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UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS



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Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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The Labor Month in Review

AN ESTIMATED 26 MILLION young people are expected to enter the labor market between 1960 and 1970; this number is far larger than the United States has ever had to educate, train, and absorb in the labor force during a similar period. The implications of this prospect, along with those presented by sluggish economic growth, changing demand, and rising productivity, are considered in the Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training, by the U.S. Department of Labor. Required under section 104 of the Manpower Development and Training Act of 1962, the reports are evidence of increasing awareness of existing and expected manpower problems. Excerpts of the reports, which were transmitted to Congress by President John F. Kennedy on March 11, 1963, are carried elsewhere in this issue. The following discussion is confined primarily to those aspects of manpower policy relating to the younger segments of the labor force.

During the past decade, the segment of the population aged 14 to 24 years increased by only 11 percent, while the population as a whole grew by almost 19 percent. Population figures for the present decade, however, show a dramatic change: Between 1960 and 1970, total population is expected to increase by about 16 percent, but the 14-24 age group will grow by almost 47 percent during this same period. As a result, the labor force will experience a net addition of 6 million young workers, taking account of a slight decline in the labor force participation rate of this age group as more youths remain in school longer. The expected 45 percent increase in this portion of the labor force (after a 3 percent increase during the 1950's) will account for nearly half the total increase expected in the labor force during this period.

Meanwhile, for the past 5 years youth unemployment has been growing until in 1962, persons aged 14-24 represented over one-third of the unemployed even though they accounted for less than one-fifth of the labor force.

SOLUTIONS TO MANPOWER PROBLEMS will, for the most part, come from individual decisions and actions of private citizens, organizations, and institutions. Certain parts of the evolving manpower effort, however, are envisioned by the reports as being necessarily carried out by agencies of government. Increased government-sponsored research and factfinding, for example, can make possible a more thorough identification of current manpower problems and their possible solutions. A recent innovation in government employment and unemployment statistics, for instance, involves the distinction initiated at the beginning of 1963 between the unemployed seeking full-time work and those interested only in part-time employment. Over 13 percent of those listed as unemployed in February were looking for part-time work. Separation of this group, which includes many teenagers, from the rest of the jobless enables more precise analysis of unused manpower and jobs needed.

THE RISING EDUCATIONAL AND SKILL requirements induced by technological change insure that many in the labor force will find it increasingly difficult to obtain and hold employment. Those more than 3 million persons currently in the labor force who are categorized as functional illiterates because of their failure to complete the fifth grade of schooling will remain hard-hit by unemployment since they lack the basic reading, writing, and arithmetical tools to enable them either to find a job or to upgrade their skills to the level necessitated by an increasingly complex economy.

According to the report, at the present time only 57 percent of white and 32 percent of non-white workers have at least a high school education. Even though the educational level of the labor force has been increasing for many years, the report expects that about 30 percent of the young people entering the labor force during this decade (about 7.5 million) will lack a high school diploma. These young people are likely to lack the job mobility which will be required by the narrowing of employment opportunities for the unskilled and the rising demand for workers with high educational and skill attainment which are expected to characterize the occupational structure of the coming decade. The prevailing emphasis on a high school diploma as a prerequisite to employment, even for many semiskilled jobs, creates a bleak future for the large number of boys and

girls who drop out of school before high school graduation.

At the other end of the scale, employment of professional and technical workers, the fastest growing occupational group during the last decade, is expected to grow more than twice as fast as other occupations between 1960 and 1975. At a time when many qualified high school graduates do not continue their schooling for economic or social reasons, shortages of trained personnel for essential occupations, such as engineers, teachers, and mathematicians, are becoming increasingly acute.

THE REPORT on Manpower Requirements reiterated the government's longstanding interest in obtaining information on manpower requirements and shortages. Such information can help organizations concerned with these problems to plan professional and vocational education to fit changing employment demands. The report considers that proper counseling, whether by schools or other interested groups, can guide young people into training for occupations for which they have aptitude and in which they can reasonably expect to obtain employment. Many high school dropouts, for example, may find themselves in unskilled marginal jobs because they do not realize that even a minimum amount of training can enable them to qualify for skilled or semiskilled jobs.

Apprenticeship programs can be another successful way of providing young people with the skills that will enable them to fill the growing demand for craftsmen. Although the number of persons participating in programs registered with the Department's Bureau of Apprenticeship and Training declined by almost 20 percent from the beginning of 1957 to the middle of 1962, the number completing training remained steady at about 29,000 a year. According to the report, the number of skilled workers currently supplied by apprenticeship programs is not enough to replace those who will die, retire, or transfer out of their occupations. With total employment of journeymen in construction and other trades expected to rise substantially during the next decade, apprenticeship training at its present level will provide only a small percentage of the skilled craftsmanship needed.

THE REPORT on Manpower Requirements concludes that strengthening and expanding education and guidance at all levels will help to solve the long-run problem of adjusting the skills of the labor force to changing occupational requirements. Meanwhile, the problem of the currently unemployed remains. Although 32,000 workers were to be trained under Manpower Development and Training Act and Area Redevelopment Act projects approved by January 31, 1963, only a small proportion of the long-term unemployed (1.3 million were out of work 15 weeks or longer in February 1963), can be processed under these limited capacity programs.

Both programs, however, have given considerable attention to the long-term unemployed. Approximately one-half of the trainees under both programs are listed among the long-term jobless, while the comparable nationwide proportion is 26 percent of total unemployment. On the other hand, an examination of MDTA and ARA trainee characteristics reveals that almost 90 percent of the participants have completed more than eight grades of school. Unemployed workers who have not attained this level presumably find it difficult to pass the qualifying aptitude and proficiency tests.

THE REPORT on Manpower Requirements anticipates that certain rigidities in the labor market which prevent worker mobility will have to be overcome to achieve an efficient match between qualified workers and job openings. Training is expected to provide unemployed and underemployed workers with the skill mobility that will enable them to become fully employed. If the pockets of unemployment persist in depressed areas, however, no amount of retraining will assure a worker employment unless he is willing and able to move to another area. ARA attempts to provide a solution by bringing industry to the job seekers in these areas.

Barriers to employment mobility also lie in continued discrimination in employment on the basis of age, sex, race, or religion. Fringe benefits provided to employed workers, particularly those without vesting provisions, may deter workers from moving to more advantageous employment. These obstacles to full manpower utilization must be removed through action by industry and labor as well as government.

Manpower Resources and Use

EDITOR'S NOTE.—*The following section contains three excerpts from the Secretary of Labor's report on manpower requirements, resources, utilization, and training transmitted with President John F. Kennedy's Manpower Report to the Congress on March 11, 1963. The first portion is an excerpt of the major findings made in the Secretary's report; the second and third portions are taken from chapters on industrial and occupational trends and unemployment. The text of the full Manpower Report is available from the Superintendent of Documents, Washington 25, D.C., at \$1.25 per copy. Reprints of the following section, with additional methodological notes, as well as the report itself, are available from the Regional Offices of the Bureau of Labor Statistics listed inside the front cover; the reprints may also be obtained from the Bureau's Washington office. Elisions and minor editorial changes have not been noted.*

THIS FIRST MANPOWER REPORT in our national history comes appropriately during the 50th Anniversary year of the Department of Labor—an anniversary which caps a half century of effort by the Department in “fostering, promoting, and developing the welfare of wage earners in the United States.” The country has made enormous strides during this period in employment, working conditions, the national output of goods and services, and the income levels of wage earners and of the additional millions of people who depend on them for a living. But these gains also serve to accentuate the intolerable gulf between the great majority of citizens who have shared in the general improvement in living standards and the many unemployed or otherwise disadvantaged people who are not contributing as workers, though they would gladly do so if opportunities were made available.

The Manpower Development and Training Act of 1962, in accordance with which this report is submitted, constitutes a new recognition of our national responsibility for meeting the needs of individuals who might otherwise be left stranded by economic and technological progress. Through its training provisions, we are making a beginning at aiding unemployed and underemployed workers to qualify for the changing job opportunities generated by our economy. The act also provides for the first systematic effort to anticipate and prepare to meet the country's future manpower requirements, an essential condition for achieving the optimum rate of economic and em-

ployment growth in the years ahead. The act thus represents a mandate to the Department of Labor for new dimensions of leadership and action in strengthening the Nation's human resources.

Summary of Findings

Highlights of the substantive findings of this report are as follows:

1. Employment has mounted in the United States since the end of World War II, but the number of people at work or seeking work has grown even faster.

Total employment of all classes of workers—wage earners, the self-employed, domestics, and unpaid family workers—averaged 67.8 million in 1962. This alltime record figure meant the employment of 10 million more people than in 1947, or a gain of 17 percent over the 15-year period.

These employment increases were overshadowed by the growth of 13 million, or 21 percent, in the labor force during this same period—brought about partly by population growth and partly by a rise in the proportion of women working outside the home. Although they currently constitute only a third of the country's workers, women accounted for about three-fifths of the entire labor force increase over the 1947–62 period.

2. Unemployment has consequently risen also.

An average of 4 million persons was unemployed in 1962—about 5½ percent of the civilian labor force. This was the fifth consecutive year in which the unemployment rate averaged at least

5½ percent. In the immediate postwar years, the average rate was less than 4 percent. These figures indicate that the economy not only has been unsuccessful in recent years in approaching full utilization of manpower resources but, in fact, has moved further away from this objective.

3. The very sharp rise in long-term unemployment is a matter of particular concern.

Between 1957 and 1962, long-term unemployment (15 weeks or over) rose by 100 percent, and very long-term unemployment (6 months or over) rose by almost 150 percent. The overall increase in unemployment during this period was not quite 40 percent, and the increase in short-term unemployment (under 5 weeks) was not quite 20 percent.

The adequacy of unemployment compensation benefits and other financial resources to tide workers over more than 6 months of unemployment becomes an urgent question in view of these facts. The findings also suggest the extent to which workers' skills are being eroded by long-term unemployment and the importance of emphasis on the long-term unemployed in the planning and operation of training programs.

4. In need of special attention also are the serious and intractable unemployment problems of a (a) young people, (b) older workers, (c) nonwhite workers, (d) workers attached to declining or unstable industries, (e) those located in depressed areas, and (f) unskilled workers generally. Though no group of workers is immune to unemployment, it has hit much harder in these groups than in others, owing in large measure to one common factor—lack of marketable skills.

To solve the critical unemployment problems of the groups hardest hit will require not only general economic expansion, but also greatly increased opportunities for education and training. In addition, efforts must be made to improve guidance of young people, overcome discrimination against older workers and minority groups, increase worker mobility, and further the redevelopment of depressed areas.

5. Recent employment and unemployment patterns reflect the following major developments, all of which underline the need for measures to accelerate economic growth:

a. The postwar gain in the gross national product, although impressive, has been due chiefly to increases in output per man-hour rather than in employment or man-hours worked.

Between 1947 and 1961, the real output of the private economy increased by 59 percent. Well over four-fifths of this rise was due to increases in output per man-hour. At the same time, private employment increased by only about 10 percent. And the rise in total man-hours was much smaller still—only 3 percent—because of a drop in average annual hours of work attributable in large measure to the very sharp increase in part-time employment. (More than half of the employment increase between 1947 and 1962 was in part-time jobs.)

b. The overall rate of economic growth in the past 5 years was significantly below the growth rate of the previous decade. From 1947 to 1957, the gross national product (in constant dollars) rose at an annual rate of 3.8 percent. But over the past 5 years, the rate of increase has amounted to only 2.9 percent.

c. The rate of job growth in the private sector of the economy has likewise slowed down. From 700,000 more jobs per year between 1947 and 1957, the average increase in private nonfarm employment dropped to 175,000 jobs per year between 1957 and 1962.

d. Only the public sector of the economy has had an increasing rate of employment growth since 1957. This growth has been overwhelmingly in State and local governments—largely in school systems.

6. Industrial and occupational shifts in employment have increased the displacement of workers and consequent reemployment problems.

The occupations with expanding employment opportunities generally demand prolonged education and training. And displaced workers without these qualifications have a hard time finding jobs—accounting for the high unemployment rates in the lower skilled groups.

7. Current shortages of qualified personnel exist in many professions and specialized occupations.

The numbers of new entrants completing training have not equaled the rising demand in engineering, mathematics, many of the natural and social sciences, teaching, medicine, nursing, and other professional, technical, and skilled occupations. Personnel shortages exist in many specialized fields, either nationally or in certain local areas, despite the high general level of unemployment.

8. Worker mobility is substantial in the United States but is still inadequate for a completely effective matching of workers and jobs.

Eight million men and women—about 1 out of every 10 who did any work in 1961—changed jobs during the year. Some moved voluntarily, in search of better jobs or for other reasons. Others had to make changes because of job loss.

The sometimes excessive frequency of job changes among 18- and 19-year-olds reflects the difficulties faced by inexperienced workers not trained in a particular skill. Their high rate of job changes underscores the need for more extensive and realistic vocational guidance of youth and for improved vocational training.

9. Basic dimensions of our future manpower problems are the unprecedented increase in the labor force in prospect during the 1960's and the radically changing patterns of labor force growth.

a. This country's work force will grow by about 13 million during the 1960's and by another 7 million between 1970 and 1975, reaching a total of 93 million in the latter year. The increase in number of workers will be much greater than in any previous 15 years of our history. It will provide the manpower potential for rapid economic growth.

b. Young workers under 25 will make up nearly half of the added labor supply during the 1960's, and adult women will make up another 30 percent.

10. Future productivity gains will also add to economic growth and have a major employment impact.

Productivity has risen in the United States since World War II at a rate somewhat above the long-term trend. From 1947 to 1961, output per man-hour in the private economy increased at an average rate of 3 percent per year, compared with an average annual gain of 2.4 percent over the past half century. If we assume no more than a continuation of the postwar rate of increase in productivity, economic expansion equivalent to over 2 million jobs per year will be needed during the 1960's to offset advances in technology.

11. Achieving full employment of the rapidly growing labor force will involve large employment gains in many nonfarm industries, especially since farm employment is expected to go on decreasing.

Farmers will continue to move into nonfarm jobs at about the current rate.

Among nonagricultural industries, those furnishing services will continue to show much the most rapid employment growth. Employment in these industries (mainly trade, finance, State and local government, and the service industry group) may increase by almost 30 percent during the 1960's, according to projections on the assumption of generally full employment. In goods-producing industries, employment is expected to increase only moderately. An exception is construction, in which employment may rise by almost 40 percent over the decade under full employment conditions.

12. Professional and technical occupations will be much the fastest growing during the 1960's, but above-average employment growth is expected also in other white-collar occupations, for skilled workers, and for service workers.

Professions likely to grow especially fast during this decade include, for example, engineering, many of the natural sciences, and college teaching. Rapidly increasing demand for technicians is also anticipated.

13. The prospective net changes in employment are only a partial indication of future manpower requirements; replacement needs create a large additional demand for workers.

14. The future labor supply in specific occupations will depend not only on educational and training facilities but also on such uncertain factors as the occupational choices made by individuals; it is therefore very difficult to assess the future labor supply in quantitative terms. Comparisons of projected manpower supply and manpower requirements have, however, been made on a preliminary basis for skilled trades and the professions, to aid in the planning of training programs and other steps necessary to meet personnel needs in these critically important occupations.

a. Apprenticeship programs of the current magnitude will not supply enough skilled workers even to replace those who die, retire, or transfer out of their occupations in the years ahead.

b. New entrants into professional and related occupations, from colleges and universities and other sources, would about equal the personnel needs indicated by the tentative projections. Nevertheless, personnel shortages are expected to continue in many professions, especially at the higher levels of training.

Employment Projections to 1975*

In looking forward at labor force prospects, an appropriate starting point is an examination of the expected population changes, since the supply of workers always depends to a large extent on the size and composition of the population of working age.

The total population of the United States will probably reach close to 210 million by 1970, about 28 million more than in 1960, according to the set of projections by the Bureau of the Census which are believed to be most reasonable. By 1975, the population may total 226 million, a further gain of 17 million.

The expected population increases, [and changes in the extent of labor force participation on the part of men and women in various age groups,] will bring about an unparalleled growth in the labor force. The number of workers in the United States is expected to rise by about 20 million between 1960 and 1975.

Projected Employment in Major Industries

An assessment of the economy's prospective manpower requirements and of the consequent needs for skill development can make an important contribution to the attainment of higher employment levels and reduction of unemployment. This is recognized by the Manpower Development and Training Act of 1962, which specifies that the Department of Labor shall appraise foreseeable manpower needs and the adequacy of the Nation's efforts to meet these needs and make this information available for use in educational, training, counseling, and placement activities. Accordingly, projections of future employment trends in major industries [and occupational groups] are presented in the following sections.

Making judgments about future events such as are involved in these projections is, of course, difficult and hazardous. Manpower needs can be affected by a great variety of possible events, including new scientific discoveries and inventions, worldwide political developments, natural catastrophes, and the vagaries of consumer preferences. Even if these exogenous factors were not in the background and economic influences were all we had to consider, the task would still be difficult

since our knowledge of past economic trends and of the forces governing economic relationships is nowhere perfect and, in some areas, hardly more than rudimentary. Nevertheless, drawing upon research on [industry and occupational] employment trends and many related topics conducted by the Department of Labor over a period of years, it has been possible to develop employment projections which should serve as a guide in planning training programs and dealing with other manpower and educational problems.¹

Civilian employment will rise from about 67 million in 1960 to more than 80 million in 1970 and nearly 88 million in 1975—a gain of nearly one-third during the 1960–75 period—under the conditions predicated. These projected increases reflect the expected labor force growth and, also, the added rise in employment involved in reducing unemployment to the minimum implied by our full employment assumption.

The overall growth in civilian employment will be accompanied by significant changes in the industrial distribution of employment. Many industries will gain or lose ground in production and employment, relative to the total economy, because of changes in patterns of demand—including not only the purchasing patterns of consumers but

*From the chapter entitled "The Manpower Future," which was based on materials prepared in the Division of Manpower and Occupational Outlook, Bureau of Labor Statistics.

¹ In interpreting these projections, a number of general points must be borne in mind. The most important of these is that the future employment picture presented assumes the realization of full employment. If we fail to achieve this objective and so fall short of attaining the very high general levels of employment the assumption implies, future employment in different industries and occupations will similarly fall short of the projected levels. Furthermore, the difference would be greater in fields where employment fluctuates widely with changing levels of business activity (such as manufacturing and construction) than in those where employment tends to be more stable.

It is further assumed that, along with the achievement of full employment, the country will attain the rate of economic growth agreed to in discussions with our fellow members of the Organization for Economic Cooperation and Development—an increase of 50 percent in gross national product from 1960 to 1970.

Other basic assumptions, necessary in any long-term economic projections, have also been made here: That there will be a continuity of economic and social patterns and relationships in our society, including patterns of consumption, and that scientific and technological advances will continue to affect methods of production as indicated by recent trends. In these projections, it has been further assumed that there will be no war or other cataclysmic event which would substantially alter the rate and nature of economic growth, and it has been assumed that the size of the Armed Forces will not change significantly from the current level.

Another point which needs emphasis is that more comprehensive and accurate data are available on some of the factors involved in the estimating procedures than on others. The best judgments of the staffs of government agencies and of industry and union representatives were used in bridging gaps in data and in our knowledge of underlying economic relationships. But much work remains to be done, and the projections here presented are only approximations. They are subject to revision as new data become available, techniques are further refined, and the future unfolds.

also decisions about business investments and decisions by government about expenditures for highways, public buildings, defense production, education, and a great variety of other products and services. Advances in technology, the introduction of new products, the emergence of new industries, and changes in the availability of natural resources are among the other factors that will influence the industrial composition of employment.

The only broad industry sector in which an actual decline in employment is expected between now and 1975, even under conditions of generally full employment, is agriculture. The rise in output per farm worker, which underlies the long-term decline in farm employment, is expected to continue as a result of the increased use of machinery, fertilizers, feed additives, pesticides, and other technological advances. The continuing decrease in the number of farms—particularly the small, low-income-producing units—will result in a significant decrease in the number of farmers. And further mechanization may prevent any significant rise in the number of hired farm workers, despite the expected increase in large farms. As a result, agricultural employment may decline from 5.7 million in 1960 to 4.3 million in 1970 and to about 4 million by 1975.

At the same time, nonagricultural employment will increase rapidly. The Department of Labor's projections show a rise in nonfarm employment from 61 million in 1960 to about 76 million in 1970 and nearly 84 million in 1975. Most of the increase will be in wage and salary employment, which may rise from about 51.5 million in 1960 to about 71.5 million in 1975. The number of other workers (self-employed, unpaid family workers, and domestics) is likely to increase also, but at a slower rate—from 9.5 million to a projected 12 million—over the 15-year period.

TABLE 1. NONAGRICULTURAL WAGE AND SALARY WORKER EMPLOYMENT, BY INDUSTRY DIVISION, 1960 TO 1975

Industry division	Employment (in millions)			Percent change, 1960-75
	Actual	Projected		
		1960	1970		1975
Total.....	54.3	67.7	74.2	37
Service-producing industries.....	34.0	43.7	48.8	44
Wholesale and retail trade.....	11.4	14.0	15.6	37
Government.....	8.5	11.5	12.8	51
Service and miscellaneous.....	7.4	10.2	11.9	61
Transportation and public utilities.....	4.0	4.4	4.5	13
Finance, insurance, and real estate.....	2.7	3.5	3.9	44
Goods-producing industries.....	20.4	24.0	25.4	25
Manufacturing.....	16.8	19.2	20.3	21
Contract construction.....	2.9	4.0	4.4	52
Mining.....	.7	.7	.7	-----

NOTE: Individual items may not add to totals because of rounding.

Among the nonagricultural industries, those furnishing services are expected to have a much more rapid growth in employment than those producing goods, continuing the long-term trend.² Wage and salary employment in service industries (including trade; transportation and public utilities; finance, insurance, and real estate; government; and all other services) may increase almost 45 percent between 1960 and 1975, while in goods-producing industries (manufacturing, construction, and mining), the rise may be around 25 percent.³

The employment trends projected for each major industry division are shown in table 1 and are briefly discussed in the following sections.

Wholesale and Retail Trade. Employment in trade, which has grown rapidly in recent decades, will continue to increase substantially over the next 15 years. As population and consumer expenditures mount, wholesale and retail trade establishments will distribute an increasing volume of goods and require a growing number of employees. The rate of increase in employment will be slowed, however, by technological developments such as increased use of vending machines and other self-service techniques and of computers for inventory control and billing, which will tend to raise output per man-hour. Altogether, employment in wholesale and retail trade may increase by 23 percent between 1960 and 1970. It may reach 14 million by 1970 and exceed 15½ million by 1975, with retail trade continuing to employ nearly 3 of every 4 workers in the division, as it has since 1939.

² It should be noted that the discussion of employment trends in different industries which follows is all geared to the estimates of wage and salary employment derived by the BLS from payroll reports, whereas the overall figures on farm and nonfarm employment cited in preceding paragraphs relate to current employment figures derived from the monthly labor force surveys. For a discussion of the differences in coverage and employment levels between these two series, see *Employment and Earnings*.

³ If agriculture had been included with the goods-producing industries, the employment rise in this broad industry sector would have been considerably less than the 25 percent projected for manufacturing, construction, and mining, and the relative shift toward service-producing industries would therefore appear even greater. However, for technical reasons relating to differences in the basic employment series, agriculture has been excluded in the above comparisons of projected trends.

A large part of the increased employment in trade is expected to be among part-time workers, including many women and younger workers. The development of suburban shopping centers and the trend toward keeping stores open during evening hours is creating a demand for large numbers of part-time workers, who are available from nearby residential areas. Wholesale and retail trade will also continue to provide many opportunities for self-employment. According to the 1960 Census, almost 60 percent of all self-employed nonfarm proprietors were in this industry division.

Government. Government employment is expected to increase by about one-third between 1960 and 1970—to more than 11 million persons. By 1975, the total may approach 13 million. As in the past 15 years, nearly all of the increase in government employment will be in State and local government agencies. Population growth and the movement of people from rural to urban areas and from cities to suburbs will continue to raise requirements for educational and public health services, police and fire protection, sanitation, street and highway maintenance, welfare, and other services. As a result, State and local government employment is expected to rise by more than 50 percent between 1960 and 1975, whereas it is assumed that little change will take place in Federal Government employment, under the conditions of minimum unemployment and no major wars or other catastrophes assumed in these projections.

Services and Miscellaneous Industry Division. As per capita income continues to rise, consumers are expected to spend a larger and larger share of their income on services of many kinds, continuing a long-term trend. Employment is therefore expected to grow faster in the service industries than any other division during the coming decade. By 1970, employment in service industries may total 10 million. By 1975, it may be nearly 12 million—more than 60 percent higher than in 1960.

Within the service division, employment will increase most rapidly in medical and health services. Factors which will contribute to this increase include the expected growth in population, especially the increased numbers of older people and children; rising income levels; increased emphasis on public health and medical research;

changing patterns of health care; and the construction of additional medical, dental, and public health facilities.

Employment in business services of all kinds is also expected to grow—as business firms rely increasingly on advertising services to sell their products; on accounting, auditing, and bookkeeping services to handle their fiscal recordkeeping; and on audit bureaus and collecting agencies to cope with the increasing use of consumer credit. In addition, more young people will be attending schools at all levels, with a resulting increase in employment not only in public schools but also in the private educational institutions included in the service industry division.

Transportation and Public Utilities. Widely differing employment trends are expected in the years ahead, as in recent decades, in the different transportation and public utility industries.

Taking into consideration diverse trends and the full employment assumption basic to all these projections, a rise in transportation and public utility employment from about 4 million in 1960 to about 4.4 million in 1970 and 4.5 million in 1975 is a reasonable expectation.

Finance, Insurance, and Real Estate. Employment in finance, insurance, and real estate is expanding steadily. There may be as many as 3.5 million workers in this industry division by 1970 and 3.9 million by 1975—which would be an increase of around 45 percent over the 1960–75 period. Underlying the employment growth in this group of industries will be the increasing complexity of the Nation's financial activities, rising levels of income, and the general growth of our industrial and urban society.

In banking, which employed every fourth worker in the division in 1960, employment growth is expected to be especially rapid in spite of greatly increased use of electronic data-processing equipment. By 1975, banking may employ about 40 percent of all workers in the division. In both insurance and real estate, employment is likely to increase by about one-third between 1960 and 1975.

Because women currently comprise almost half of this industry division's employment, the rapid employment increase anticipated in finance, insurance, and real estate has significant job implications for women.

Manufacturing. Employment in manufacturing is expected to increase at a much slower rate than employment in nonagricultural industries as a whole. In 1960, manufacturing—the largest industry division—employed 16.8 million workers and accounted for about 30 percent of all nonfarm workers. By 1970, manufacturing employment may rise to about 19 million, but even so, the division's share of nonfarm employment would fall to about 28 percent. By 1975, manufacturing employment may be over 20 million, given the assumed full employment situation. If this high general level of employment is not reached, however, manufacturing employment will be considerably below the projected figures—since employment in this industry division varies widely with changes in general business conditions.

Within manufacturing, employment trends will differ among individual industries. The much faster growth in employment in durable than in nondurable goods industries, evident since the end of World War II, is expected to continue. Durable goods employment may increase at nearly twice the rate for nondurable goods between 1960 and 1975. Increasing government expenditures for missiles, spacecraft, and electronic products are expected to result in large employment increases in the industries making these products. Large increases in employment will also occur in other durable goods industries—including instruments and industrial electrical equipment—which are involved in the production of automation and other advanced equipment. Among the nondurable goods industries, the fastest growing will be chemicals, printing, and paper.

Contract Construction. Employment in contract construction will rise at a rate much above the average for all nonfarm industries between 1960 and 1975, as a result of the substantial increase in construction activity expected during this period. Home and apartment house construction will be stimulated by the anticipated large increases in population and new families, by higher personal income levels, and by continuing shifts of families from cities to suburbs. Large government expenditures for construction of schools, hospitals, and roads can be anticipated. Construction of industrial plants and commercial establishments such

as office buildings, stores, and banks is also likely to expand, with the general growth of the economy. Altogether, according to projections by the Department of Commerce, new construction activity may increase by 57 percent between 1960 and 1970 and almost double between 1960 and 1975.⁴ The volume of construction maintenance and repair, which now is about one-third that of new construction, is also expected to grow significantly during this period. The rise in construction employment will probably not keep pace with this growth, however, because of further mechanization of work processes and materials handling, prefabrication of components, and other changes which will reduce manpower requirements per unit of output.

On the basis of these considerations and other factors, employment in contract construction is projected at about 4 million in 1970, or some 38 percent above the 1960 level. By 1975, it may approach 4½ million, under the assumed full employment conditions. In both years, however, construction employment will be well below the projected figures if the optimum general level of employment is not reached. Of all the industry divisions, there is none in which employment fluctuates more widely with changes in general business conditions than construction.

Mining. In mining, the remaining industry division, employment is expected to remain fairly close to the 1960 level of 700,000 over the next decade. In bituminous coal mining, where the number of production workers has dropped sharply in recent decades, some further declines in employment appear likely. But since minor employment increases may occur in some other mining industries, notably crude petroleum and natural gas production, relatively little change is anticipated in the general level of employment for the division as a whole.

Projected Occupational Employment

Great changes in occupational employment patterns are in prospect in the United States, owing to the differing growth trends in different industries, the likelihood that technological progress will proceed at an accelerating rate, and the many other kinds of factors which have brought about past changes in the occupational structure of employ-

⁴“Construction in an Expanding Economy, 1960-2000,” Construction Review, September 1961 (U.S. Department of Commerce, Business and Defense Services Administration).

ment. An assessment of future employment trends in major occupations is consequently essential if we are to appraise future manpower needs and the adequacy of present and prospective labor supply.

In assessing the demand for workers in a particular occupation, account must be taken both of the number needed because of net growth in employment and of those required to replace workers who are separated from the occupation because of death, sickness, retirement, transfer, or other reasons.

That shifts in employment among industries will bring about further changes in the occupational structure of the work force has already been suggested. Each industry has its own occupational pattern, which has been and will be subject to frequent changes because of new products and processes and other technological and economic developments. The changing occupational composition of the work force within industries and the uneven growth of industries will, together, significantly affect the demand for workers with specific occupational skills in the years ahead, as in past decades. And according to the studies made so far by the Department of Labor, the effect will continue to be clearly toward a rising demand for workers with high levels of education and skill, and a narrowing of employment opportunities for the unskilled. The importance of good educational preparation for employment will also be increased by the rapidly changing nature of our technology and the consequent frequent changes of content in many occupations. Workers will have unprecedented need for occupational flexibility, and a good education is the essential base upon which a flexible and responsive labor force can be built.

The chief occupational employment trends⁵ indicated by the Department of Labor's projections are (1) a continuation through 1975 of the relatively rapid growth of white-collar occupations, especially professional and technical occupations; (2) a slower growth in blue-collar occupations as a group, with craftsmen experiencing the most rapid employment gains and no increase at all in employment of laborers; (3) a faster-than-average growth in service worker employment and (4) a further decline in the numbers of farmers and farm laborers. (See table 2.)

Contributing to the projected growth of approximately 20 percent in total employment between 1960 and 1970 is an anticipated increase of about 30 percent in white-collar and 14 percent in blue-collar employment. Over the 15-year period 1960-75, employment may increase by about 31 percent in all occupations taken together, 46 percent in white-collar occupations, and 21 percent in blue-collar jobs.

Professional, Technical, and Kindred Workers. Employment of professional, technical, and kindred workers, who have been by far the fastest growing occupational group during the past decade, may increase at more than twice the average rate for all fields of work between 1960 and 1975. The increase in professional and related employment is projected at about 43 percent over the 1960 decade and another 16 percent between 1970 and 1975—which would raise the number of workers in the group to more than 12 million by 1975.

⁵ The employment projections for major occupational groups presented in this section have as a base the 1960 employment levels for these groups derived from the monthly labor force survey. These data differ from the levels shown by the 1960 Census of Population. [EDITOR'S NOTE.—See *Monthly Labor Review*, November 1962, p. 1210.]

TABLE 2. EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP, 1960 TO 1975

Major occupational group	Actual, 1960		Projected, 1970		Projected, 1975		Percent change		
	Number (in millions)	Percent	Number (in millions)	Percent	Number (in millions)	Percent	1960-70	1970-75	1960-75
Total.....	66.7	100.0	80.5	100.0	87.6	100.0	21	9	31
Professional, technical, and kindred workers.....	7.5	11.2	10.7	13.3	12.4	14.2	43	16	65
Managers, officials, and proprietors, except farm...	7.1	10.6	8.6	10.7	9.4	10.7	21	9	32
Clerical and kindred workers.....	9.8	14.7	12.8	15.9	14.2	16.2	31	11	45
Sales workers.....	4.4	6.6	5.4	6.7	5.9	6.7	23	9	34
Craftsmen, foremen, and kindred workers.....	8.6	12.8	10.3	12.8	11.2	12.8	20	9	30
Operatives and kindred workers.....	12.0	18.0	13.6	16.9	14.2	16.3	13	4	18
Service workers.....	8.3	12.5	11.1	13.8	12.5	14.3	34	13	51
Laborers, except farm and mine.....	3.7	5.5	3.7	4.6	3.7	4.3			
Farmers, farm managers, laborers, and foremen...	5.4	8.1	4.2	5.3	3.9	4.5	-22	-7	-28

NOTE: Individual items may not add to totals because of rounding.

Personnel needs are expected to rise substantially in practically every professional field—including teaching, the health professions, the social sciences, the clergy, and the law, as well as engineering and the natural sciences. However, employment is likely to go on increasing much faster in some professions than others.

In engineering and the natural sciences, employment requirements may be about 2.4 million by 1975, roughly double the number currently employed. By 1970, nearly 1.4 million engineers may be needed, an increase of about 550,000 over 1960 employment. For scientists, the employment demand may reach 580,000 by 1970, compared with a 1960 figure of 335,000, according to preliminary estimates. Greatly increased requirements for scientists are anticipated for the Nation's aerospace, health-related research, defense, and technical assistance programs, as well as to meet the generally expanding needs of our growing economy. Requirements will be particularly high for scientists with advanced training to the doctorate level and beyond. Emphasis will be far from uniform across all fields of science; many specializations which will be important in 1970 cannot even be envisioned at this time. Broadly speaking, mathematics and physics will be among the fastest growing fields. The largest scientific fields—chemistry and the biological sciences—will also grow rapidly. Still others—for example, geology—may experience considerably slower growth. Interdisciplinary areas, such as those found in oceanography, biophysics, engineering physics, and metallurgy, can be expected to expand greatly.

In 1960, the number of technicians working with engineers and scientists was about 775,000, according to a rough estimate. It is anticipated that, during the next 10 to 15 years, demand will increase at least as fast in these occupations as in engineering and the sciences, leading possibly to a doubling in requirements by 1975.

In teaching, the largest profession, employment may increase to nearly 2.5 million by 1970—which would be almost one-half million more full-time teachers than were employed in schools and institutions of higher education in 1960. This projection assumes the expected increase in the school age population, a continuation of recent trends toward lengthening of school attendance, and a realization of expected pupil-teacher ratios.

In college teaching, personnel needs will grow much faster, in relative terms, than in elementary and secondary school teaching—though the number of positions involved will be smaller. In 1960, the total number of full-time college and university teachers in the country was about 175,000; by 1970, this number will need to be about 80 percent greater to take care of the unprecedented numbers of young people expected to be seeking a college education.

The extremely rapid growth in technician occupations is another noteworthy trend which is expected to continue. Although the shortages of engineers, and scientists—and the consequent need to relieve these professional workers of tasks which can be performed by less highly trained persons—have helped to increase employment of technicians in the past two decades, the growth of these occupations has a more fundamental cause. It is due basically to the increasing complexity of modern technology, which has created a need for workers who have some basic scientific and mathematical knowledge and also specialized training in some aspect of technology.

Managers, Officials, and Proprietors (Except Farm). Relatively slow growth in the number of proprietors is anticipated in the years ahead, since the trend toward formation of larger businesses is expected to continue and greatly restrict the growth in the total number of firms. The number of managers and other salaried officials in business organizations and government is likely to go on increasing fairly rapidly.

The net result of these diverse trends will probably be a slower increase in employment in the manager-proprietor group as a whole than in any other major group of white-collar workers. Nevertheless, the relative increase in the combined group may be about the same as that for all occupations; it is projected at about 20 percent from 1960 to 1970 and about 9 percent during the following 5 years—which would bring the total number of proprietors, managers and salaried officials in the country to 8.6 million in 1970 and 9.4 million by 1975.

Clerical Workers. Employment of clerical workers is expected to show a relatively large increase during the next 10 to 15 years, since the ever-

mounting volume of communications, record-keeping, and other paperwork characteristic of our economy is likely to more than offset the labor-saving effects of electronic computers and other new office equipment. By 1970, clerical employment may rise to 12.8 million and, by 1975, may reach 14 million, some 45 percent above 1960.

One reason for anticipating this employment growth is the expected rapid expansion of the finance, insurance, and other industries employing many clerical workers. Another is the trend toward transferring to clerical workers functions which were formerly performed by sales personnel and proprietors. For example, the trend toward self-service in retail stores will mean the elimination of some sales jobs but the creation of new positions for cashiers and checkers (who are classed as clerical workers). Although the use of electronic data-processing and other labor-saving office equipment will be extended steadily, this will have an impact chiefly on the numbers of clerical workers doing relatively routine work in such functions as billing, inventory control, and processing of insurance records, bank checks, and payrolls.

Sales Workers. By 1970, sales employment may total nearly $5\frac{1}{2}$ million. By 1975, it may be close to 6 million—a figure more than one-third higher than that for 1960.

Population growth and rising per capita income are among the factors that will tend to bring about the expected increases in sales employment. The expected further growth in the numbers of part-time workers in sales jobs will also tend to increase total employment in this occupational group. These factors are expected to decidedly outweigh the effects of self-service techniques and other labor-saving innovations, which will tend to limit the growth of retail sales employment.

Craftsmen, Foremen, and Kindred Workers. Among blue-collar workers, the craftsmen, foremen, and kindred workers will continue to have the most favorable employment outlook. The number of these skilled workers may increase by nearly $2\frac{1}{2}$ million over the 1960-75 period—to more than 11 million by 1975.

Increased employment of mechanics and repairmen, building trades craftsmen, skilled metal

workers and foremen will probably account for most of the growth in the skilled worker group. Because of the mounting need for mechanics and repairmen to install and maintain the ever-increasing amount of complex equipment used by industry, government agencies, and private households, employment of these workers may reach $2\frac{1}{4}$ million in 1970 and 3 million by 1975, compared with only about 2 million in 1960.

The anticipated large volume of construction activity may be reflected in a similarly rapid rise in employment of building trades craftsmen—from $2\frac{1}{2}$ million in 1960 to a projected $3\frac{1}{4}$ million in 1975. The building trades craftsmen expected to experience the most rapid employment growth are operating engineers, cement masons, bricklayers, construction electricians, sheet-metal workers, and plumbers and pipefitters.

Relatively rapid employment gains are expected also among some skilled metal workers—particularly tool and die makers and instrument makers. These skilled workers will benefit from the substantial expansion in production and consequent rise in employment levels projected, under the full employment assumption, for the metalworking industries where the majority of them are employed.

Operatives and Kindred Workers. Operatives and kindred workers, currently the Nation's largest occupational group, are expected to have a slower-than-average rate of employment growth in coming years. The proportion these workers represent of all employed persons may drop from about 18 percent in 1960 to about 16 percent in 1975. Nevertheless, their employment may rise by somewhat more than 2 million over the 15-year period. On this basis, more than 14 million operatives would be employed in 1975.

Increasing automation of production processes will undoubtedly eliminate a good many operative jobs in the years ahead. However, the introduction of automated machinery in factories and other business establishments has been and will probably continue to be gradual. Moreover, the growing use of motor vehicles for transport will result in increasing employment of truck and bus drivers—one of the large groups of workers in the operative category; and our dynamic technology is continuing to create some new semiskilled occupations.

Industrial Laborers. Employment of industrial laborers, which totaled 3.7 million in 1960, is expected to show little or no change in absolute numbers over the next decade under the predicated full-employment conditions. Even under these conditions, however, the proportion laborers represent of the total employed labor force will drop from 5½ percent in 1960 to less than 4½ percent in 1975.

The replacement of unskilled laborers by machinery in excavating, ditch digging, and similar work will undoubtedly progress further. Power-driven equipment, such as forklift trucks, derricks, cranes, hoists, and conveyor belts, will take over more and more of the materials-handling work in factories, freight terminals, and warehouses. And integrated systems of processing and materials-handling equipment, which represent a more advanced stage of automation, will be installed in increasing numbers of plants. Nevertheless, the Department's projections indicate continuing substantial employment of laborers during the next decade, with many openings anticipated each year because of the high turnover rates characteristic of workers in the more casual types of laboring jobs.

Service Workers. In this diverse occupational group as a whole, employment is expected to increase fairly rapidly—at a rate considerably above the average for the entire work force. From 8.3 million in 1960, the number of service workers may rise to about 11 million in 1970 and 12½ million in 1975, or by one-half over the 15-year period.

A relatively rapid rise in employment of protective service workers such as policemen and firemen is to be expected as the population increases, especially in urban and suburban communities. A very substantial increase in demand for practical nurses and for attendants in hospitals and other institutions is also anticipated. Other categories of service workers expected to experience rapid employment growth include waiters and waitresses, cooks, and charwomen and cleaners. The chief reason for anticipating growth in these latter occupations is the expected expansion in the food service business and in hospitals and other types of public buildings and institutions.

Farm Occupations. Employment of farmers (including farm managers and foremen) and farm

laborers will continue to decrease. Between 1960 and 1970, the decline may be more than 20 percent, with a further decrease of about 6 or 7 percent likely between 1970 and 1975. Over the 15-year period, the drop in employment may be as great as 1½ million below the 1960 figure of not quite 5½ million.

Replacement Needs. Projections of occupational employment trends such as are presented in preceding sections provide one of the two major components required for projections of future manpower requirements—namely, estimates of net employment growth. The other component—demand created by replacement needs—is of equal importance, however. In fact, the number of persons who will be required to replace workers who retire, die, or leave the work force for other reasons between 1960 and 1970 will exceed the 13.8 million net growth in employment projected for the economy as a whole during that period.

In some occupations, particularly those in which many women are employed, the number of people required as replacements is much greater than the number needed for newly created jobs. For example, it is estimated that about 8 percent of all elementary and secondary school teachers must be replaced each year, whereas net growth in the occupation is expected to average only about 2½ percent per year during the 1960's.

Considerable information is available on death and retirement rates for male workers. In addition, studies of the working patterns of women have made it possible to estimate net loss rates for female workers. However, little is known about the occupational mobility of the Nation's work force, and it is therefore difficult to estimate the manpower needed to replace workers who transfer from one occupation to another.

In order to arrive at minimum figures on replacement needs during the 1960-70 period for workers at the various skill levels, death and retirement rates have been applied to the age distribution of workers in major occupational groups, as shown in the 1960 Census of Population. No allowance was made in this calculation for transfers among occupations.

For men workers, this procedure yields an overall annual separation rate of approximately 2 percent during the 1960's. The rates for men in selected occupational groups range from 1.7 per-

cent in the case of professional workers and operatives—both relatively young groups—to 2.6 percent for managers, officials, and proprietors—who have a considerably higher average age. The overall annual separation rate for women—which allows for withdrawals because of family responsibilities, as well as death and retirement—is around 5 percent. The rate for women shows little variation among the major occupational groups.

By applying the appropriate separation rates to the number of workers of different ages in each group, the following minimum figures on average annual replacement needs have been computed for some of the major occupational groups:

Occupational group	Separations expected annually, 1960-70		
	Total	Male	Female
Professional, technical, and kindred workers.....	231,300	83,300	148,000
Managers, officials, and proprietors, except farm.....	209,900	156,300	53,600
Clerical and kindred workers.....	414,900	59,600	355,300
Sales workers.....	142,200	55,200	87,000
Craftsmen, foremen, and kindred workers.....	187,500	176,000	11,500
Operatives and kindred workers.....	304,200	148,200	156,000

Within each broad occupational group, there may be wide differences in the separation rates for specific occupations, owing largely to the sex and age composition of the occupation. For example, the profession of engineers, staffed largely by men, has a much lower replacement rate than that of

school teachers, in which women predominate. Similarly, within the clerical group, mail carriers and stock clerks (mainly men) have lower replacement rates than typists and telephone operators (mainly women). And among the craftsmen group, locomotive engineers, whose average age is high, have a replacement rate that greatly exceeds that for electronics repairmen, who are a relatively young group. Differences in separation rates by occupation are also related to retirement practices—as in the medical professions, many of whose members continue to practice long after they reach the normal retirement age for other occupations.

If transfers of workers among occupational groups could have been included in these figures on replacement needs, the indicated manpower requirements would have been raised considerably in some fields of work. But they would have been lowered in others where the net effect of transfers in and out of the occupation is a gain in workers.

In general, workers tend to move from the less skilled to the more skilled occupations. For example, a factory operator may eventually become a foreman, thus moving from a semiskilled to a skilled classification; similarly, a mechanic may transfer to a job as a technician, thus shifting from the craftsman to the professional, technical, and kindred worker classification. This type of transfer is usually the result of long experience, often supplemented by additional training.

Recent Trends and Impact of Unemployment*

Unemployment is a serious problem for the United States. Although employment and output increased during 1962, the Nation is still far short of reasonably full utilization of its manpower resources.

An average of 4 million Americans, about 5½ percent of the civilian labor force, were unemployed in 1962. This was less unemployment than in 1961—a recession year—and in the next preceding recession year of 1958, but it still was more than the average rate for the postwar period as a whole.

The rate of unemployment¹ has fluctuated considerably in the past 15 years, reaching a low of 2.9 percent in 1953 at the end of the Korean conflict and a high of 6.8 percent in the recession year 1958. Since November 1957, however, the seasonally adjusted rate of unemployment has been consistently 5 percent or higher and has averaged close to 6 percent. Not since the decade of the 1930's has unemployment remained this high for so long a period of time. The 1962 unemployment rate of 5½ percent is particularly disturbing because the rate has held tenaciously to this level many months after a substantial recovery from the 1960-61 business recession.

Unemployment and the Full Employment Goal

The definition of an acceptable level of unemployment—that is, the unemployment rate that accompanies “full employment”—is difficult to determine and may indeed vary from time to time. No universal agreement has been achieved as to the goals in this area which are feasible in a free society, and adequate information is lacking on essential points (e.g., causes of unemployment and the extent and nature of job vacancies).

Nevertheless, even without agreement on a specific minimum rate, there is a national consensus that the economy has been operating well below its full potential utilization of manpower—and also plant capacity—since 1957. One measure of the economy's recent failure in this respect is simply the lower levels of unemployment attained in the preceding years. Of the 12 years between 1946

and 1957, 6 had an average unemployment rate of 4 percent or less, and of the remaining 6 years, 2 had higher rates because of marked business recessions.

An unemployment rate of 4 percent or less has thus been achieved in actual practice, without the application of special measures directed at reducing labor market limitations and without Government assistance on any broad scale in qualifying workers for new jobs. Therefore it seems reasonable to assume that, given a national effort directed at specific aspects of the unemployment problem and accelerated economic growth, unemployment could be reduced well below the 4-percent level without undue strain on the economy.

Another yardstick of the degree to which the current 5½-percent rate falls short of feasible goals is the current experience in other industrialized western countries. Even after allowance is made for differences in concepts and definitions, unemployment rates in many such countries are in the neighborhood of 2 percent.

Upward Trends in Unemployment

This country has had three business recessions during the past decade, and after each one the rate of unemployment remained higher than before the preceding downturn.² In 1953, the rate of unemployment was under 3 percent before it started to increase as business activity declined toward the end of the year. During the subsequent recovery period (1955-57), however, the unemployment rate never fell significantly below 4 per-

* From the chapter entitled “Unemployment and Manpower Utilization” based on materials prepared in the Division of Employment and Labor Force Analysis, Bureau of Labor Statistics.

¹ The rate of unemployment is a more meaningful measure for comparisons over time than the number of unemployed, because the number tends to rise along with the increasing size of the population and labor force.

² Some observers have claimed that the problem has been exaggerated by the concepts and methods used in gathering the unemployment statistics, principally because the totals include some married women and teenagers who presumably do not need jobs. It should be noted, however, that (1) the concepts, definitions, and sampling and other procedures have remained unchanged since 1957 (when unemployment last registered 4 percent) and the data are basically comparable at least for the postwar period and for most purposes since 1940; (2) that married women and teenagers who look for work have always been included in the jobless count and that their needs for employment and income are probably much stronger than is commonly supposed; (3) that unemployment rates have risen among adult men 20 to 64 years of age—a group which is strongly attached to the labor force and whose need for work is obvious; (4) that the rise in unemployment since 1957 is confirmed by data on insured unemployment which do not depend on sampling and which include only experienced workers who have lost jobs through no fault of their own.

cent. Then in 1959 and 1960, after the recovery from the 1958 recession, unemployment dropped only as low as 5 percent (for limited periods) instead of returning to its 4 percent prerecession level. And in 1962, the rate again stayed at a higher plateau, 5½ percent, after recovery than it was prior to the downswing late in 1960.

In terms of human welfare, another disquieting aspect of the unemployment situation since 1957 has been the disproportionate rise in long-term unemployment—the increase in the proportion of unemployed workers remaining out of work for 15 weeks or longer. Between 1957 and 1962, when total unemployment increased by 36 percent, short-term unemployment (less than 5 weeks) increased by only one-fifth, whereas long-term unemployment doubled.

There is a great deal of turnover among the unemployed—that is, a large and continuing movement of previously unemployed workers into jobs or out of the labor force, while other workers lose their jobs and nonworkers start looking for work and thus join the ranks of the unemployed. In terms of manpower utilization, however, this turnover means only that aggregate weeks of idle manpower during the course of a year are spread among many more persons than are unemployed at any given time. Moreover, the extent of turnover is now less than it used to be and spells of unemployment tend to last longer, with consequently greater distress for the workers involved.

Prospects for unemployment improvement in the years ahead depend to a great extent on our ability to achieve a more satisfactory rate of economic growth, but several special manpower trends warrant comment since they will present significant problems in efforts to achieve fuller manpower utilization.

The anticipated rapid rate of labor force growth is one such trend. With the labor force expected to grow at an average rate of 1¼ million a year between 1960 and 1970 (compared with about 840,000 per year during the 1950's), labor supply pressures will increase. Moreover, in the years immediately ahead, growth will be concentrated to a great extent among young persons in their late teens and early twenties, who cannot (unlike many adult women who will be the second largest source of additional workers in the near future) long postpone their entry into the labor market.

Added pressure on the labor force arises from advances in productivity and technology. Automation and other kinds of technological progress affect employment in varying degrees in different situations, under the impact of many influences which are in need of further study. Whatever the overall effect, however, it is apparent that such advances are drastically altering the composition of labor demand, with consequent dislocations and at least temporary unemployment for many workers during the adjustment process.

The continuing outmigration of workers from farm areas is another notable source of pressure on the urban labor market. Inasmuch as most persons of farm background have limited non-farm work experience, their problems in finding and retaining suitable employment in urban communities are often particularly serious.

The Location of Unemployment

Unemployment has never been evenly distributed throughout the economy. There has always been great variation in unemployment by area, industry, and occupation and in the kinds of individuals affected, so that certain communities or groups are hit much more sharply than others. These variations in impact explain the need for special-purpose programs to meet the unemployment problems of particular groups and localities.

In December 1962, a total of 18 major areas, 103 smaller, and 436 very small areas were classified as having "substantial and persistent unemployment." (Areas are so classified when unemployment is currently 6 percent or higher and has been at least 50 percent above the national average for 3 of the preceding 4 years or more than that for fewer years.) Together, these areas accounted for nearly one-fourth of the country's unemployed, but slightly less than one-eighth of the total work force.

The 18 major areas of persistent unemployment were located in 7 States—notably Pennsylvania, West Virginia, and Massachusetts—and in Puerto Rico. Three of the country's principal industrial centers—Detroit, Pittsburgh, and Providence-Pawtucket—are included in the group of major labor market areas with persistent unemployment. In nearly all these communities, the high level of unemployment reflects a major decline or even

virtual disappearance of the area's major industry or industries. In the main, these areas have been goods-producing centers. Among the branches of manufacturing involved are basic producers' goods industries, led by primary metals; some consumer durable industries, including automobiles; and such nondurable goods industries as textiles and apparel. Practically all areas dependent upon coal mining are in distress. The decline in railroad transportation has also contributed to area unemployment problems.

Recently, the Area Redevelopment Act of 1961 and the Public Works Acceleration Act of 1962 have made possible programs of local redevelopment, retraining, and public works which should contribute greatly to a solution of the problem of many areas.

The Groups Hardest Hit by Unemployment

Although no group in the American labor force is completely invulnerable to unemployment, the most serious, persistent, and intractable unemployment problems are those of (1) young people, (2) older workers, (3) nonwhite workers, (4) the relatively unskilled, and (5) workers attached to declining industries or to those characterized by highly seasonal or otherwise unstable employment. For those workers who fall in more than one of these groups, the problems are, of course, intensified.

Young Workers. Unemployment is always higher among young persons than among adults, for a number of reasons. The 14- to 24-year-old group includes a high proportion of new labor market entrants and jobchangers, groups that experience a great deal of transitional (and hopefully short-term) unemployment. Young people starting on their working careers are especially vulnerable to layoffs, because of their lack of seniority and inexperience.

In the past, the high rate of unemployment among young people has often been accepted as

inevitable in a dynamic and free labor market such as ours. But more recently a new sense of urgency is being felt about it because—

1. In 1962, the average unemployment rate was about 13 percent for boys 14 to 19 years of age and 9 percent for those in their early twenties, while for men aged 25 or over it was 4 percent. Young persons under 25 represented over one-third of the unemployed but less than one-fifth of the labor force.

2. The number of young persons reaching working age is growing at an accelerated rate, so that a continuation of exceedingly high unemployment rates among young workers would mean an increasingly large pool of unutilized manpower resources as well as a social problem of greater and greater dimensions.

3. The advances in technology are restricting employment opportunities in unskilled jobs at the same time that huge numbers of youngsters are dropping out of school before they get enough education to meet employers' hiring standards for anything but unskilled work.

Although the rate of unemployment is high among all young people, it is far higher for the high school dropout than for the high school graduate.³ According to the most recent survey on this subject, about 350,000 young people over age 16 dropped out of high school (before graduation) between January and October 1961. And of this 350,000, an estimated 27 percent were unemployed in October 1961, compared with 18 percent of that year's high school graduates.

Rates of unemployment for both dropouts and graduates decline as they grow older and obtain more job experience. However, school dropouts have persistent difficulty in overcoming the handicap of their limited education and continue to suffer considerably more unemployment than graduates. For example, those who had dropped out of school in 1959 had a rate of unemployment in October 1961 twice as high as that for graduates of the same year. Moreover, even when they find employment, the kinds of jobs school dropouts obtain—not only in their youthful years but in later years as well—are much less desirable than those held by high school graduates.

The problems of school dropouts in the labor market are the result of a complex of factors and are not amenable to simple solutions. Many youngsters leave school because of such factors as

³ The latest information on these subjects relates to October 1961. It appears in Special Labor Force Reports Nos. 21 and 22, *Employment of High School Graduates and Dropouts in 1961* and *The Employment of Students, October 1961* (Bureau of Labor Statistics). An intensive study of the work and unemployment experience of young people leaving school is described in *School and Early Employment Experience of Youth: A Report on Seven Communities, 1952-57* (U.S. Department of Labor, Bureau of Labor Statistics Bulletin 1277, 1960). It should be noted that students are counted, just like other workers, as employed if they have a job and as unemployed if they are looking for a job.

inability to learn, difficulty in adapting to the school environment, emotional instability, inadequate motivation, and the limited cultural outlook of their underprivileged homes. These factors, as well as the dropouts' limited education, affect their subsequent unsatisfactory labor market experience.

Older Workers. Workers over 45 years of age have also been troubled by special unemployment problems. Although less likely than younger workers to lose their jobs because they often have the protection of seniority rights, which give them job-retention preference in case of layoffs, older workers who do become unemployed frequently face serious difficulties in getting new jobs. These difficulties are reflected in the fact that, even during recovery periods, the rate of unemployment of older men has not improved as fast as the general unemployment rate—not because of any rise in layoffs among them but because of their slower reentry into employment.

Older workers' skills may be outmoded. Their education, even if relatively adequate at the time they received it, is often limited compared with the higher level of education of younger workers. And their adaptability to new situations may be more limited than that of workers under 40. Furthermore, longtime ties to their community and circle of family and friends usually limit their mobility much more than is true for younger persons.

As a result, long-term unemployment rates are higher for older than for younger adults. In 1962 the proportion of unemployed men who remained out of work for 15 weeks or longer was 4 out of 10 for those 45 to 64 year of age, compared with an average of 3 out of 10 for all age groups.

Nonwhite Workers. Unemployment has been much heavier among Negro than among white workers. In 1962, nonwhites (nine-tenths of whom are Negroes) made up 11 percent of the civilian labor force but 22 percent of the unemployed [and 28 percent of those unemployed for 6 months or longer]. On the average, there were 900,000 nonwhite workers without jobs during 1962, with an unemployment rate of 11 percent, more than twice that for white workers. The white-nonwhite differences were more striking among adult men; in this group, the nonwhite

workers' unemployment rate was two and one-half times higher than that of the white worker.

Nonwhite teenagers have one of the highest jobless rates of any age-sex-color group. In 1962, the unemployment rate for nonwhite boys stood at 21 percent; for girls, at 28 percent. The comparable figure for white boys and girls was 12 percent.

Thus, although there has been substantial improvement in the economic status of nonwhites as a group in recent decades, they remain especially vulnerable to unemployment. In part, this is due to their heavy concentration in occupations particularly susceptible to unemployment—unskilled farm and nonfarm labor, semiskilled production jobs, and service occupations. It is estimated that about half the racial difference in unemployment rates is due to the heavy concentration of nonwhite workers in occupations such as these, where there is a great deal of unemployment. Nevertheless, within each broad occupational group, unemployment is disproportionately high among nonwhite workers partly because these workers tend to be near the bottom of the skill ladder for their occupational group.

Discrimination against nonwhites is also an obvious factor in this picture, difficult though it may be to assess precisely. Its presence accounts at least in part for the limited access of nonwhite workers to the skilled and professional occupations and for their restricted upward movement even within the occupational groups in which they are widely employed. The discrimination on the employment front is undoubtedly fortified and its elimination made more difficult by discrimination in other areas, particularly education. Because of their limited opportunities for education and training, many nonwhite workers have been unable to prepare for skilled or professional occupations and hence could not qualify for them even if the doors of employment were opened.

Unskilled Workers. In each of the groups singled out so far, absence of education and skill looms large as a cause of unemployment. The unemployment rate is always higher among laborers than any other major occupational group. And in 13 of the last 16 years, the second highest rate of unemployment was recorded for operatives and kindred semiskilled workers. A third group for whom the rate of unemployment has been consistently above the overall average in each of the

past 16 years is service workers (not including those in domestic service).

On the other hand, unemployment rates are extremely low among professional and technical workers and among managers, officials, and proprietors—although even these groups are not entirely free of unemployment.

Unemployment rates also have a close though inverse relationship to the level of education—probably due in large measure to the importance of educational preparation in the determination of workers' occupations. With each step up the educational ladder, the rate of unemployment drops significantly.

Industries With High Unemployment. High rates of unemployment among skilled as well as unskilled workers characterize certain industries which are beset by long-term declines in production and employment or are subject to particularly wide fluctuations in employment—either seasonally or in response to changes in the general level of business activity.

Construction has long been a prime example of an industry subject to a high rate of unemployment. In 1962, workers in that industry had an average unemployment rate of 12 percent, more than twice that for all workers. Construction employment is subject to sharp seasonal fluctuations, especially in the northern States, where outdoor work is often interrupted in the winter months. It also varies sharply with the business cycle, and in recent years has tended to decline. Moreover, the industry has a pattern of short-term projects and relatively loose attachment of employees to particular employers. All these factors make for persistently high unemployment rates, even among skilled construction craftsmen.

Unemployment also tends to be high among hired workers in agriculture. The seasonality of the work, disruptions due to unusually bad weather or crop failures, and the uncertainties of migratory farm work are the main factors in the high unemployment rates for those who still regard themselves as farm workers.

The rate of unemployment among mine workers has been higher than the overall average rate in each of the last 14 years because of the marked decline in employment in this industry. And mine workers who have been displaced are particularly subject to long-term unemployment, since

most mining communities offer little in the way of alternative employment opportunities.

Within manufacturing there is considerable variation in the incidence of unemployment among industries and also from year to year, depending largely on the general state of business activity. A major branch of manufacturing with a high rate of unemployment is the automobile industry, which responds sharply to declines in general business conditions and has additional fluctuations of its own. In 1961, unemployment averaged 14 percent among automobile workers, going as high as 27 percent in some months. The industry has some seasonal unemployment; during August or September of each year automobile plants are invariably shut down for short periods for model changeovers. Furthermore, automobile employment has had a downward trend during the past decade as a result in part of technological changes. Even in 1962, a boom year for automobile production, the rate of unemployment of automobile workers stayed about as high as the unemployment rate for the labor force as a whole. Two of the major automobile manufacturing centers—Detroit and Flint—have been on the list of high unemployment areas for a long time, partly because of the general employment decline in the industry though also because of a shift of automobile employment out of Michigan.

Another manufacturing industry group where unemployment has been high is primary metals. In 4 out of the last 6 years (including 1962), unemployment in primary metals has averaged 7 percent or higher, owing mainly to the steel industry's declining employment. Nondurable goods industries which have had relatively high unemployment in recent years include food processing, textiles, and apparel.

Comparison of Unemployment Here and Abroad

Unemployment in recent years has been relatively greater in the United States than in most other industrial countries. Recent studies have concluded that wide differences in unemployment rates do exist and are not due merely to differences in unemployment measurement concepts and techniques. When unemployment rates in other countries are adjusted to conform to U.S. measurement methods, they are usually increased, but they are still consistently below the rates in the United

States. Western European and Japanese unemployment rates have been below the U.S. rates not merely in a single year but in general throughout the full decade of the 1950's.

Differences in unemployment rates between countries are influenced by demographic, institutional, and structural factors as well as by economic ones. Institutional and legal forces in these other countries, which induce firmer attachments between workers and employers even during business declines and tend to produce the "permanent worker," are significant factors in the differential rates. Structural changes—often cited as the reason for higher unemployment in this country—have, if judged by the criterion of relative increases in productivity, been taking place at an equal or even more rapid pace in the other countries, with the exception of the United Kingdom. The considerable structural changes in the economy of these countries have been easily absorbed without creating unemployment, in part because of special mechanisms they have for aiding adjustments in the labor market.

In addition, the much slower rate of increase in aggregate demand and, correlatively, of economic growth in the United States has been a significant factor in our higher unemployment rates. As would be expected and is apparent from the international comparison, structural changes can be accommodated with greater ease in an economy which is expanding rapidly.

Part-Time Employment

One of the notable changes in this country's manpower utilization picture in the postwar years is a marked increase in part-time employment—that is, employment for fewer than 35 hours a week. By 1962, almost a fifth of all nonfarm employment was part time.

Part-time workers are primarily housewives and students who are not available or willing to work full time because of family, school, or other obligations. Another large group is composed of semiretired persons and others who prefer not to work a full week or cannot do so because of ill health or partial disability.

Workers on part time for economic reasons—those who want full-time work but cannot find it or who are employed on jobs which are ordinarily

full time but which have been cut back because of business conditions—represent a failure by the economy to utilize human resources fully. In 1962, such workers numbered 2.3 million, accounting for 20 percent of the total employed part time. If the hours they lost are added to the hours lost by those totally unemployed, the combined rate of idleness in 1962 would represent 6.7 percent of the potential worktime of our labor force.

Although there has been an increase in recent years in the numbers of workers on part time for economic reasons, the great bulk of the increase in part-timers since 1949 derives from those on voluntary part time. For all part-timers taken together, employment rose from not quite 7 million in 1949 to over 11 million in 1962—or by 62 percent. During this same period, full-time employment in the United States rose by only 20 percent.

The growth of part-time employment may be giving an impression of greater utilization of our manpower resources than is actually warranted. Indeed, in the private nonfarm economy most of the increase in wage and salary employment since 1957 is accounted for by a rise in part-time employment, chiefly in the trade and service industries. There has been relatively little change in full-time employment in the private sector in these last 5 years. (In the government sector, specifically State and local government employment, there has been a full-time employment rise, however.)

Other Types of Underutilization

Part-week employment for economic reasons shows "visible" underemployment. Another form of underemployment, difficult to measure, occurs when workers are employed on jobs which do not utilize their full capacity, or on which their productivity is lower than it would be in some other occupation.

In some industries, notably agriculture, there is a chronic tendency toward disguised underemployment even in good years. The rural areas of the country have a relatively high rate of population growth, while the labor requirements of agriculture are declining. The result is an accumulation of surplus workers in agriculture, who have low wage rates, low earnings, and relatively low though rapidly increasing productivity.

Union Disciplinary Powers and Procedures

EDITOR'S NOTE.—*This is the second of four articles based on Disciplinary Powers and Procedures in Union Constitutions (BLS Bulletin 1350), which will be published in the spring of this year. The first article, in the February issue (pp. 125-132), covered grounds for trial of members and local officers. The third and fourth, scheduled for the April and May issues, will cover rights of the accused and influence of the Labor-Management Reporting and Disclosure Act on constitutional provisions for discipline. The bulletin also covers summary discipline, trials at the international level, and discipline of international officers, as well as the topics discussed in these articles.*

II. Trial Powers and Procedures at the Local Union Level

LEON E. LUNDEN*

OF THE 158 national and international union constitutions studied,¹ only 12 did not explicitly grant local unions the authority to conduct trials (table 1), although 10 others gave local affiliates such powers but were silent on procedural details. The remaining 136 constitutions specifically authorized locals to hold hearings, determine guilt or innocence, and assess penalties.

While a few of these (11) were limited to trials of members only, an overwhelming majority (125) applied the local trial provision to both members and officers. Identical trial procedures governed in 106 constitutions. This classification includes some which stipulated only, for example, that "members" were subject to trial, but a close reading of the discipline and related provisions indicated that in this context "members" included local officers as well. Most of the 106 were nevertheless precise in setting forth trial jurisdiction. The remaining 19 constitutions stipulated that members and officers would be tried by the local union, but under different procedures. Twelve of these provided impeachment proceedings against local union officers, commonly on

charges of neglect of duty or absence from meetings. Generally, the officer's status as an officer, not as a member, could be affected by the outcome.

Safeguards in the Trial Machinery

National and international unions have erected a number of safeguards for the early stages of the trial process by defining a variety of procedural steps designed to restrain frivolous actions and abuses of disciplinary powers.²

Typically, any local union officer or member was authorized to file charges against any other officer or member, but the accuser had to write and sign the charges. Preferring charges later found to be false was generally a punishable offense. Unions, as a rule, required that all charges specifically state the alleged violation

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¹ For scope and method of survey, see *Monthly Labor Review*, February 1963, p. 125.

² Selected due process safeguards for trials at the local union and international level will be discussed in an article in the April issue.

and the constitutional provisions or union laws that were supposedly broken. Executive officers individually, or an executive body, were usually designated as receiving agents. A few unions identified an alternate receiving agent if charges were preferred against the person normally designated. Charges could be read to a membership meeting or otherwise published in order to disseminate them to the widest possible group. Their merit could also be given a preliminary review.

The prevalence of these safeguards varied considerably, but provisions stipulating the form of charges (i.e., written, specific) were by far the most frequent, appearing in nine-tenths of the 136 union constitutions that gave details on local union trial procedures. Provisions designating those persons authorized to receive charges were second most prevalent, found in about three-fourths of the 136 union constitutions. Safeguards to assure true charges (i.e., signatures, penalties for false charges) were found in three-fifths. Much less frequent were provisions requiring the publication of charges and their review for sufficiency, found in about a fourth of the 136 constitutions.

Filing Charges. As a general rule, both members and local union officers were authorized to prefer charges against other local union officers and members. A few constitutions, in fact, obligated officers and members to bring charges when aware of violations, as, for example, in the following:

It shall be the duty of any member of a local lodge who may possess information that a member of his lodge has violated the international constitutions to immediately prefer charges in writing to the president of the lodge (International Die Sinkers' Conference, Ind.).

Form of Charges. Of the 136 national and international unions which specified local trial procedures, 125 established the form of charges. Uniformly, accusations had to be in writing, and most constitutions also required that the charges specify in detail the alleged offenses.

In 51 of the 125 unions, written charges were the sole requirement:

Charges may be brought in writing by any officer or member of the local union or of the international union (Office Employees)

TABLE 1. PROVISIONS FOR TRIALS OF MEMBERS AND LOCAL UNION OFFICERS AT THE LOCAL UNION LEVEL, NATIONAL AND INTERNATIONAL UNION CONSTITUTIONS, EARLY 1961

[Members in thousands]

Type of provision	Total studied		Affiliation			
			AFL-CIO		Unaffiliated	
	Un-ions	Mem-bers	Un-ions	Mem-bers	Un-ions	Mem-bers
All constitutions studied.	158	16,923.1	122	14,228.8	36	2,694.3
Constitutions specifying local trial procedures	136	15,996.4	111	13,986.2	25	2,010.2
Members and local officers.	125	15,017.2	102	13,011.4	23	2,005.8
Identical trial procedures	106	12,587.7	87	10,598.2	19	1,989.5
Different trial procedures	19	2,429.5	15	2,413.2	4	16.3
Members only	11	979.2	9	974.8	2	4.4
Constitutions providing for local trials, but not specifying trial procedures ¹	10	836.6	7	229.3	3	607.3
Constitutions without reference to local trials	12	90.1	4	13.3	8	76.8

¹ Includes 9 constitutions that provided trials for members and local union officers at the international level and 1 that provided international trials for local union officers only.

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

The remaining 74 unions required that charges be both in writing and specific concerning the offenses allegedly committed. As acknowledged by the Typographical Union, the requirement for specific charges afforded the accused the opportunity to defend himself:

Accusations of charges must be made in writing by a member of the union in good standing. In all cases, charges . . . shall be sufficiently specific . . . to permit defendant to prepare a proper defense.

Truth of Charges. Some 60 percent (81) of the 136 unions detailing local trial procedures included various safeguards designed to deter reckless, poorly based accusations (table 2). Three unions directed that charges be sworn or notarized; for instance—

I do hereby declare upon my honor as a member of the Order of Railroad Telegraphers, that the charges as subscribed to by me are true, and the same are not made out of malice or prejudice on my part; but with a desire to see the best interests of the Order subserved, and in vindication of the vow taken when becoming a member of this order. (Railroad Telegraphers)

More commonly (24 unions), the requirement was that all charges be signed by the accuser, thereby ruling out trials on anonymous accusations. Under some constitutions, the signature of more than one complainant was necessary to invoke the union's trial machinery. The Street,

Electric Railway and Motor Coach Employees, for example, directed that charges against members be signed by at least 5 members and those against officers by at least 10 members. Locals of the American Communications Association (Ind.) needed the endorsement of 15 percent of their membership to activate the trial machinery except that in locals of 100 or fewer members, at least 20 signatures were required, whereas locals having over 1,000 members needed only 150. Two other internationals required accusers to leave a deposit with the union at the time of filing charges, the deposit to be forfeited if the charges were not upheld.

The power to penalize accusers for issuing false charges was granted in well over half the 81 constitutions that provided the safeguards discussed. Penalties ranged from reprimand (Auto Workers) to expulsion (Meat Cutters). Other punishments consisted of (1) suspension (i.e., Rubber Workers); (2) fines in a fixed amount (i.e., Glass Bottle Blowers); and (3) fines in a varying amount designed to cover the costs of the trial which had resulted from the original charges (i.e., Iron Workers).

Publication of Charges and Preliminary Review. Thirty-nine union constitutions offered an addi-

TABLE 2. SAFEGUARDS RELATING TO FORM AND TRUTH OF CHARGES IN LOCAL UNION TRIAL PROCEDURES, NATIONAL AND INTERNATIONAL UNION CONSTITUTIONS, EARLY 1961

[Number of constitutions]

Safeguard provision	Total studied	Form of charges		
		Written and specific	Written only	Form of charges not stipulated
All constitutions providing for charges in local trial procedures.....	136	74	51	11
Constitutions providing safeguards.....	81	58	21	2
Charges must be signed and accusers subject to penalties for filing false charges.....	26	22	3	1
Charges must be signed.....	24	17	6	1
Accusers subject to penalties for filing false charges.....	23	12	11	-----
Charges must be sworn or notarized.....	3	3	-----	-----
Other safeguards.....	15	4	1	-----
Constitutions without safeguard provisions.....	55	16	30	9

¹ These 5 provisions were as follows: (1) the accuser must sign charges and post a security deposit; (2) charges must be sworn and the accuser is subject to penalties for filing false charges; (3) the accuser must sign the charges, post a security deposit, and is subject to discipline for filing false charges; (4) charges must be signed and accuser is subject to penalties for filing false charges against a local officer; and (5) false accusers are subject to penalties, and charges against local officers must be signed by 15 members.

TABLE 3. PROVISIONS FOR PUBLICATION OF CHARGES AND PRELIMINARY REVIEW BEFORE TRIAL AT THE LOCAL UNION LEVEL, NATIONAL AND INTERNATIONAL UNION CONSTITUTIONS, EARLY 1961

[Members in thousands]

Provisions for publication of charges and preliminary review	Total studied		Affiliation			
	Un-ions	Mem-bers	AFL-CIO		Unaffiliated	
			Un-ions	Mem-bers	Un-ions	Mem-bers
All constitutions providing for charges in local trial procedures.....	136	15,996.4	111	13,986.2	25	2,010.2
Constitutions providing for publication of charges.....	39	4,522.4	34	4,431.2	5	91.2
Charges to be read at membership meeting.....	¹ 34	4,415.0	30	4,350.3	4	64.7
Posted on bulletin board.....	1	9.1	1	9.1	-----	-----
Published in union newspaper.....	1	40.0	1	40.0	-----	-----
Other publication provisions.....	² 3	58.3	2	31.8	1	26.5
Constitutions without publication of charges provisions.....	97	11,474.0	77	9,555.0	20	1,919.0
Constitutions providing for preliminary review of charges by.....	31	3,013.0	26	2,953.7	5	59.2
Membership meeting.....	13	1,259.9	13	1,259.9	-----	-----
Local executive board.....	6	377.9	6	377.9	-----	-----
International president.....	3	193.2	3	193.2	-----	-----
Local president reviewed charges against officers; no provision for review of charges against members.....	3	23.8	2	19.6	1	4.2
Two or more automatic reviews.....	3	1,105.6	2	1,103.1	1	2.5
Other review bodies.....	³ 3	52.5	-----	-----	3	52.5
Constitutions without preliminary review provisions.....	105	12,583.5	85	11,032.4	20	1,951.0

¹ 28 constitutions explicitly required reading of charges to the membership; 6 contained provisions for preliminary review by the membership which implied that charges were read at the membership meeting.

² These 3 provisions were as follows: (1) the membership was to be notified by publication on bulletin boards, the union newspaper, or personal notification; (2) charges against local officers were to be read at a membership meeting but there was no reference to reading charges against local members; and (3) the membership was to be notified but the method of publication was not specified.

³ In 1 of these, the review body was 2 permanent committees; in the other 2, a committee appointed by the local union president.

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

tional safeguard by requiring that local unions bring charges to the attention of the membership (table 3). Nearly half (17) of these also called for a preliminary review of charges.

Reading of charges at a membership meeting was by far the most frequently adopted form of publication, appearing in 34 of the 39 constitutions requiring publication.

Another union provided that charges be published in the union newspaper and a second that they be posted on the union's bulletin board. The Carpenters stipulated that charges would be read at one meeting but that formal consideration of the charges would be delayed until the next meeting, thus allowing for a further dissemination of the accusations to those members who had not attended the first meeting, but

who might be interested in participating in the subsequent proceedings.

The Brotherhood of Locomotive Engineers (Ind.) was 1 of the 17 unions that authorized publication of charges preparatory to a preliminary review of their sufficiency:

The chief engineer of the division shall, at the next regular meeting thereof, after charges are preferred, cause the secretary-treasurer to read said charges in open meeting and appoint a committee of three to investigate and report its findings to the next regular meeting unless further time shall be given.

Altogether, provision for a pretrial review of charges appeared in 31 constitutions, including 14 of those that did not call for publication of charges. In its intent, such a review was somewhat akin to that performed by a grand jury; the preliminary investigation might prove that the allegations had no merit, resulting in their being dropped before trial, and if not, it served as a procedure for gathering all pertinent information for later use by the trial body.

Three unions provided for more than one preliminary review. The Machinists, for instance, first allowed the local union president to evaluate charges, but his decision to drop them was subject to a further automatic membership review. The Typographers and the Watch Workers (Ind.) in effect also authorized a two-step review by a vote on two separate questions: (1) whether the charges as presented were deemed cognizable; and, after investigation by a special committee, (2) whether the charges were worthy of trial.

Composition of the Trial Agency

An unbiased tribunal is fundamental to the fair administration of justice. Therefore, the composition of the trial body, the method of its selection, and the provisions guaranteeing its impartiality are of particular relevance. Unions select trial bodies in different ways, as described in this section. Unlike the courts, however, unions may divest the trial bodies of final decision-making authority, as described in the next section.

Although all 136 union constitutions which provided for trials at the local union level referred to trial bodies (table 4), in 19 they were not clearly defined. Nine of the 19 simply provided for trial

TABLE 4. LOCAL UNION TRIAL BODIES, NATIONAL AND INTERNATIONAL UNION CONSTITUTIONS, EARLY 1961
[Members in thousands]

Trial body	Total studied		Affiliation			
			AFL-CIO		Unaffiliated	
	Un-ions	Mem-bers	Un-ions	Mem-bers	Un-ions	Mem-bers
All constitutions providing local trial procedures.....	136	15,996.4	111	13,986.2	25	2,010.2
Constitutions providing for trial by a local governing body.....	62	7,180.2	56	5,631.4	6	1,548.8
Constitutions providing for trial by local union membership.....	28	1,340.5	20	1,139.7	8	200.8
Membership meeting.....	16	776.5	12	697.8	4	78.7
Committee selected by the membership.....	12	564.0	8	441.9	4	122.1
Constitutions providing for trial by an agent appointed by the local union president.....	15	1,898.9	11	1,884.7	4	14.2
Constitutions providing panel methods for selecting a trial body.....	10	2,153.4	8	2,149.3	2	4.2
Panel selected by drawing lots.....	5	1,282.8	5	1,282.8	-----	-----
Panel elected by the membership.....	3	836.8	2	836.0	1	.8
Other panel methods.....	2	33.8	1	30.4	1	3.3
Constitutions providing for trial by a "committee," no reference to details.....	9	1,710.2	7	1,633.5	2	76.6
Constitutions providing for trial by the "local union," no reference to details.....	10	1,540.2	7	1,374.6	3	165.6
Constitutions providing for trial by other bodies.....	2	173.1	2	173.1	-----	-----

¹ In 1 case, a panel appointed by the local president; in the other, a panel composed of presidents of nearby local unions.

² In 1 case, the trial body was an investigating committee in locals of more than 200 members and the membership meeting in smaller locals; in the other, a 5-member trial committee included 2 persons appointed by the president, 2 by the vice president, and 1 by the accused.

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

by a "committee" of the local union, without prescribing its makeup or selection. The remaining 10 were equally indefinite and usually delegated this authority to the local union:

[The accused] shall be given an impartial trial by his local affiliate as provided in the bylaws of said local affiliate (Leather Workers International Union of America)

All other unions (117) clearly designated who was to serve on the trial board. Most frequently, the local's governing body acted as the tribunal. This was authorized in 62 unions having a combined membership of 7.2 million. An additional 15 unions, accounting for another 1.9 million members, empowered the local president to appoint the trial board. In 77 unions,³ therefore, the local union's executive officers either served on or selected the trial committee, although in most of these another body, usually the membership, had the power to "hand down a final decision.

³ The 19 unions referred to above may also fall into this category.

Among the 62 naming a local governing body to act as trial committee was the Hatters, which provided the alternatives of trial by the full executive board or by a subcommittee responsible to the executive board as follows:

Charges made by a member or officer of a local union against another member or officer of the same local union shall be tried by the local executive board or by a subcommittee to be designated by such board, such committee to report back its findings to the executive board, and its recommendations, if any.

The Transport Workers, on the other hand, placed hearing authority exclusively in the hands of an ad hoc executive board subcommittee rather than in the full board:

In the event that the local executive board should decide that the charges warrant investigation and hearing, the local executive board shall elect a trial committee of three of its own members and shall designate one of its own members to present the charges before the trial committee. The members of the trial committee shall be selected by the executive board specifically for the trial of such charges

The Machinists were among the 15 unions giving local union presidents the power to appoint trial boards. In this union, the hearing agency also conducted a preliminary investigation of the sufficiency of charges:

Whenever charges have been preferred against a member, the president of the local lodge shall promptly appoint a trial committee of not more than five members, one of whom shall act as chairman and one of whom shall act as secretary. The trial committee shall conduct an investigation of the charges and decide whether there is sufficient substance to warrant a trial hearing being held. If the trial committee decides a trial hearing is warranted, the committee shall, within 1 week of its appointment, notify the member of the charges against him and when and where to appear for trial

The remaining 38 unions that defined the trial board either vested responsibility in groups other than local union officers or prescribed different methods for choosing tribunal members. In 28 unions, for instance, local union members were responsible. Sixteen of these unions required that trials be held at regular or special membership meetings, as in the United Textile Workers:

[Charges] will be presented to the executive committee of the local union with complainant present. If sufficient charged grounds are found to warrant a hearing, the member or officer charged will be . . . told when to appear at the next regular meeting, or a special meeting called for that purpose Any member or officer against whom charges have been preferred, who refuses to

appear at the investigation or hearing of the general body shall stand suspended

The remaining 12 unions, including the Stone and Allied Products Workers, authorized the membership to select a committee to hear the evidence:

The local shall elect a trial committee of at least seven members. Election of the trial committee will be held at a regular meeting of the local or a special meeting called for that purpose.

Another 10 unions adopted panel procedures for selecting members to serve on boards. Half of these unions provided for a random selection from among the members present at the trial meeting to establish a roster from which the final trial committee could then be chosen.

Fifty-six unions provided various assurances that trial committees would be impartial. Most frequently, interested parties such as the accused, accuser, and witnesses were automatically to be disqualified from serving on the trial board.

Scope of Local Authority

International union constitutions differed considerably concerning the scope of authority granted to local union trial bodies. Less than half of the constitutions gave the trial bodies final powers to determine guilt and impose a penalty; the majority, on the other hand, reduced trial committees to advisory roles by placing final authority either fully or partially in other local bodies. Overwhelmingly, whether it constituted a trial or a nontrial body, the local union membership was to be the final decision-maker. Only rarely were local union powers to impose punishment limited by supervision and control of the international union, other than through normal appeal procedures.

Constitutions of over half the unions giving details on local union trial procedures specified the vote necessary to impose sentence. Majority votes were most prevalent, but two-thirds votes were also frequently stipulated. Most commonly, a majority or a two-thirds vote of those present at a meeting was required, although counts limited just to those voting were often stipulated. Usually, the same margin was required for expulsion as for lesser penalties. In a significant number of constitutions, however, the size of the required votes differed, invariably requiring a higher vote to expel.

The Trial Body's Power. Only 58 unions, with nearly 6 million members, specifically authorized local trial bodies to make final and binding decisions. Typical was the brief statement of authority incorporated in the constitution of the Aluminum Workers:

If the charges, or any portion thereof, are sustained, then the trial body shall render judgment and impose disciplinary action as provided for in this constitution. If the charges are not sustained, the same shall be dismissed and the accused shall continue to be entitled to full rights of membership or office in the local union.

In an additional 59 unions, affecting 6.9 million members, the trial board's authority was limited to issuing recommendations for ratification by another body. The trial committee was to hear witnesses, gather and summarize evidence, and issue findings concerning guilt and proposed penalties, but these penalties were to be approved by another body, usually the membership meeting. For example:

. . . said committee shall hear all evidence and render judgment in accordance therewith and report such judgment and recommendations to the secretary of the local union . . . The judgment and recommendations shall be submitted to the next regular meeting of the local union, or a special meeting called for such purpose . . . its recommendation shall become effective only if approved by a vote of the majority of the local union membership present at such meeting (Allied Industrial Workers)

Included among the 59 unions were a few that not only prohibited local trial committees from making final decisions but also restricted their authority to recommend penalties. The Boilermakers, for instance, permitted local trial boards to issue findings as to the guilt or innocence of the accused, but such boards could not advise a penalty except to advocate leniency.

As a general rule, the trial body was to submit its advisory report in writing to the nontrial body empowered to issue the final decision so that the report might be read and voted upon. The Firemen and Oilers, for example, provided that the written report be read at the first membership meeting following the trial, and that a vote then be taken to accept or reject the decision. Other unions among the 59 made the choice broader by allowing the ratifying nontrial body, in addition, to modify the report. Additional constitutions established procedures whereby the nontrial body could either consider separately each major

part of the trial agency's report or examine each charge separately, voting first on guilt, and, if guilt was found, voting on penalty.

In addition, in a small number of unions, some or all parties to the trial were specifically authorized to state their case before the ratifying body. Thus, in the American Flint Glass Workers' Union, for one, only the accused was so authorized; in the Brotherhood of Maintenance of Way Employes, both the accused and the accuser, or their representatives, could avail themselves of this right. To these two participants, the Stereotypers' Union added the trial committee itself, so that all three positions might be heard before the final vote was held. Finally, in the Typographical Union the full membership debated the trial committee's report before reaching a verdict. A similar prevote debate was held by the Upholsterers under the following procedures:

After the secretary has read the report of the trial board, the chairman of the meeting shall offer the accused and the accuser the privilege of presenting their respective statements orally to the meeting. The accused shall have the privilege of speaking first, followed by the accuser or the accusers who in turn shall be followed by the accused in final rebuttal. The accused and the accuser shall be granted an equal amount of time, and shall be confined to speaking only on matters germane to the case and presented during the trial. There shall be no other speakers or debate . . . The members shall decide . . . on each of the findings of the trial board in the following order:

1. Guilt or innocence; and
2. Penalty, if any.

Fifteen unions vested local union trial bodies with decisionmaking powers that were partially final and partially advisory. In five unions, for instance, the trial body's decision was to be final on guilt, but only advisory on penalties, as illustrated in the Rubber Workers' constitution:

The findings and recommendations of the trial board shall be reported at the next regular meeting of the local union following the trial board's decision. A vote by secret ballot shall then be taken on the penalty, if any, recommended by the trial board, but the trial board's recommendations on penalties may be amended The local union has no power to change the decision of the trial board with respect to the guilt or innocence of the accused

In seven unions, the report of the trial body was to be final if approved by the nontrial body:

The trial committee shall render its findings and judgment in writing In the event the judgment and findings of the trial committee provide for disciplinary

TABLE 5. FINAL DECISION AUTHORITY IN LOCAL UNION TRIALS, NATIONAL AND INTERNATIONAL UNION CONSTITUTIONS, EARLY 1961

[Members in thousands]

Decision authority	Total studied		Trial body		Nontrial body	
	Un-ions	Mem-bers	Un-ions	Mem-bers	Un-ions	Mem-bers
All constitutions providing local trial procedures.....	136	15,996.4	58	5,945.2	78	10,051.1
Membership meeting or special committee elected at membership meeting.....	89	9,875.2	18	604.8	71	9,270.4
Local executive board or subcommittee.....	29	5,010.4	26	4,382.5	3	627.9
Local executive board or special trial body.....	4	223.8	4	223.8	-----	-----
Special trial committee selected by a panel method.....	2	4.9	2	4.9	-----	-----
Subject to international executive board review and approval.....	1	6.3	-----	-----	1	6.3
Local union.....	7	547.4	6	493.9	1	53.5
Unspecified committee.....	1	76.2	1	76.2	-----	-----
Other.....	3	252.1	2	159.1	1	93.0

¹ In 59 of the 78 unions, the trial body's decisions were advisory both as to guilt and penalty; in another 15, the trial body retained partial final decision-making power; in an additional 3, the final decisionmaking authority varied with the trial body (the membership meeting or an appointed trial committee); and in 1 union, the decisionmaking power varied with the jurisdiction of the local union (wire service or newspaper locals).

² In locals having less than 200 members, the trial body was the membership meeting, and in larger locals, it was an investigating committee. In both cases, the designated body rendered the final decision.

³ In 1 case, final decisions were rendered by the local union president; in the other, the membership meeting was the final decisionmaker except that the local might otherwise arrange its trial procedures should it so desire.

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

action . . . such findings shall be final unless rejected by a two-thirds majority vote of the members by secret ballot at the regular meeting at the headquarters of the local. (Masters, Mates and Pilots)

One of these seven, the Cigar Makers, gave full authority to the local union to discipline, subject to approval by the international executive board. In 3 of the 15 unions, trial committees were empowered to make final decisions except where expulsion or suspension was at issue, in which case the final decision was to be referred to another body.

Where, as in three unions, provision was made for trial by the membership meeting or a specially elected or appointed committee, the latter's findings were subject to review and ratification.

The Decisionmaking Body. In most unions, the final decision as to guilt and penalty rested

with the local union membership or in a special committee composed of members elected or selected at a membership meeting (table 5). In contrast, only 29 unions vested final power in the local's executive board or in a subcommittee of the executive council, while 18 unions create a variety of other arrangements.

In the 78 situations where nontrial bodies were given the power to make final decisions, the membership meeting was most frequently designated (71 cases). Only three constitutions referred final authority to the local executive board, a fourth to the international executive board, and a fifth to the "local union" without defining further which local union body was to employ this authority. Finally, the Barbers Union ordered its trial bodies to report their findings to the local union president who then would render the final decision, and the Jewelry Workers' Union gave final authority to the membership, unless local union bylaws provided otherwise.

Local Powers of Suspension and Expulsion. Only 9 of 136 unions placed restrictions upon the rights of their local affiliates to discipline either by limiting the penalties that could be imposed or by requiring international approval of such actions. In the Railway Patrolmen, Hosiery Workers, and the Stone and Allied Craftsmen (Ind.), for instance, the disciplinary authority of subordinate organizations was limited to the imposition of fines. Similarly, local unions of the American Communications Association (Ind.) were allowed to suspend those members found guilty of a variety of offenses, but were denied the right to levy lesser or harsher penalties. To expel members, the Bricklayers locals needed international executive board approval, as did the Boilermakers locals for suspensions and expulsions, locals of the Tool Craftsmen (Ind.) for fines and expulsions, and those of the Plumbers for suspensions, expulsions, and fines over \$100. Locals of the Molders were required to submit all proposed suspensions or expulsions to their international president for approval.

Human Resources and Economic Development

EDITOR'S NOTE.—*The following two articles are excerpts from Volume XI, Part I—Human Resources, a collection of United States papers prepared for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas. The conference, held in Geneva on February 4–20, 1963, was "called by the U.N. Economic and Social Council as a significant contribution toward the objectives of the United Nations Decade of Development." For reading ease, omissions from the text are not indicated.*

Population and Labor Force

PHILIP M. HAUSER*

ECONOMIC DEVELOPMENT has as its objective the raising of the level of living of a people. The population of a nation, as the human resource, plays a vital role in its achievement. In the contemporary situation, four aspects of population in the less developed areas are operating to retard economic development: The relatively high rate of population growth, unfavorable age structure, unbalanced population distribution, and inadequately educated and trained manpower. All are amenable to control, but they cannot be controlled unless the ways in which they hamper efforts to raise levels of living are fully understood, relevant policies are formulated, and necessary programs put into operation.

High Rates of Population Growth

The standard of living cannot be raised unless aggregate output increases more rapidly than total population. It is clear that an increase in

aggregate output does not result in any increase in level of living if, simultaneously, there is a corresponding increase in total population. The greater the rate of population increase, then the higher must be the rate of economic growth to effect any increase in per capita income.

The implications may be readily seen in examining the United Nations "medium" population projections and data for aggregate income. Latin America, whose population is expected to increase more than 3½-fold during the second half of the century, would have to increase her aggregate product 8-fold to match the 1950 European level of living by the year 2000 and 23-fold to match the 1950 North American level of living. Comparable factors for Africa, which may increase her population some 2½-fold during the second half of this century, would be 13 and 38 to match the 1950 European and North American level of living, respectively. Asia, which may experience a population increase during the second half of this century of some 2.5 billion, would have to increase her aggregate income by factors of 21 and 62, respectively. Calculations of this type demonstrate that contemporary and projected rates of population increase in the economically less developed areas impose stupendous burdens upon them in their efforts to raise living levels. Yet, ironically enough, there is an inverse relationship between the level of living of a region and its current and projected rate of population increase to the end of the century.

Rapid population growth also adversely affects investment to achieve economic growth. Capital to income ratios indicate that to achieve an increment of one unit of income approximately three units of capital are required. Populations increasing at a rate of 3 percent per year, already approximated by Latin America and other parts of the world and in prospect for most of the less developed areas in this century, must therefore achieve a savings of approximately 9 percent per annum, merely to maintain their present low levels of per capita income. Yet many of the economically less developed societies find it difficult to achieve a savings rate of more than 4 to 5 percent.

Rapid population increase, however, is not necessarily a barrier to economic development.

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In North America during the 19th century, for example, a resource-rich unexploited continent, rapid population increase undoubtedly contributed to increased levels of living, for with its low man-resources ratio, rapid population growth contributed to economies of scale. In the less developed areas today, where there is already a high man-resources ratio, rapid population growth contributes not to economies of scale but to diminishing returns.

Unfavorable Age Structure

High fertility areas have larger proportions of young persons than do low fertility areas. In Asia, Latin America, and Africa in 1950, 40 percent or more of the total population was under 15 years of age. In contrast, in Europe and North America, 26 and 27 percent of the total population, respectively, were under 15 years of age. By 1975, the age structures of the economically less developed, because of their anticipated higher fertility rates, will still have larger proportions of their total population under 15 years of age. These relatively large proportions may be interpreted as unfavorable to economic development for at least two reasons. First, the relatively high proportion of young persons below working age tends to reduce labor input per capita and, all other things being equal, tends therefore to reduce income per capita. Second, the larger proportion of young persons in the population requires that a greater part of limited resources be allocated to "social" investment rather than to "economic" investment. That is, the more youthful the population, the greater is the proportion of total savings that must be devoted to the rearing of the young, and the smaller is the proportion of total savings that is available for investment in agricultural or industrial projects designed to increase per capita production.

Many of the less developed areas of the world are in the process of achieving an increase in expectation of life at birth from approximately 30 to 50 years. High fertility under conditions of declining mortality has the effect of retarding economic development not only in being responsible for high rates of total population growth but also in producing an age structure which adversely affects economic growth.

Imbalance in Population Distribution

High urbanization generally is identified with economically advanced areas and the advent of industrialization. Yet despite their relatively low rate of industrialization, the less advanced areas in Asia, Latin America, and Africa contained over 45 percent of the world's residents of cities of 20,000 or more in 1950, whereas Europe (excluding the U.S.S.R.) and North America contained but 41 percent of the world population living in cities of this size. Moreover, during the 20th century, the rate of urbanization of Asia, Latin America, and Africa has exceeded that of Europe and North America.

In the economically advanced nations, urbanization is both an antecedent and a consequent of high levels of living. In the less developed areas of the world today, urbanization is less the result of indigenous economic development and more the product of economic development of a historical imperial system focused largely on a "mother" country. Urban agglomerations in the less developed areas are more the product of the push of population from overpopulated rural areas than the pull of population to urban centers by reason of greater economic opportunity. Furthermore, the recent acceleration in the rate of urbanization in many of the less developed areas reflects the disruption and disorganization produced by the war and postwar political instability creating a troubled countryside and large refugee populations. These areas may be said to be overurbanized in the sense that larger proportions of their population live in urban places than is justified by their degree of economic development. More specifically, compared with the economically advanced nations at comparable levels of urbanization, a much smaller proportion of the labor force in the less developed areas is engaged in nonagricultural and especially mechanized industrial occupations.

To state that a less developed area is overurbanized is to pose its major economic problem: it does not have an adequate economic base to support its urban population by the standards of the economically advanced nations. The fundamental economic problem of the less developed areas is that of achieving increased productivity. The many difficulties which obstruct the attainment of this objective are likely to be exacerbated

rather than ameliorated by the present and prospective rates of urbanization.

Given the present levels of productivity and limited savings in the less developed areas, a major common problem relates to the allocation of resources for the improvement of agriculture, on the one hand, and the development of industrial sectors of the economy, on the other. In many nations, improvement in the productivity of the agricultural sector of the economy may contribute more to rising levels of living than efforts to induce industrialization. The claims of large and growing urban populations and their growing political importance may require disproportionate allocations of limited resources to the development of the urban, rather than the agricultural, sectors of the economy, at the expense of a net increase in product per head. Allocation of resources to social purposes, such as the elimination of shanty towns, piped water, sewerage, better housing, and social services for immigrants, badly needed as they may be, can be made only at the expense of decreased investment in agricultural and industrial productive facilities—investment designed to increase productivity as in tractors and fertilizers or in powerplants, factories, and transport.

The already acute problems of the urban areas in the less developed areas are intensified by the large internal migratory flows of population from rural to urban areas. A number of nations are making efforts to decelerate rural to urban migration by means of programs designed to raise levels of living of the rural population.

Quality of Human Resources

Also operating as a barrier to economic development in the less developed areas is the low general educational level and low skill of the population and most importantly of the labor force. Perhaps the most important single type of investment for achieving economic development is investment in human resources. In fact it is being argued that "investment in the human factor may well have a higher payoff in terms of increased output than does any other input."¹

There is little need for elaborating the importance of increasing the level of education of a population as an important element in achieving

economic development. A major barrier to raising the educational level of a nation, however, may be found in high fertility. As mortality decreases while the birth rate remains fixed, total school construction needs may increase from a doubling to more than a quadrupling. Contrariwise, a decrease in birth rate produces a substantial decrease in school construction needs when mortality is held constant. If the birth rate is decreased along with declines in the death rate, appreciable decreases in school construction needs may be effected.

The gains that may be achieved from a reduction in birth rate in decreasing the investment necessary for educational construction may, of course, also be gained in decreasing the investment necessary for increasing teachers and educational facilities. Similar savings may be achieved on training programs, that is, the teaching of occupational skills.

Concluding Observations

To eliminate the adverse effects of population factors on economic development, it is necessary to dampen rates of total population increase, to effect a more favorable age structure, to achieve a more balanced urban-rural population distribution, and to raise the quality of the population by attaining higher levels of education and training. Each of these goals is attainable, and significantly enough, all may be achieved by a decrease in the birth rate.

A decrease in birth rate seems a simple enough solution. But it is not easy of attainment. The hard fact is that in most of the less developed areas there is neither incentive nor motivation for regulating family size. Moreover, it is not clear that the techniques for controlling fertility are as yet available which can be effectively employed in these areas.

There is a great need, therefore, for increased research both in the social sciences and in the natural sciences to learn more about how to increase motivation and incentive for the regulation of the family size and about human reproduction so that more effective methods for controlling fertility may be developed.

¹ Andrew Gunder Frank, "Human Capital and Economic Growth," *Economic Development and Cultural Change*, January 1960, p. 170.

High-Level Manpower Development

FREDERICK H. HARBISON*

THE WEALTH OF A NATION depends ultimately upon the productive skills and the levels of education of its people. Investment in the development of man should be a primary concern of every nation which hopes to make forward progress in the modern world. Progress, of course, is related to the general levels of education and skills of a country's entire population, but it is even more intimately connected with the development of its strategic or high-level manpower. This paper is concerned with the logic of high-level manpower development in relation to general social and economic growth.

Any definition of strategic or high-level manpower must be somewhat arbitrary. For the purposes of this paper, we shall assume that it includes all persons who have 12 years or more of formal education or its equivalent in skill and experience. Accordingly, in most countries, this definition will encompass all (1) professional personnel including scientists, doctors, engineers, architects, agricultural officers, veterinarians, lawyers, university professors, etc.; (2) senior administrators, executives, managers, and principals of sizable establishments in government, industry, commerce, transportation, etc., as well as political leaders, officers of police and Armed Forces, judges, and senior union officials; (3) subprofessional personnel in agriculture, industry, commerce, and public services, such as nurses, higher supervisory personnel, chief clerks, and technicians of all kinds; (4) highly skilled artisans and craftsmen; and (5) teachers in secondary schools, technical institutes, teacher-training institutions, and vocational schools. In the more advanced countries, primary school teachers would also be classified as high-level manpower, but in most of the less developed

countries, their educational and skill level would generally be beneath the high-level manpower category.

A Measure of Economic Advancement

The stock of high-level manpower possessed by a country is perhaps one of the best indicators of its stage of economic and social advancement. In the most advanced countries, for example, the number of persons with 12 years' education or its equivalent probably exceeds 100 per 1,000 inhabitants. In such countries, primary education for 6 years is both universal and compulsory. Well over 50 percent of the 14-17 year age cohort is in secondary schools, and over 10 percent of the 18-20 cohort is in some form of higher education. In the more primitive underdeveloped countries, on the other hand, only 1 person per 1,000 inhabitants may have 12 years or more of education. In these countries, less than a third of the 7-13 year age cohort is in primary school; less than 1 percent of the 14-17 group is in secondary school; and only a handful of individuals is in higher education either at home or abroad.

In general, the stage of a country's development as measured by these human resource indicators shows a positive correlation with its stage of development as measured by estimates of national income per capita.¹ However, the relative differences between some advanced and less developed countries may be greater in terms of high-level manpower than in terms of per capita national income. Italy, for example, has 39 times more persons per 1,000 inhabitants with 12 years or more education than Nigeria, but its national income per capita is only about 9 times that of Nigeria. Similarly, the U.S.S.R. has a per capita stock of high-level manpower 11 times greater than Egypt, but its national income per capita is only 7 times greater. On the other hand, relative differences in stock of high-level manpower and national income in the United States as compared with Egypt are about the same, while the comparison between the United States and the U.S.S.R. shows a greater relative difference in national income per capita than in stock of high-level manpower.

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¹The data presented here regarding the relationship between human resource development and general economic growth are taken from a study in progress by the author and his associates at Princeton University. This study is entitled "Models of Human Resource Development in Modernizing Societies."

Because of the obvious technical difficulties in constructing accurate measures of the stock of high-level manpower and national income, one should be most cautious in relying too heavily on statistics such as those presented above. The only point being stressed here is simply the importance of using some measure or measures of human resource development when analyzing the problems and prospects of economic and social growth in newly developing countries.

High-Level Manpower and Economic Growth

On the basis of preliminary studies in 30 countries at various stages of development, it is possible to make some tentative generalizations regarding the relationship between high-level manpower and general economic development. Although these generalizations need to be refined, qualified, and used with caution, they may serve as rough guidelines for policy planners. In brief they are as follows:

a. In all developing economies, the rate of accumulation of high-level manpower exceeds the rate of increase of the total labor force. In the United States, for example, the increase in high-level manpower during the past 50 years is certainly more than twice the increase in the Nation's labor force. This has been true also of the Soviet Union. And it is probable that most newly developing countries in their early stages of growth may have to increase high-level manpower at least three times as rapidly as their labor forces if they are to achieve a rise in per capita income of 2 percent or more a year. Within the high-level manpower category, of course, certain critical occupational groups such as engineers, technicians, agricultural experts, and secondary school teachers may need to increase at a much more rapid rate, whereas lawyers and arts graduates should probably increase at a more moderate pace.

b. In most countries, the rate of increase of high-level manpower also will exceed the rate of economic growth. In newly developing countries which already have critical shortages of highly skilled persons, the ratio of the annual increase in high-level manpower to the annual increase in national income may need to be as high as 3 to 1, or even higher in those cases where expatriates are to be replaced by the citizens of the developing

country. In more advanced societies, which already have a sizable stock of high-level manpower, this ratio may be considerably lower. Here again, the ratios of increases for particular occupational groups within the high-level manpower category are even more significant than the ratio for the high-level manpower group in the aggregate.

c. Equally important as the rate of high-level manpower accumulation is the efficiency with which it is employed. In nearly all newly developing countries, highly trained people may be employed on jobs beneath their skill merely because there is a more critical shortage of persons with lesser intermediate skills. Here the patterns of incentives which education generates, the types of persons produced, and the manner in which they become allocated to strategic activities are of supreme importance.

d. The required rate of accumulation of high-level manpower in a developing society is related to change and innovation in economic, social, and political life. A static society usually requires very few persons in the high-level manpower category. But as a static society begins to modernize, it must accumulate high-level manpower of all kinds to staff a new and expanding government service, to introduce new systems of land use and new methods in agriculture, to develop new means of communication, to carry forward industrialization, and to build a system of education. Changes in all these fields require large inputs of persons with professional and technical skills and organizing ability. The more rapid the changes, the more intensive will be the use of high-level manpower.

Accumulation of High-Level Manpower

What are the major processes of human capital formation in newly developing societies? Obviously, high-level manpower may be developed through investment in formal education, but this kind of development takes a long time. For example, it takes 8 to 10 years to make a qualified engineer out of an 8-year primary school leaver. In planning ahead, a country must assume that its potential new additions to high-level manpower stock from domestic sources for at least 15 years in the future are presently in school. Thus, no broadening of the base of primary education will have much effect upon the development of

high-level manpower within that timespan. The rate of accumulation of high-level manpower within the 15-year period can be increased only through investment in education at higher levels of those who are already in school.

Fortunately, however, there are other ways of accumulating high-level manpower and accelerating the rate of its development. High-level manpower may be imported from abroad through a variety of means such as technical assistance, expatriate enterprises, hiring of consultants, or encouragement of immigration. It may be developed in employment through on-the-job training, in-service programs of education, management development seminars, part-time adult education classes, and many other means. High-level manpower may also be developed in employment through better organization of work, the creation of productive attitudes and incentives, and better management of people. And, of course, the development of people is assisted at all levels by improvements in public health and by better nutrition.

The task of the newly developing country, therefore, is to devise a logical strategy of high-level manpower development and to relate this strategy to its broader objectives of economic growth.

Strategy of High-Level Manpower Development

A strategy of high-level manpower development has these essential components: The rational development of formal education; the promotion of effective training of employed manpower; the building of incentives which are appropriate for a productive society; and the temporary use of foreign personnel to fill positions requiring skills which are unavailable within the country. Progress in any one area is usually dependent upon coordinated progress in the other three as well.

A strategy of high-level manpower development involves much more than a program for development of formal education. Indeed, investments in formal education are likely to contribute effectively to rapid growth only (a) if there are adequate incentives to encourage men and women to engage in the kinds of productive activities which are needed to accelerate the modernization process, and (b) if appropriate

measures are taken to shift a large part of the responsibility for training to the principal employing institutions whether they be public or private.

The program for developing formal education, however, is perhaps the most difficult and certainly the most costly element in the strategy. And here, countries with limited resources have some hard choices to make. In most of the newly developing countries, priority must be given to investment in and the development of broad secondary education, and in poor countries, this may require the temporary postponement of achievement of universal primary education. With regard to higher education, most of the newly developing countries may need to give priority to the building of intermediate-level training institutions and to the expansion of the scientific and engineering faculties of universities. A country committed to rapid economic progress needs to make careful assessments of the future demand for various categories of high-level manpower, and to some extent, it will have to shape its program of investment in education to meet this demand. For this reason, education policy should not be left exclusively in the hands of educators or education ministries. It must be influenced at strategic points by those who are concerned with the general problems of economic growth.

The analysis set forth suggests that most newly developing countries might be well-advised to establish some kind of human resource strategy board to plan and coordinate the various programs which are necessary for the rapid accumulation of high-level manpower. Such a board should have broader responsibilities than a statistical agency, a study commission, or a long-range planning organization. Although primarily concerned with policy formulation, the human resource strategy board should be involved in day-to-day coordination of activities of various ministries and employing institutions. It thus would have both advisory and executive responsibilities. Its top staff, therefore, should be neither statisticians, professional educators, nor economists as such. Rather, its key personnel should be strategists—persons who combine political insight with a rational understanding of the processes of economic and social growth in this Century of Science.

Papers From the IRRA Annual Meeting

EDITOR'S NOTE.—*The following six articles were excerpted from papers delivered at the Industrial Relations Research Association meeting in Pittsburgh on December 27–28, 1962. Space limitations prevented reprinting sometimes extensive methodological notes and much of the data; an attempt has been made, however, to select portions of the papers believed to be of particular interest to readers of this periodical. Full texts of the papers will be published in IRRA proceedings, available in May from the association (University of Wisconsin, Sterling Hall, Madison, Wis.). Minor changes in wording and syntax have been made and signs to denote elisions have not been employed. Additional papers from the meeting were presented in the February issue.*

Exportability of the American System of Industrial Relations

CHARLES A. MYERS*

TO WHAT EXTENT is the American system of industrial relations exportable to other countries, particularly to newly developing countries? Cultural anthropologists and other students of comparative societies have long pointed to [the difficulty of attempting to transfer organizational forms from developed to less developed countries]. Despite these caveats, I believe that some elements in our system of industrial relations are "exportable," but this exportability is considerably less than is implicit or explicitly assumed in many of our private and public policies abroad. Certainly the system as a whole is not exportable. What parts, then, are relevant to the needs of developing countries?

Exportable Elements

I believe that more of what management has learned and practiced in the United States is applicable in other industrializing countries than is much of our trade union experience or our governmental system of industrial relations. The

distinctive American contribution is in managerial organization, personnel administration, and human relations. Good management is a critical need in all developing countries, and the American managerial experience in building effective organizations of people is, I think, widely exportable.

Management approaches in dealing with trade unions are less applicable because of the different nature of our unions from those in many of the developing countries. Nevertheless, I have found widespread interest in the concrete experiences of American managements and unions in building constructive relations. However, to the extent that we lack consensus on major issues, or if there is a "hardening of antagonisms" in certain labor-management relationships, we should be reluctant to "export" these features.

While there are some universals in management, especially in organizing human resources, trade unions differ more widely among countries. To be sure, trade unionism everywhere is a response of industrial workers to the environment in which they find themselves, but this environment is quite different in a newly developed country—especially if it has achieved independence since the war. (Trade unions have frequently been

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part of the independence movement and are necessarily often politically oriented and led by outsiders who may also be political leaders or have political ambitions.) The economic functions and objectives of American unions operating in a mature industrial society are not necessarily relevant now in the less-industrialized and economically poorer societies. There are, nevertheless, many features of American trade unionism which commend themselves to consideration by trade unions in developing countries. Examples are the development of leadership from the ranks of the workers as literacy becomes more widespread; union programs for training shop stewards and local leaders; self-financing of union activities through membership dues and the checkoff; the increasing orientation of union activities toward the industry or the labor market; collective bargaining pressures on management at the plant level for more humane and equitable treatment of workers; and finally (but not least) the development of definite procedures for handling worker grievances. Furthermore, American unions have considerable experience in ways of building membership loyalty to the union, not only through collective bargaining services, but also through housing, credit unions, recreational and cultural activities, and even assistance on personal problems.

I question whether the continuing emphasis in some quarters on promoting "free and independent" trade unions in all developing countries, presumably on the pattern of American unionism, is realistic or even helpful. The assumption is that the present American labor movement is a model for the world. But surely our labor movement is a product of the relative freedom for private interest groups in our pluralistic society, as much as it is a factor contributing to this freedom. Other societies reflect different degrees of freedom for interest groups. Therefore, different degrees of freedom for trade unions are found in developing countries as well as in some of the more advanced, just as there are different degrees of freedom for other groups in the society, including management.

The more intimate relationship between unions and political movements or governments in newly independent countries is partly the result of earlier identification of unions with movements for independence from colonial powers and partly the result of other pressures (economic development

plans, Communist threats, etc.) which cause governments to control labor movements more than we have today in the West. Unions have some freedom and influence even within the "one-party" democracies, such as Egypt, India, and perhaps even Ghana. In many developing countries, there is, as Maurice Neufeld has put it, "the inevitability of political unionism." Thus, our view of the trade union as virtually free of government influence or control will be a long time in developing in these countries at their present stage of political and economic growth.

Turning to the Government's role in American industrial relations, I believe that our labor legislation and Government policy in the settlement of labor disputes are also a product of our own experience and, therefore, do not constitute "a model for the world." The Wagner and Taft-Hartley principle of secret ballot and exclusive bargaining representation is found in few other countries. The idea of legislating against "unfair labor practices" is also more or less uniquely American and certainly not copied directly by many other countries. If anything, this legislation is the result of tardy recognition and acceptance of unions by American employers as compared to employer attitudes in other advanced industrial countries. Nor is the Taft-Hartley emergency dispute procedure exportable in the sense that other countries have found or necessarily should find merit in it. Indeed, the American rejection of various forms of compulsory arbitration does not find favor in many other countries where there is more direct government intervention in the settlement of labor disputes. In the United States, we cannot claim to have found the "answer" in dealing with critical collective bargaining situations. Possibly on this score, we can learn something from the experience of other countries, particularly Sweden.

While our Government system of legislation on labor relations may have less exportability value, this is not true of our technical "know-how" in administering a social security system, a public employment service, or in developing adequate labor statistics or manpower data. Here our experience is understandably sought by other countries. Developing countries, in particular, need a strategy for the development of human resources. Technical assistance of this character is more exportable than the total legal framework within which it operates.

Finally, the research orientation of university industrial relations centers has been a model for similar developments in several foreign universities and deserves wider application. Similarly, the close contacts between these institutions and labor, management, and government are found in some other countries, but the gap between the academic community and the industrial relations participants is usually wider than in this country. We have done something to export these aspects of our system, especially through university programs in other countries with government or foundation support, but a continuing effort is needed.

Some Policy Implications

If some parts of [the American system of industrial relations] are exportable, what are the implications for U.S. private and public policies?

1. U.S. firms operating abroad need to send more representatives who can not only get a plant built and operating technically, but who possess the ability to develop nationals in the country to positions of greater competence and responsibility. Management seminars abroad, as well as visits by management teams from other countries to the United States, offer continuing opportunities for American management to present the best of American managerial philosophy and practices in industrial relations.

2. U.S. trade unions can be more helpful in giving technical assistance in the development of grievance procedures, worker education, trade union leadership training, and membership building programs based on various services to members.

The effort (largely under U.S. Government auspices) to bring trade union leaders from other countries to the United States is also useful, if it does not overwhelm them with the variety and size of our present unions, their physical equipment in the form of buildings, office staffs, treasuries, and so forth; however, much more thought and evaluation need to be given to improving this program.

3. U.S. foreign aid programs should continue to give assistance to the development of better management and to the growth of professional

management organizations in other countries as well as to programs to train trade union leaders and to educate workers, especially in literacy and trade skills. With the assistance of the labor attachés in each embassy, information and experience of American trade unions in these programs can be offered. The productivity centers supported by U.S. foreign aid have in some countries attempted overambitious programs, but the direction is right, since it involves an effort to bring together labor and management representatives to increase productivity.

4. U.S. labor legislation and dispute settlement procedures seem less applicable to the problems of present developing countries, with the possible exception of our experience with private voluntary arbitration in the settlement of disputes arising under collective agreements. As for higher labor standards, the International Labor Organization perhaps does enough to spread these, and possibly even too much if developing countries do not realize that economic growth makes possible these higher standards, not the reverse. But in the technical assistance area, better labor statistics, improved social security administration and better employment exchange organization are all useful, if the countries ask for this assistance.

5. Finally, universities and professors in our field have an obligation to respond to requests for assistance in developing better research in educational and other centers in developing countries, and helping to organize conference and extension programs for labor and management representatives. But they need to be prepared to shed some of their preconceptions, to listen and learn as well as to offer advice.

Our American philosophy of democratic pluralism and free association is better left to grow by example out of the way our representatives act abroad, rather than by direct preachment. Furthermore, the longrun U.S. objective of encouraging the growth of free institutions in developing countries will be best advanced if we offer these nations the means of helping them develop in their own ways, not as direct copies of our industrial relations institutions, but in their own forms of democratic pluralism.

New Problems for Collective Bargaining

LEONARD WOODCOCK*

THE GREATEST NEW PROBLEM of collective bargaining involves measures designed to permit the employment opportunities necessary to the political health of a democratic society. How does collective bargaining tackle the problem of work opportunity? It has, of course, been chipping away at it since World War II, with more paid holidays and longer vacations. On top of labor's agenda is the shortening of working time, not to ease the burden of work, but simply to make work available to all who need it. This is a joint task of collective bargaining and legislative action.

The fight for the shortening of working time must be geared to the creation of *new* job opportunities and not simply to the protection of the existing work force. Schemes which depend on attrition may meet the problem in a particular establishment, but not in society as a whole. This fight is meaningful only as it brings into the work force the growing army of young people and brings back the dispossessed.

The new problems are complex and social, rather than specific and industrial. In a society beset by the social problems created by the revolutionary transformation of electronics and nuclearics, the techniques of labor's last generation may have become outmoded.

This possibility may underlie the thinking of those who question the value of the arbitrament of the strike as the decider of collective bargaining questions. Here, however, there seems to be developing a double standard: The strike to which exception is mostly taken is the one in which the particular union is able to exercise its strength effectively. If the reforms which are proposed simply seek to dilute this power without affording a democratic substitute to allow the restoration of an equilibrium, then industry's

postwar subversion of collective bargaining will go on apace. Concern about the new problem of the undesirability of strikes should include all strikes. An economic conflict between an employer and his employees brings pressure upon both, but these pressures are unequal. In theory, the pressures work to the point of bringing both sides to a reasonable solution. The employer's right to bring in stranger replacements vitiates the theory. A democratic society should prohibit the introduction of class warfare into individual strikes by forbidding the introduction of strangers into a private dispute; along with this should go a mechanism for measuring from time to time the wishes of the contestants in a fair and equitable manner.

This brings me to the consideration of old problems in the new context. In-plant working conditions in many industries are still far from ideal. There are in the plants of America commonly accepted invasions of individual privacy which would not be tolerated in any other section of society.

Collective bargaining must be accepted by both sides, and in the context of our grave new problems, both sides must accept the new mechanisms demanded by the solutions needed. If economic action in vital industries is not a private matter, then the process of solution determination is no private matter. The experimental use of third parties is a step toward finding a new way. At the very least, the presence of an experienced third party demands that logic shall clothe the opposing arguments, and this has, on occasion, produced an atmosphere of reason. The gravest threat to handling the basic new problem of collective bargaining is lack of agreement on the facts, or, rather, lack of the facts. The chief tool needed here is an acceptance of on-going study groups which can force a facing of the facts as a first step toward the solutions necessary to the health of the national community.

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Influences of Employer Bargaining Associations in Manufacturing

MAX S. WORTMAN, JR.*

DURING THE PAST QUARTER CENTURY, the organization and operations of employer bargaining associations in the United States have changed considerably. Originally, most employer bargaining associations were involved in the dual roles of negotiation and administration of labor agreements for their memberships. Today these roles have changed and include not only labor relations but also other aspects of manpower management.

As a preliminary probe toward discovering some of the important variables which an employers' association affects in its constituent firms, this study is directed at discovering whether there were differences in various measures of employee unrest between manufacturing firms which are and manufacturing firms which are not members of an employer bargaining association.¹ This investigation is important for the information which it might reveal about possible relationships between manpower management policies and employer bargaining associations with respect to employee unrest and the actual benefits derived from membership in an employers' association.

Apparently the employer bargaining association attempts to achieve uniformity in wages, hours, and conditions of employment throughout the local labor market. Since an employee would know that most employees in his occupation in the local labor market are receiving the same employment conditions, this effort at standardized conditions of employment could conceivably reduce employee insecurity. The hypothesis tested in this study was: Manufacturing firms which are members of the employers' association tend to

have less employee unrest than manufacturing firms which are not members of the association. Several hypotheses were formulated to test the major hypothesis including: Manufacturing firms which are members of the association tend to have (1) fewer work stoppages, (2) less severe work stoppages, (3) higher levels of union security, (4) fewer grievances annually, (5) lower absenteeism rates, and (6) lower turnover rates than manufacturing firms which are not members of the association.

Findings

Analysis of the data on incidence of work stoppages shows no significant difference between association and nonassociation groups in the occurrence of work stoppages, but the lower difference in the frequency of work stoppages in the association firms is significant, although this should be qualified because of the small number of nonassociation firms. (See table, p. 273.)

Although the severity of work stoppages was not significantly different in the association firms as contrasted with the nonassociation firms, there was a consistently lower difference in the association firms in regard to the length of stoppages.

The level of union security was not significantly different for the two groups. However, the association group had a sizable percentage of its firms with the preferential shop.

With respect to the grievance procedure, there was (1) no significant difference between the association and nonassociation groups with regard to the presence or absence of a grievance procedure within the firm, (2) a significantly lower difference in the association group of firms in the total number of grievances annually, and (3) no difference between the groups with respect to the number of grievances reaching arbitration.

The data for turnover rates indicate a lower difference in the association group when compared with the nonassociation group; however, the difference was not significant. Using quartiles, the data in the nonassociation group are higher than those in the association group at all points, continually increasing from the first to the third quartile.

Lastly, the data on absenteeism rates indicate no significant difference between the two groups. However, the association group had a slightly higher absenteeism rate.

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¹ The term "employer bargaining association" is defined as a group of employers who are banded together primarily for labor relations, but who are engaged extensively in other manpower management functions such as staffing, training, employee benefits and services, wage and salary administration, and personnel research. "Employee unrest" is behavior arising out of inadequate satisfaction of the basic drives of employees.

The universe in this study was all manufacturing firms employing 100 or more salaried and hourly workers in the Minneapolis-St. Paul Standard Metropolitan Statistical Area on June 5, 1961.

Since this study was an exploratory probe, little statistical analysis of the data was planned. However, some measure of variability in the data was desired to determine any significant statistical differences between the member and nonmember firms involved in the study. For this purpose, the chi square test of independence at the .95 level of significance was selected.

INDICATORS OF EMPLOYEE UNREST IN MANUFACTURING FIRMS, BY MEMBERSHIP IN EMPLOYER BARGAINING ASSOCIATION¹

Indicator	All firms	Association members	Nonassociation members	Indicator	All firms	Association members	Nonassociation members
WORK STOPPAGES IN 10-YEAR PERIOD²				ANNUAL TOTAL GRIEVANCES PER 100 EMPLOYEES⁷			
All occurrences ³	79	67	12	All grievances ⁸	145	110	35
1 work stoppage.....	49	45	4	Under 0.50 grievance.....	60	46	14
2 work stoppages.....	19	15	4	0.50 to 0.99 grievance.....	9	4	5
3 work stoppages.....	6	4	2	1.00 to 1.49 grievances.....	9	7	2
4 work stoppages.....	2	2	.....	1.50 to 2.49 grievances.....	15	15	.....
5 work stoppages.....	1	1	.....	2.50 to 3.49 grievances.....	11	10	1
6 work stoppages.....	1	.....	1	3.50 to 4.99 grievances.....	9	5	4
7 work stoppages.....	.....	.....	.....	5.00 to 6.49 grievances.....	14	8	6
8 work stoppages.....	.....	.....	.....	6.50 grievances or more.....	18	15	3
9 work stoppages.....	.....	.....	.....	ANNUAL TURNOVER RATE^{7,9}			
10 work stoppages.....	.....	.....	.....	All rates ¹⁰	188	144	44
11 work stoppages or more.....	1	.....	1	Under 9 percent.....	78	66	12
AVERAGE DURATION⁴ OF WORK STOPPAGES²				9.0 to 17.9 percent.....	38	29	9
All durations ⁵	79	67	12	18.0 to 26.9 percent.....	29	20	9
Under 5 days.....	7	7	.....	27.0 to 35.9 percent.....	12	9	3
5 to 9 days.....	18	16	2	36.0 to 44.9 percent.....	12	6	6
10 to 14 days.....	12	9	3	45.0 percent or more.....	19	14	5
15 to 19 days.....	6	5	1	ANNUAL ABSENTEEISM RATE^{7,11}			
20 to 24 days.....	10	9	1	All rates ¹²	134	104	30
25 to 29 days.....	3	3	.....	Under 0.50 percent.....	43	32	11
30 to 34 days.....	9	6	3	0.50 to 0.99 percent.....	16	12	4
35 to 39 days.....	5	5	.....	1.00 to 1.49 percent.....	17	12	5
40 to 44 days.....	1	1	.....	1.50 to 1.99 percent.....	14	13	1
45 to 49 days.....	2	1	1	2.00 to 2.49 percent.....	7	5	2
50 days or more.....	6	5	1	2.50 to 2.99 percent.....	6	6	.....
UNION SECURITY				3.00 to 3.49 percent.....	13	10	3
All types ⁶	169	136	33	3.50 to 3.99 percent.....	6	4	2
Preferential shop.....	17	⁶ 17	.....	4.00 to 4.49 percent.....	4	4	.....
Union shop.....	137	107	30	4.50 to 4.99 percent.....	2	2	.....
Agency shop.....	1	1	.....	5.00 to 5.49 percent.....	2	2	.....
Maintenance of membership.....	14	11	3	5.50 to 5.99 percent.....	3	2	1
				6.00 percent or more.....	1	.....	1

¹ Based on responses during June-July 1961 from 216 manufacturing firms, of which 162 were association members.

² Stoppages occurred during the period 1951-61.

³ 38 firms are nonunion, 98 had no stoppage, and 1 did not answer work stoppage questions.

⁴ Average length of stoppage in calendar days.

⁵ 38 firms are nonunion; 9 firms returned questionnaire but sent no contract.

⁶ Were primarily printing, publishing, and milk products firms.

⁷ For production and maintenance employees during June 1960-June 1961.

⁸ 36 firms had no grievance procedure since they were not unionized; 2 firms, nonunion, returned questionnaire but did not respond to grievance

question; 33 firms also returned questionnaire but were unable to determine total number of grievances.

⁹ The net turnover rate equals total number of accessions or separations (whichever is lower) divided by average yearly employment times 100. See Dale Yoder, *Personnel Management and Industrial Relations*, 5th ed. (Englewood Cliffs, N.J., Prentice-Hall, Inc., 1956), p. 745.

¹⁰ 28 firms did not answer the turnover rate question, 17 of them because they had no records.

¹¹ The annual absenteeism rate equals total days lost divided by scheduled man-days (assuming 252 working days) times 100.

¹² 82 firms did not answer the total days lost question, 58 of them because they had no records or records were insufficient.

Conclusions

There may be relationships between membership in employers' associations and employee unrest in member firms.² Several reasons could be posited for the possible effects which the employers' association may have upon employee unrest. First, the association may reduce employee unrest through continuing advice and information from its staff on many phases of manpower management policy. Second, through surveys of wages and personnel policies and practices and through newsletters, the association may indicate to the

² Another section of this study indicated a statistically significant lower difference in member firms with respect to decisionmaking on labor relations policy and a statistically significant higher difference in manpower management program costs. The median cost in the association firms was approximately double that of the nonassociation firms.

member firms the relative employment conditions in other local firms and perhaps in the same industry. Thus each member firm may attempt to keep employees satisfied by offering equivalent terms and conditions of employment. Third, information on techniques designed to reduce employee unrest may be sent to all members. Fourth, the association may help by measuring employee unrest in the particular firm on a continuing basis and encouraging it to adopt techniques to reduce unrest. In addition, research on morale by the association may aid the member firm. Fifth, firms having better employment policies and programs may join the association. Therefore, the good employment relations program in a member firm may become even better with the assistance of an effective employer bargaining association.

Choosing the Objectives of National Wage-Price Policy

LLOYD ULMAN*

THE INNOVATIONS of the Council of Economic Advisers [in enunciating guideposts for judging whether wage-price decisions were in the national interest] lay in including numerical data on annual rates of growth in output per man-hour over various periods and in various sections of the economy and in specifying desirable departures from the "general guide rate" which, while consistent with stability of the general price level, would reconcile the general guideposts with "objectives of equity and efficiency." Discussion of the first of these additional objectives deals with the distribution of income and the bargaining power of certain groups of low-wage workers; the discussion of the efficiency objective deals chiefly with allocational criteria and union-management devices to raise productivity.

The Objectives of Equity and Efficiency

It has been suggested that extra large wage increases ought not be allowed in all cases of labor shortage for, as the British White Paper on *Incomes Policy* maintains, "In a fully employed economy, there are bound to be scarcities of many kinds of labor." Hence, in fact if not in theory, the allocational guidelines, which are designed to promote the objective of efficiency, may not, under conditions of full employment, satisfy the requirements of price stability. The encouragement given to joint private efforts to increase productivity through the provision of monetary rewards might also operate at cross-purposes with the general (overall productivity) guidelines—and with the specified allocational criteria as well, although increases in compensation in exchange for abandonment of inefficient working arrangements may result in lower costs than would below-standard wage increases or even wage cuts. Pro forma union-management arrangements or the establishment of loose production standards must be distinguished from genuine and efficient efforts to reduce costs.

The allocational guidelines could, if given priority, restrict the scope of some of the Economic Report's concessions to the objective of equity,

which have been widely emphasized by trade unions. While the Council's statements that "there is nothing immutable . . . about the distribution of the total product between labor and nonlabor income" and that "collective bargaining within an industry over the division of the proceeds between labor and nonlabor income is not necessarily disruptive of overall price stability" may be accepted, such restricted bargaining could result in wage behavior violative of the allocational criteria. So could wage increases which might increase the share of the unionized sector of the labor force without raising the general level of prices. Various empirical studies have indeed failed to reveal a significant positive association between changes in labor's share and union strength (as measured by degree of organization), but no one can predict whether this lack of association would persist if employers were denied access to price increases.

Another question in the realms of equity and income distribution concerns the admissibility of wage increases to compensate for increases in the cost of living—some of which might have been produced by price increases justified by guideposts.

The productivity principle, of course, does not rule out redistribution away from wages since it is used as a guidepost for *maximum* wage increases. In some instances, however, the price behavior guideposts, as they now stand, may work inequity upon employers. Even if wage increases are exactly those required to keep the wage share stable, the share of profits could decline in an industry if its rise in productivity is associated with capital deepening and if the latter entails increased depreciation per unit of output.

One of the equity guideposts points the way to extra-generous wage increases in industries "in which rates are exceptionally low compared with the range of wages earned elsewhere by similar labor, because the bargaining position of workers has been weak in particular local labor markets." However, under the allocational rules, low-paid workers in markets characterized by disequilibrium due to excess supply are not entitled to such favorable treatment, but only workers in markets where wages are depressed by monopsonistic bargaining power of employers and where wage increases need not and should not induce employ-

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ers to raise prices and reduce output and employment. Distinguishing the two low-wage situations and, in monopsony situations, determining by how much the wage increase could appropriately exceed the general guide rate could present sticky problems of measurement. Yet failure to make the indicated distinction could admit an infinite variety of "inequity adjustments," "catch-ups," and similar tributes to the ingenuity of man in time of great national emergency.

Enforcing the Policy

These and similar problems will have to be faced up to if we are really in earnest about pursuing this type of multiobjective wage policy. They are not insoluble—at least they are resolvable on the level of policy—but it is evident that questions of interpretation and application in specific cases will remain and, therefore, that a complex wage policy cannot be self-enforcing. In addition, one must rate as doubtful a priori the prospects of appeals to self-restraint, especially when addressed to participants in decentralized and frequently competitive bargaining and price determining systems.

I should like to suggest that the type of enforcement required depends upon the nature of the wage restraint program—and that the latter entails the imposition of an ordering among the stated economic objectives of full employment, economic growth, price stability, and balance of payments equilibrium. Thus, if high priority is assigned to overall price stability as well as full employment, the indicated wage (or wage-price) policy would have to be of indefinite duration and economywide in the scope of its intended application—preferably with formal, legislated machinery to interpret and administer the policy. Such machinery would have to include union—and therefore industry—representation. Even during wartime, unions forced the abandonment of wage stabilization policies and private enterprise obliged the Government to lift price ceilings; and the prospect of "permanent" guideposts in peacetime would a fortiori tempt erosion, if not outright defiance. Indeed, a tripartite policy of indefinite duration would probably politicize collective bargaining, price determination, and the distribution of factor incomes to a degree greater than most people would contemplate, let alone approve.

Finally, the objective of overall price stability itself may be inconsistent with the objective of achieving equilibrium in the balance of payments under existing guideposts; this would be true if it should be discovered that our chief export industries' rates of increase in productivity were less than the overall rate.

If, on the other hand, priority were assigned to securing balance-of-payments equilibrium in addition to full employment, a wage stabilization policy could be narrower in scope and probably (in the light of international cost movements and other measures taken by the United States or in prospect) of limited duration. The loss in terms of institutional freedom and independence would be minimized; many industries that would be subject to the policy have been traditionally subject to informal pressure mediation. If the specific-industry productivity criterion were adopted, the objectives of allocative efficiency and of equity as well would be sacrificed, in some instances, for the duration of what is hopefully a temporary period. Effective restraint in some of the high-wage, high-unemployment industries covered by such a program would, however, imply conformity, rather than opposition, to reasonable allocational criteria. The freedom of employees in uncovered industries to secure what wage increases they could would also presumably work inequities. But the system of free collective bargaining has worked inequities of its own; and, while two wrongs don't make a right, they not infrequently have the effect of abating indignation. Finally, stability of the overall price level could not be guaranteed by a policy which seeks control over only one of its component sectors, although consolation might be derived from the absence of a theoretical commitment to the existing distribution of income.

The downgrading of overall price stability as an end in itself would represent a hard choice among competing objectives. But the two principal alternatives—free collective bargaining and full employment—alone enjoy the sanction of legislative affirmation. Economists should have no objection to practicing what they preach about the need to make choices. And it is a hopeful note that there are some policymakers who assign priority to both full employment and free collective bargaining, recognizing that the associated gains in productivity and output will act to dampen inflationary pressures.

Interplant Transfers in the Automobile Industry

PHILIP TAFT*

ALTHOUGH collective bargaining agreements provide some job security to older and longer service workers through seniority systems, no possibility for exercising job rights exists in plant and departmental closings. To provide some job opportunities, a number of contracts give preferential employment rights to the affected employees at another plant of the company.

Enforcement of Preferential Rights

Because of the changes in employment and shifts of operation by the large companies in the automobile industry, for example, the provisions governing seniority and preferential job rights have been extensively developed. The 1961 contract of General Motors with the United Automobile Workers (UAW) provides that—

For 18 months after production begins in a new plant, the corporation will give preference to the applications of laid-off employees having seniority in other plants over applications of individuals who have not previously worked for the corporation, provided their previous experience in the corporation shows that they can qualify for the job.

Such employees retain their seniority in the plant "where originally acquired" until they establish seniority in the new plant.

"If the transfer of major operations between plants results in the permanent release of employees with seniority," the issue can be raised with the company, and a solution in accordance with the provisions giving preference to employees with seniority in a new plant will be made. Employees transferred under this provision retain their full seniority and, if the distance is at least 50 miles, are entitled to a relocation allowance of \$55 to \$580, depending upon the distance between the plants and upon marital status; the applicant must change his residence permanently.

A similar provision is found in the contracts between the UAW and the Chrysler Corp. and the Ford Motor Co. It has, at times, been a source of difficulty, but the international union has not wavered in its insistence that the contract be obeyed. A well-known example of the prob-

lems of enforcement arose when the Chrysler Corp. merged its stamping operations at the Nine-Mile plant in Detroit. This was a new plant and the workers that were directly employed held "date of entry" seniority. The local union at the Nine-Mile plant opposed the transfers, but both the corporation and the international insisted that the provisions in the contract be obeyed. An unsuccessful attempt to decertify the international as bargaining agent was initiated, but it was thrown out by the National Labor Relations Board on the ground that the bargaining unit was nationwide in scope.

Local employees often oppose transfers, although such opposition may actually be the result of misunderstanding. An example of the latter was the reaction of the workers in the Lincoln engine plant of the Ford Motor Co. in Lima, Ohio. The job had been transferred from Dearborn, Mich., and only 16 out of 439 employees expressed a desire to transfer. The Lima plant was new and the union's request for bargaining rights was rejected on the ground that no work was to be transferred; the union, therefore, had to organize the plant *de novo*. During the organizing campaign, reports that workers were to be transferred from other Ford operations to Lima were spread, but the union assured the Lima workers that no such step was planned. On June 2, 1957, the union won the bargaining election, and on September 27, it learned that the company planned to transfer work from the Dearborn engine plant to Lima. Under the contract, employees have the right to follow transferred work with full seniority earned at their prior place of employment. This meant that the workers from Dearborn would have higher seniority than the new employees at Lima. The Lima employees believed the union guilty of bad faith and applied for a decertification election to the National Labor Relations Board; the petition was rejected on the ground that the national Ford agreement was in effect. At the insistence of the international union, the local finally receded from its opposition and accepted 16 transferees.

Under the Ford contract of 1958, employees who have exhausted their seniority within their seniority unit can be offered available work at any

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of the plants "in the local labor market area as defined by the State Employment Security Commission of the State in which the plants affected are located."

In addition, the firms in the automobile industry have incorporated clauses giving laid-off employees preference in hiring over new employees. Under the Chrysler agreement, employees who accept work in another plant of the corporation "start work as new employees in the plant. If they are recalled to work in their former plant, they may elect not to return, in which case their seniority in their former plant shall be terminated. If they elect to return to their former plant, their seniority in the plant from which they were recalled shall be terminated."

Extent of Transfers

According to officers of the UAW, thousands of workers have availed themselves of the opportunity to transfer under the provisions of the contract with the motor companies. In the early 1950's, a large group of Chrysler workers moved from San Leandro to Los Angeles, Calif., although the precise number is not available. During the same period, between 400 and 500 workers shifted from a Chrysler plant in San Francisco to one in Los Angeles. When the Newark, Del., tank plant was reorganized into an assembly plant in 1957-58, many workers (600) transferred from Detroit, despite the uncertainties that existed among members of the union and the limited housing available.

A large shift of workers also took place when Chrysler's Evansville, Ind., assembly and body plant was relocated in St. Louis, Mo., in 1957. When union officers first sought confirmation of the report of a contemplated move, it was denied by the corporation. Subsequently the information was released and the union demanded that workers be allowed to move with the job according to the contract. There were roughly between 4,000 and 5,000 seniority workers at the Evansville plant, and more than half of the number shifted to St. Louis. Two years later, more than 600 out of about 900 workers transferred from Detroit to St. Louis when the Dodge Dart operation was moved to the latter city. The union claims also that over 800 workers moved from Detroit, Mich., to Twinsburg, Ohio, and that all the 260 workers

employed in the Marysville, Mich., plant transferred—200 to Mopar and 60 to Delaware. Employment in the Chrysler Corp. has been declining sharply, and it undoubtedly influenced the response.

Propensity To Transfer

Willingness to move is influenced by employment opportunities existing in the residence area, the outlook for permanent employment elsewhere, and a variety of personal considerations which differ among individuals. Under normal conditions, the highly mobile are at the margin of decision; they are the ones who will respond to relatively minor incentives. As one moves up the range, he encounters workers with a declining propensity to move. Age composition of the plant's work force, available housing at the point of the new opportunities, and family position—such as schooling—may influence the decision. In addition, any firm planning a shift in its operations to another community faces the need for mollifying public sentiment. It will, therefore, try to minimize the effect of a plant shutdown and will seek to assure the community that another concern will take over the abandoned properties. Such announcements inevitably affect the propensity to transfer.

In March 1958, the Ford Motor Co. closed down its plant in Somerville, Mass., and offered the 1,344 employees work at Lorain, Ohio, and at the Mawah, N.J., assembly plant. Thirteen percent accepted employment in Lorain and less than 2 percent (25 workers) in Mawah. Union officers were asked to comment on the failure of more workers to avail themselves of transfer rights, especially in view of the character of the labor market in Somerville. It is also significant that six times as many workers transferred to Lorain, a much longer distance from Somerville than Mawah. The overall low transfer rate was, according to the union, influenced by the high age of the Somerville work force. A high correlation between the age of an automobile plant and the age of the work force is likely to exist. The automobile industry is, from the point of view of the worker, a desirable source of employment; its wages and fringe benefits are among the highest in industry. Consequently, there is a tendency of workers to remain attached

to it once they have been employed. It leads to a perhaps higher correlation of age of plant and work force than in other industries.

A larger percentage of employees accepted transfers when the Memphis, Tenn., assembly plant shut down in June 1958. All 1,124 hourly employees were offered work at the Lorain and Cincinnati automatic transmission plants, and a number of skilled employees were offered work at the Sheffield, Ala., foundry and the Nashville, Tenn., glass plant. Approximately 40 percent accepted work at Lorain and 2 percent in Cincinnati. A few others transferred to Sheffield and Nashville, and a number retired.

In a shutdown of some operations in a Ford plant in Monroe, Mich., 1,567 employees (the total number) were offered transfers to the new plant in Sandusky, Ohio. Three hundred twenty-four, or 20 percent, accepted transfer; a majority of the remaining were "soon utilized in other jobs at the Monroe plant."

When the company closed its operations at Iron Mountain, Mich., in 1951, employment was offered to the 1,323 affected workers in other company plants. About 25 percent accepted transfers, 18 percent initially agreed to move but later refused to work in other plants of the company, 25 percent were employed by the firm that took over the plant facilities, and 6 percent retired.

The closer the new plant is to the old one, the greater the tendency of workers to accept transfer. The shift of the standard transmission and radiator job from the River Rouge Ford plant to Livonia, Mich., a distance of 18 miles, was accompanied by an 85-percent acceptance of transfer by eligible workers. An even greater per-

centage, between 98 and 99, accepted transfers from the Long Beach to the Los Angeles plant after the complete shift of operations to the new location.

Inducements to Shifting

According to Ken Bannon of the Ford Department, UAW, a mere announcement of the existence of unfilled jobs is not sufficient to induce transfers. In order to elicit a fairly large response, the union and management must cooperate in presenting the information to the workers whether employed or on layoff. The rate of transfers may be closely correlated with the efforts made by the company and the union to induce shifting. In April 1954, Ford's Richmond, Calif., operations were transferred to Milpitas (near San Jose), 60 miles from the old plant. The company was anxious to procure experienced workers for its new location, and under the April 2, 1954, transfer agreement between the union and the company, an "additional full-time representative will be accorded the union for a period totaling 4 months. He will serve as special coordinator for the union on matters concerning the transfer from Richmond to San Jose." The task of the representative was to seek housing for the employees moving to the new location. As a result of the efforts made, between 1,300 and 1,400 employees, or 98 percent of the total involved, shifted to the new plant. The Ford Co. also cooperated in postponing the closing down of its Hamilton, Ohio, plant at the request of the union until jobs were available at the Fairfax plant, 18 miles away. Almost all workers accepted transfer.

Flexible Versus Compulsory Retirement Policies

FRED SLAVICK AND JOHN W. MCCONNELL*

A GROUP of social scientists at Cornell University has been gathering information about retirement age policies and practices being followed throughout the country, including (1) the factors associated with particular policies utilized by employing organizations, (2) the experience and satisfaction of organizations and individuals under various approaches to retirement, and (3) the content, nature, and effectiveness of programs preparing employees for retirement. Except for the followup of nonrespondents, collection and processing of data dealing with retirement age policy have been completed and analysis is now under way.¹

The findings presented here are based on a partial analysis of the responses to our first subsample. These numbered 473, or 45 percent of the plants in this first group. Fairly rough statistical techniques were used. A complete analysis of this first subsample will be made with a view toward utilizing the findings to establish hypotheses and perhaps draw some tentative conclusions. The analysis of the responses to the second subsample, along with the data from our 20 field studies, will use more rigorous statistical measures of association to test the hypotheses established through the analysis of the first subsample. Thus, the results presented here are more in the nature of a progress report rather than a complete statement of the preliminary findings.

Analysis thus far has focused on ascertaining the independent variables associated with the following dependent variables: (1) presence or absence of a pension or profit-sharing retirement plan; (2) general character of the retirement age policy; and (3) extent to which employees subject to policies which are nominally compulsory are, in practice, exempted from the rule and permitted to continue at work beyond the compulsory age. We have centered our attention on the following independent variables in relation to the three dependent variables: size of the local plant; size of the entire company of which the plant is a part; the presence or absence of a collective bargaining agreement in

the plant; and classification of the plant as part of a manufacturing or nonmanufacturing industry.

We have defined the normal retirement age as the age at which an employee is eligible to retire without reduction in his benefit because of age. Of 346 establishments with pension or profit-sharing plans which provided information on this subject, 314 had a single age for all categories of employees covered; of these, 287 used 65 as the normal retirement age.

Two hundred and forty-seven plants with some type of compulsory age policy provided information concerning the age at which employees are required to retire. In 194 cases, the same age applied to all employees in the plant. In 53 cases, different compulsory ages applied to different categories. Sixty-five is the predominant compulsory age among the organizations in our subsample.

The retirement age policies of employers responding to our questionnaire were classified into six types: (1) compulsory at normal retirement age; (2) flexible with no upper age limit; (3) compulsory at an age later than normal retirement age; (4) flexible for some general categories of employees and compulsory at normal retirement age for other categories; (5) compulsory at normal retirement age for some categories, and compulsory at an age later than normal retirement age for other categories; (6) flexible for some categories, and compulsory at an age later than normal retirement age for other categories.

Our preliminary analysis confirms the fact that plants which do not have a pension or profit-sharing plan tend overwhelmingly (94 percent of the cases) to have a completely flexible policy, and that establishments with only a profit-sharing plan are very likely to take a similar approach. We have, therefore, restricted our initial analysis to those plants which have formal pension plans

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¹Data were collected and processed from a questionnaire survey of employing organizations and from field studies of 20 employing organizations. The sample of establishments used in the study is a weighted random sample of all business and industrial units with 50 employees or more reporting to the Bureau of Old-Age and Survivors Insurance in March 1956, stratified by size. Railroads, nonprofit organizations, farms, households, and government agencies were not included in the universe of reporting units from which the sample was drawn. Mail questionnaires were sent to two independently drawn subsample units of employers.

in order to ascertain more readily the possible importance of the independent variables.

Among the six types of policies, all except Type 2 involve at least some "compulsion" for all or certain categories of employees. Type 2 thus contains the greatest degree of flexibility, with Type 1 involving the greatest degree of compulsion. Our discussion is concerned with the factors which may be associated with the use of these two particular policies.

Policy Type 2

Of the 311 plants with a pension plan responding to our questionnaire, 75, or 26.7 percent, had a Type 2 policy.² When the relationship between nominal retirement age policy and each of the independent variables is examined, size of entire company appears to be the only one to emerge as significant.³ The percentage of plants which have a completely flexible policy decreases as size increases, ranging from 64.7 percent in the size class 50-249 to 10 percent for the class 10,000 and over.⁴ The most important break occurs between sizes 500-999 and 1,000-9,999. The difference between sizes 50-249 and 250-499 (21.8 percentage points) is not quite significant at the 5-percent level. However, the difference between sizes 50-249 and 500-999 is significant, as is the difference between class 50-249 and the next two higher classes combined.⁵

The analysis of our data thus far indicates that unionization appears to make no difference as far as the prevalence of Type 2 policies is concerned.

A rough check on possible association between the prevalence of flexible policies and type of industry as broadly dichotomized into manufacturing and nonmanufacturing did not reveal any significant differences.⁶

Policy Type 1

Turning to an analysis of the Type 1 policy, a somewhat different picture emerges, with size of entire company seeming to play less of a role. Given a choice between the degree of compulsion represented by Type 1 and Type 3 policies, factors other than size take on added significance. Examining size in relation to the prevalence of

Type 1 policies, we find the only significant differences to be those between category 50-249 and 1,000-9,999 and between category 1,000-9,999 and 10,000 and over. However, when union status is held constant while size is varied, all differences by size disappear in the nonunion group. When size is held constant, the nonunion group with a Type 1 policy exceeds the union group in the extreme size categories (50-249 and 10,000 and over). If there is an association between the union-nonunion variable and frequency of Type 1 policies, it is likely to be found in the extreme size categories.

Scrutiny of the manufacturing-nonmanufacturing variable indicates that this may be of importance. When all size categories are lumped, the nonmanufacturing group with Type 1 policies significantly exceeds the manufacturing category. Moreover, a greater percent of nonmanufacturing firms appears in all size categories.

Frequency of Exceptions

Companies with compulsory policies frequently make exceptions and permit employees who have reached the compulsory retirement age to continue at work for varying periods of time. We asked employers who indicated they had a compulsory policy to provide information as to the number of employees in each plant who reached the compulsory retirement age since January 1, 1956 (or since the present compulsory policy was instituted, if later than that date), and how many of such employees were excepted from the rule and permitted to continue at work.

² For the remaining plants with pensions, the distribution was: Policy 1—40.8 percent; Policy 3—19 percent; Policy 4—5.1 percent; Policy 5—7.4 percent; Policy 6—1 percent. This distribution and the others in this article refer to our weighted sample, not to the estimated actual distribution for the country. In the later stages of our study, we shall attempt to make estimates of actual distributions.

³ Throughout this analysis, statistical significance is measured by the *t*-test at the 5-percent level.

⁴ Five size classes were established: 50-249, 250-499, 500-999, 1,000-9,999, and 10,000 and over.

⁵ We also explored the possible association of plant size (as distinct from size of company of which the plant is a part) with frequency of Type 2 policies. No differences of interest emerged either when size of plant by itself was compared with policy, or when size of entire organization was held constant while local size was varied.

⁶ In the later stages of the study, the manufacturing-nonmanufacturing groupings will be broken down into finer industrial classifications as a means of investigating the possible importance of the industry variable. Similarly, it is hoped that the field studies will provide greater insight as to the possible influence of the union status variable.

PERCENT OF EMPLOYEES REACHING THE COMPULSORY RETIREMENT AGE WHO WERE EXCEPTED FROM THE COMPULSORY RETIREMENT RULE UNDER VARIOUS TYPES OF COMPULSORY RETIREMENT POLICIES ¹

Type of compulsory policy ²	All plants	Plants with no employees excepted		Plants with 1-9 percent of employees excepted		Plants with 10-29 percent of employees excepted		Plants with 30-49 percent of employees excepted		Plants with 50 percent or more of employees excepted	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total-----	174	103	59.2	15	8.6	30	17.2	11	6.3	15	8.6
Type 1-----	110	60	54.5	11	10.0	22	20.0	7	6.4	10	9.1
Type 3-----	36	26	72.2	1	2.8	3	8.3	4	11.1	2	5.6
Type 4-----	12	7	58.3	1	8.3	3	25.0			1	8.3
Type 5-----	13	8	61.5	2	15.4	1	7.6			2	15.4
Type 6-----	3	2	66.7			1	33.3				

¹ Includes plants in which at least one employee reached the compulsory retirement age. Period covered is January 1, 1956 (or later, if the compulsory policy was established after that date) through June 30, 1961. All but a

few plants had formal pension plans; plants having profit-sharing plans were also included.

² See text for definition of types of compulsory policies.

Of the employers with compulsory policies who responded to this question, some 174 indicated that at least one employee in the plant had reached the compulsory retirement age since the time specified. Some 59.2 percent of the plants indicated that no employees who had reached the compulsory retirement age were excepted. (See accompanying table.) At the other extreme, 8.6 percent of the plants indicated that over 50 percent of the employees reaching the compulsory age were excepted.

In beginning our analysis, we have centered our interest on the extreme type of compulsion in which employees are required to retire at the normal retirement age (Type 1), and where there were no exceptions made. In addition, we have restricted our initial analysis to plants which have a pension plan. Some 57 plants, or 56.4 percent of the respondents with these characteristics, permitted no exceptions during the period specified.

We have examined the strict enforcement of the Type 1 policy (as represented by the absence of exceptions) in relation to the variables. Of these, size of entire company and union status appear to emerge as significant. As was the case in our analysis of "nominal" retirement age policies, variations in size of local plants showed no differences concerning the propensity to make exceptions to the compulsory retirement rule.

When union and nonunion plants are compared without reference to size, a significant difference emerges, with 66.2 percent of the unionized plants having had no exceptions in comparison to 38.9 percent of the nonunion plants. If size of entire company is held constant, the difference of 30.4 percentage points between the union and nonunion firms in the 1,000-9,999 category is significant.

In the remaining two categories, differences still occur between the union and nonunion groups, but the number of nonunion plants in these size categories is too small to warrant a test of significance. However, a larger percentage of union plants with no exceptions is found in each of these size categories.

If the union status variable is held constant and the size factor varied, the differences between sizes discussed earlier hold up in the union category, and in the nonunion category the difference of 20.7 percentage points between the categories 50-999 and 1,000-9,999, although resulting from too few cases to have statistical significance, is clearly in the same direction as that found when size is examined without reference to union status. Thus, unionization and (largeness of) size seem to be associated independently with a propensity not to make exceptions to the compulsory retirement rule.

Our examination of possible association between the manufacturing-nonmanufacturing variable and percentage exceptions yielded no differences of interest.

* * * * *

Even after we have completed the analysis of the first subsample, established our hypotheses, and tested these through an analysis of our second subsample, our work will only be partially completed. In a sense, the most important task will still remain to be done. This consists of attempting to explain the extent to which the associations uncovered actually represent cause and effect relationships, and the forces giving rise to such relationships.

Labor Market Experience of Unemployed Older Workers

WALTER H. FRANKE*

THIS ARTICLE reports some of the findings of a study of unemployed older persons in Peoria, Ill., based on interviews conducted in July and August 1959 with 195 male workers age 45-64 who were jobless during October 1957.¹

Extent of Long-Term Joblessness

Most of the workers experienced very extended periods of unemployment. Over half were without work for a year or more. The high level of extended joblessness reflects in part, of course, the weak demand for labor generally during much of the period covered.

Extended periods of unemployment were particularly frequent for workers who were age 55 and over, for those who had relatively little education, for blue-collar workers with little skill, and for those who had to leave their previous jobs for reasons of health. Fifty-seven percent of those with less than a ninth grade education were out of work for a year or more, compared with only 44 percent of those with more education. The combination of advanced age and low education had particularly severe consequences. Sixty-five percent of those age 55 and over with less than a ninth grade education were without work for 12 months or more.

These data indicate that the market does differentiate among older workers. The older unemployed do not receive indiscriminate treatment.

Work Experience

What kind of work records did these older workers have to present to prospective employers? The first point of significance is that half of them had worked for their previous employer for 2 years or less. Only a third had worked as long as 7 years on their previous jobs. The relatively short tenure on previous jobs suggests that unemployed older workers are not representative of older workers generally. The average tenure of employed workers of the same age in the Peoria

labor market was almost certainly well above that of these older unemployed workers.

Sixty percent of the workers had, however, worked for a single employer for more than 10 years at some time. Those who found jobs relatively quickly had substantial periods of work with one employer more often than the long-term unemployed, indicating that a steady work record had some effect on employer decisions to hire. Three-fourths had their major work experience as blue-collar manual workers. Only about 1 in 5 could be classified as a skilled worker; and among the long-term unemployed, only 15 percent had been employed in skilled work on their longest job. Many of the jobs they had worked on longest required either heavy or fast work—jobs such as truck and tractor driver, car loader, construction laborer, mine operative and laborer, and machine operator. These are not the kinds of jobs for which the greater experience of the older worker is a great advantage.

Few of the unemployed had taken any steps to rectify deficiencies they might have had in training or experience. Some of those who had taken special occupational training within the previous 5 years appear to have benefited in shorter duration unemployment.

Involuntary permanent separations accounted for a third of the reasons given for separation from their longest job. The most common explanation given for involuntary separation was the permanent closing of the firm for which they had worked. Among the long-term unemployed, nearly 30 percent gave this reason.

Workers who said they left their longest job voluntarily were more likely to be among the short-term than among the long-term unemployed. A third of the long-term unemployed, however, had left their longest job voluntarily, either because of dissatisfaction or to take what they considered to be a better job. Also, a larger proportion of the long-term unemployed than of the others had left their longest job because of

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¹ The interviews constituted a part of a larger inquiry into the problems of older workers. Their objective was to determine how personal and work history characteristics, job market perceptions, and jobseeking patterns of older workers relate to the duration of their unemployment.

Limiting factors in the study are as follows: The sample covers only workers registered at an office of the State employment service; the Peoria area is highly industrialized and the labor market heavily dominated by a few large firms; and the time period was one of serious recession.

poor health, an injury, or because the work had become too hard for them to continue.

The occupational distribution of the workers at the time of their current period of unemployment is quite similar to the distribution on the longest job. The major change is the substantially greater proportion classified as service workers. Agricultural workers, on the other hand, declined to almost nothing. The occupational shift is an indication that some of the skills learned in previous employment had become obsolete.

The reasons given by the workers for separation from their last jobs are indicative of the permanent loss of security occasioned by an older worker's losing a long-tenure job. While only a small proportion had been laid off of their longest job, two-thirds had been separated from their most recent job for this reason. For the long-term unemployed, poor health was also an important factor. One of every eight workers age 55-64 had left his last job for health reasons, compared with only 1 of every 20 of those age 45-54.

Jobseeking Behavior

The conditions which an unemployed worker considers as necessary requisites to accepting a job give some indication of how "choosy" a job-seeker he is. A majority in this study indicated willingness to move their residence out of the Peoria area in order to have a job, and nearly all said they were willing to accept work other than in their "regular" or usual occupations. These answers indicate a willingness to adjust to the kinds of jobs available. About three-fourths of those willing to change occupations said they would be willing to accept "any" kind of work. Substantially fewer of the long-term than the short-term jobless, however, had interest in moving out of their home area for employment. This difference is not attributable to the age difference between the two groups. Those age 55 and over expressed willingness to move as often as younger workers.

Most of the workers did specify a minimum wage below which they would not be willing to work. Only about one-quarter appeared to indicate a wage as high as \$2 per hour, and another

fourth said they were ready to accept a job paying \$1 or less an hour. Fifteen percent said they were willing to accept any "living wage," but did not specify what this wage was.

Only 11 percent said they had refused a job offer during their period of unemployment. There are two possible explanations for the low proportion who were offered jobs: (1) few jobs were available for which they were acceptable or qualified; and (2) the workers did not come in touch with the jobs that were available.

Some of the findings indicate the efforts put forth by the workers to find jobs.² A large majority made at least one direct application for work to an employer. Nearly 20 percent, however, made none. A minority said they had extended their search outside normal commuting distance of Peoria. As might be expected, fewer searched for work outside the area than said they would be willing to accept such work.

Only a small minority of the workers had found such channels as mass media advertising or the State employment service very helpful to them in locating jobs when they were out of work. In the experience of these workers, the most fruitful method of job search was making direct application to employers. The most common pattern during this period of unemployment, however, was to discontinue making applications for work after a period of time. The most frequent reasons given for this were discouragement over repeated rejections by employers because of age, fear of losing their "regular" job if they accepted another job while on layoff, conclusion that there just were no jobs available, and expectation of recall or call to a job for which they had applied earlier.

The data suggest that some of the workers did not seek work with a high degree of urgency. In part, at least, this appears to be the result of discouragement with the prospect of finding work, and of hope that former jobs or jobs they had applied for would open up. Whether a more diligent search would have been effective cannot be answered.

Conclusions

The findings of this study suggest that it is useful to distinguish three groups of unemployed

² The data are based on worker statements of how they looked for work.

older workers. Different approaches to the problems of workers in these groups would seem to be appropriate.

In one group are those whose level of education, skill and training, health, or motivation to work are such that their chances of obtaining work, except in periods of extreme labor shortage, appear to be very low. Many in this group are over 55 years old. Consideration should be given to making subsidized employment opportunities available to them or to making their withdrawal from the labor force financially feasible.

A second group, while they may be qualified only for jobs at relatively low skill levels, appear to have work records, levels of education and

skill, and health which make them fully capable of employment in private industry. Many are out of work because of plant shutdowns or other technological changes. Mitigation of their labor market problems requires methods for minimizing the permanent displacement of long-service workers through such devices as interplant and interdepartment transfers as well as special efforts to assist them in finding jobs and to involve them in retraining programs.

Finally, some older workers have skills and abilities in such demand that loss of a job means only a short period of unemployment. While they could also benefit from the approaches suggested above, they are able to manage in the labor market through their own efforts.

Effects of Private Pension Plans on Labor Mobility

EDITOR'S NOTE.—*This article contains excerpts from section II of Private Pension Plans and Manpower Policy, a U.S. Department of Labor report prepared by Hugh Folk of the University of California with the assistance of staff members of the department for the President's Committee on Corporate Pension Funds and Other Private Retirement and Welfare Programs. Footnotes are not included, and for ease of reading, omissions from the text have not been indicated. The report will be published as BLS Bulletin 1359.*

LABOR MOBILITY in the United States has decreased in recent years. The causes of the decline are by no means certain, and it is impossible to say whether the forces leading to the decline are growing in importance. It is true, however, that some countries exhibit higher mobility and others have lower mobility than the United States. Some countries, such as Japan, the Federal Republic of Germany, and Sweden typically exhibit low turnover. In Japan, the "lifetime job" is a well-established principle, and workers are very closely bound to the employer. In Sweden and Germany, efforts have been made to increase labor mobility. Yet all of these countries have recently exhibited high rates of economic growth. This suggests that labor mobility is only one of the factors contributing to growth and development but not the primary factor.

Movement of workers from one job to another is but one adjustment needed in a growing economy. While mobility in the United States has decreased, it does not now appear that inadequate mobility is a general problem of the economy, although in certain occupations and industries more outward movement is desirable. Movement out of these industries and occupations is probably not impeded by unwillingness to change to other jobs,

but rather by the shortage of other jobs to which workers might change and by the educational and training qualifications necessary for the jobs which are available. If mobility is generally adequate, then the prevalence of pension plans which in some instances impede mobility cannot be criticized from the point of view of economic policy for reducing mobility below desirable levels.

Pensions are only one of the influences which tie workers more closely to their jobs with increasing age and length of service. Identification of the effect attributable to pensions alone, and not to seniority provisions, age composition of the work force, size of firm, wages, or industry, is almost impossible because firms with pensions frequently are large and often have high wages and strict seniority provisions, and are older with relatively large numbers of older workers. Classification of firms into pension and nonpension groups and comparison of total separation and hire rates therefore throw little light on the independent effect of pensions on turnover.

The possible effects of pensions on mobility may be summarized briefly:

1. Rigid maximum hiring ages are often found in firms with pension plans; by reducing the opportunity for older workers to change jobs, such practices may inhibit mobility.

2. The expectation of additional pension benefits to be earned in the future may induce workers to continue their present jobs rather than change to another firm which does not offer pension coverage. The importance of pensions to different workers will vary with the characteristics and attitudes of the workers. Older workers may be especially reluctant to move from a job with pension coverage to an uncovered job, even if benefits earned by completed service are fully vested. The immobilizing effects of benefits to be earned in the future do not appear to differ in substance from the immobilizing effects of higher wages or better working conditions, and therefore should be no more subject to criticism.

3. Unvested benefits may be a large part of the employee's wealth, and thereby may make job changing extremely costly to him. The greater the length of service, the larger the benefits will be; hence, unvested pensions tend to reduce the mobility of workers with long service (who are usually older workers) much more than short-service workers. Even multiemployer plans, which allow workers to keep their benefits while

TABLE 1. LABOR TURNOVER RATES, BY INDUSTRY, AGE, AND PENSION COVERAGE, 1955,¹ SIX AREAS²

[Per 100 employees]

Industry division, pension class, and type of rate	Years of age						
	All ages	Under 25	25 to 34	35 to 44	45 to 54	55 to 64	65 and over
ALL INDUSTRIES							
Pension:							
Hires.....	37	91	42	30	18	12	11
Separations.....	34	74	39	29	18	13	50
Quits.....	17	41	22	14	6	3	9
No pension:							
Hires.....	67	115	81	62	53	38	31
Separations.....	62	92	74	58	51	37	50
Quits.....	24	47	34	22	16	12	11
CONSTRUCTION							
Pension:							
Hires.....	97	194	107	108	84	72	48
Separations.....	98	173	134	104	65	71	99
Quits.....	27	38	36	23	11	5	11
No pension:							
Hires.....	146	135	186	143	139	144	157
Separations.....	136	113	173	136	132	148	170
Quits.....	20	21	24	21	21	18	9
MANUFACTURING							
Pension:							
Hires.....	30	83	39	24	15	9	8
Separations.....	27	64	34	27	14	10	49
Quits.....	14	38	21	12	5	2	8
No pension:							
Hires.....	53	115	64	47	34	25	14
Separations.....	46	81	59	41	30	20	36
Quits.....	23	43	34	19	11	9	10
PUBLIC UTILITIES³							
Pension:							
Hires.....	25	57	29	28	10	5	7
Separations.....	25	41	29	29	12	8	70
Quits.....	13	31	16	15	2	8	6
No pension:							
Hires.....	34	32	45	50	20	2	3
Separations.....	22	23	41	40	16	4	1
Quits.....	9	7	24	12	5	2	-----
TRADE							
Pension:							
Hires.....	60	125	63	49	28	21	8
Separations.....	55	106	62	46	28	15	26
Quits.....	25	51	30	20	10	4	6
No pension:							
Hires.....	68	123	86	54	42	34	19
Separations.....	65	104	81	56	44	36	38
Quits.....	35	60	47	30	21	17	12
FINANCE⁴							
Pension:							
Hires.....	29	52	30	18	12	4	7
Separations.....	29	48	31	25	7	6	79
Quits.....	21	37	24	16	4	3	22
No pension:							
Hires.....	96	135	118	91	84	49	34
Separations.....	83	120	101	76	70	38	49
Quits.....	49	90	59	48	22	19	16
SERVICES							
Pension:							
Hires.....	65	179	70	60	34	41	44
Separations.....	62	157	63	61	36	38	68
Quits.....	18	70	19	15	6	6	18
No pension:							
Hires.....	67	111	65	60	78	49	50
Separations.....	69	106	59	63	84	52	67
Quits.....	26	46	29	22	28	13	16

¹ In establishments with 50 workers or more covered by State unemployment insurance laws or by the Railroad Retirement Act. Years ending June 1955, except Los Angeles (March 1955) and Seattle (December 1955).

² Detroit, Los Angeles, Minneapolis-St. Paul, Philadelphia, Seattle, and Worcester. Turnover data from Miami not available.

³ Includes transportation, communication, and other public utilities.

⁴ Finance, insurance, and real estate.

SOURCE: Derived from unpublished tabulations furnished by the Bureau of Employment Security.

shifting among firms within the plan, may tie employees closely to the industry and union which control the plan. These plans seldom include vesting (other than early retirement which is often accompanied by restrictions on other employment) and usually require long periods of covered employment for receipt of benefits.

Influence of Pensions on Turnover

The most comprehensive data dealing in turnover rates for firms with and without pensions come from the Seven City Study conducted in 1956 by the Bureau of Employment Security. Firms with pensions had lower turnover in most age brackets in all industry divisions (table 1). Hiring and separation rates are nearly equal in size for each age, industry, and pension class, except for workers 65 years and older. Thus, there is no noticeable tendency for firms with pensions to separate more older workers than they hire.

The ratio of the separation rate in nonpension firms to the rate in pension firms appears to increase with increasing age in most industries, particularly for workers 45 and older. The sharper decrease in separation rates with increasing age in firms with pensions would be expected if pensions made an important contribution to lower turnover. For workers 55 to 64, the ratio of separation rates ranges from about 1.4 in services to 6.3 in finance, insurance, and real estate (ignoring transportation, communication, and utilities, in which the ratio is 0.5).

Classified by number of employees, firms with pensions have lower turnover rates than firms without pensions in each size-of-firm and age class. Turnover rates generally are inversely related to size of firm.

The same patterns prevail in quit rates for pension and nonpension firms classified by industry division. The quit rates are actually higher in pension firms for workers 25 to 44 years old in construction, under 25, 35 to 44, and 55 to 64 in transportation, and under 25 in services. On the whole, however, pension firms have lower quit rates than nonpension firms.

Quit rates by age for pension firms classified by size of firm also are lower than quit rates of similarly classified nonpension firms (table 2). The quit rates are inversely related to size of firm.

Other Immobilizing Influences

These data do not prove that pensions reduce mobility, but they clearly demonstrate that firms with pensions have lower turnover and quit rates, independently of industry or size of firm, although the lower mobility of workers in pension firms cannot be laid to pensions alone. There are three major reasons why pensions may not be the principal immobilizing influence.

First, characteristics other than industry or size of firm which affect mobility may differ between pension and nonpension firms. Pensions are more common in high wage firms, and much more common in unionized firms [which] are likely to have strict seniority rules and effective grievance procedures which minimize the necessity of changing jobs to obtain satisfactory work situations. Firms in seasonal industries (with characteristically high labor turnover) are less likely to have pension plans than firms with fairly steady year-round employment. In other words, pension firms are likely to offer better compensation, working conditions, and job security than nonpension firms, and might be expected to have lower turnover regardless of the effect of pensions in holding workers.

Second, pension firms have lower accession rates than nonpension firms. If the patterns of separation of pension and nonpension firms are similar to those of all firms, the lower accession rates of pension firms would mean that fewer short-service workers who are prone to quit or are frequently discharged are employed. The lower accession rates of pension firms may be a result of lower separation rates induced by pensions, but they are also related to the lower rate of growth of employment in firms with pensions.

Third, pension firms have lower separation and quit rates in most age groups in all industry and size-of-firm classes, although the differences are largest for older age groups. Since the effect of pensions on the mobility of young workers is probably quite small, this finding suggests that factors other than pensions account for much of the lower mobility of workers in firms with pensions.

Turnover among young workers is quite high in pension firms, and quit rates in pension firms in most industries drop below 10 percent only

TABLE 2. ANNUAL QUIT RATES, BY SIZE OF ESTABLISHMENT, AGE, AND PENSION COVERAGE, 1955,¹ SIX AREAS²

		[Per 100 employees]					
Pension class and age		All establishments	Number of employees in establishments				
			50-99	100-499	500-999	1,000-4,999	5,000 and over
Workers under 45 years:							
	Pension.....	23	29	27	21	20	23
	No pension.....	33	39	33	39	22	-----
Workers 45-64 years:							
	Pension.....	5	6	7	3	4	4
	No pension.....	15	21	14	12	7	-----

¹ See footnote 1, table 1.

² See footnote 2, table 1.

SOURCE: Derived from unpublished tabulations furnished by the Bureau of Employment Security.

after age 45. The willingness of workers under 45 to quit jobs is probably sufficiently high to accommodate necessary employment shifts even in pension firms. In short, the immobilizing effects of pensions which might be significant for manpower policy are likely to be important principally for older workers who stand to lose large unvested benefits, are close to retirement, and face special difficulties in finding new jobs.

Pension Trends Affecting Mobility

Three recent developments in pension plans may have had the effect of reducing the immobilizing effects of pensions: (1) vesting has become more common;¹ (2) early retirement and disability retirement are being provided in an increasing number of plans; and (3) collectively bargained multiemployer plans have grown in importance.

Vesting. In 1952, when collectively bargained pension plans were relatively new, only one-fourth of the 300 plans studied by the Bureau of Labor Statistics included vesting provisions, while in late 1958, almost six-tenths of the 300 plans included vesting. Vesting was more common in single-employer plans than in multi-employer plans.

How significant is the trend toward vesting for labor mobility? The immobilizing effects of pensions are likely to be most important for older workers with long service. Workers with vested pensions do not stand to lose benefits, so their reluctance to change jobs is perhaps less than that of workers with unvested pensions. The provision of vesting with 10 years or more of required service

¹ If employment earns the employee a right to a future pension or a cash refund of both the employee's contribution (if any) and the employer's contribution, the pension is said to be vested.

can probably do much to decrease the immobilizing effects of pensions on the age and service groups for whom pensions are likely to have the most significance. Nevertheless, the propensity of long-service workers to change jobs is quite low even in nonpension firms. It is unlikely, therefore, that even liberal vesting provisions requiring attainment of age 35 or 40 and as little as 5 years of service would do much to increase the total amount of jobchanging of workers with vested pensions. If the independent effect of pensions in reducing mobility is small, then the effect of vesting in increasing mobility is also likely to be small.

However, the increase in mobility which results from the spread of vesting may be quite significant for senior white-collar workers to whom unvested pensions may be important reasons for not changing jobs, since job-security provisions are uncommon in this group.

Early Retirement. Many plans which make no other provision for vesting provide for retirement before the normal retirement age (usually 65) at the option of the employee, sometimes with the employer's approval. In one or two instances, early retirement is at the option of the employer. The service required for early retirement is often lengthy, as much as 30 years. When early retirement provisions are included in pension plans, the minimum age is often 55 or 60 years. Occasionally, early retirement is accompanied by a larger pension between retirement age and age 65 when the worker becomes eligible for OASDI (or age 62 for women, and for men since 1961), and many plans permit income equalization options.

Early retirement may make an important contribution to decreasing the immobilizing effects of pensions, since early retirement makes it possible for the worker who is only a few years away from normal retirement age to leave his job without forfeiting his pension.

Early retirement provisions have undoubtedly become more common in the past few years. Of 300 collectively bargained plans in force in 1958, 218 included early retirement, and only 71 had neither vesting nor early retirement.

Early retirement nearly always results in the worker receiving a smaller pension than he would receive if he worked to the normal retirement age. For some industries, however, the results are favorable to workers as long as retirement is at

their option. Early retirement may permit a worker to quit a heavy job and find a light job at which he may be able to work past the normal retirement age.

Disability retirement provisions are unlikely to have much effect on mobility, since disability standards are usually quite restrictive. The worker who draws a disability pension, however, does have his pension rights protected.

Multiemployer Plans. Most multiemployer pension plans are negotiated by a union with a number of employers or with an employers' association and cover workers in one industry either nationally or in some area. Such plans provide a limited degree of pension portability. As long as workers shift between employers who are members of such plans, the workers' pension rights are protected. Multiemployer plans include vesting less frequently than do other negotiated plans.

In industries where workers show high attachment, multiemployer plans can provide substantial protection of pension benefits. Such plans need not reduce interfirm or interarea mobility, although they perhaps restrict interindustry and occupational mobility. Even these immobilizing effects are likely to be small if the plans provide that workers can continue membership in the plan by making contributions after ceasing to work in covered employment. Such provisions are not common.

There is some tendency for several plans in the same industry which are established by a single international union to provide reciprocal transfer of credits or to merge into a single plan. The coordinated plans or single plans which result naturally provide additional protection of pension benefits for covered workers who change jobs.

The immobilizing effects of multiemployer plans are probably much smaller than the effects of unvested single-employer plans. Nevertheless, in many industries, portability of pension credits among employers in the same industry is an inferior substitute for vesting. In others, it provides protection of pension credits which is often superior to vesting. Relatively few single-employer plans provide vesting before age 40 and 10 years of service, but multiemployer plans permit young workers with short service to keep their pension credits when they move to other employers who are members of the plan.

Summaries of Studies and Reports

Wages in the Basic Iron and Steel Industry, March 1962

WAGE RATES and supplementary benefits in the basic iron and steel industry directly affect the costs of an industry basic to the economy and the welfare of a substantial group of workers. Nearly a half million production and related workers were covered by the Bureau of Labor Statistics present study of wages in the industry.¹ In the study, information was obtained as of March 1962 on the distribution of workers by average hourly earnings, earnings in selected occupations, and the incidence of such establishment practices as paid vacations, paid holidays, and other supplementary wage benefits. For virtually all of the workers, these conditions were established by collective bargaining agreements, most of which had been negotiated with the United Steelworkers of America, which had contracts with companies accounting for about nine-tenths of the production and related workers.

The study covered establishments employing 250 workers or more and classified as blast furnaces, steel works, and rolling and finishing mills.² Information was obtained from individual company reports submitted to the American Iron and Steel Institute, in connection with that organization's regular data-reporting program, and expanded to accommodate the occupational requirements of the BLS study. BLS staff selected the occupations studied separately, participated in the development of the supplemental forms, instructions, and definitions required, and reviewed all reports for completeness and conformity with definitions and instructions.

Information used in the development of the average earnings and the earnings distribution for all production and related workers (table 1) was obtained from companies employing slightly more than four-fifths of the 484,600 workers estimated to be within the scope of the survey. The employment estimates in table 1, however, relate to the entire industry as previously defined.

The occupational portion of the study was limited to plants (1) having a common job evaluation system (developed jointly by the major steel producers and the Steelworkers union and commonly referred to as the Cooperative Wage Study (CWS) system) and (2) having the same minimum rate of \$2.285 (including an 18½-cent cost-of-living adjustment) and the same wage increment (7 cents) between job classes. The estimates provided in this portion of the study (table 2) relate to those plants reporting; such plants employed 325,100 production and related workers at the time of the study and accounted for nearly all workers employed under this common job evaluation and rate system, and about seven-tenths of the workers in the industry.³

Earnings

In March 1962, earnings of production and related workers in the basic iron and steel industry averaged \$3.17 an hour, exclusive of premium pay for overtime and for work on weekends, holidays, and late shifts.⁴ Workers paid on an incentive basis averaged \$3.42 an hour, compared with \$2.70 an hour for workers paid time rates. This difference is significantly influenced by the occupational mix of workers in the two categories of wage payment.

Earnings of all but 1 percent of the workers within the scope of the study ranged from \$2.20

¹ The full report on the study appears in BLS Bulletin 1358, *Industry Wage Survey: Basic Iron and Steel, March 1962*.

² Industries 3312 (excluding merchant coke ovens), 3315, 3316, and 3317 as defined in the 1957 edition of the *Standard Industrial Classification Manual*, prepared by the Bureau of the Budget. Establishments manufacturing electrometallurgical products (industry 3313) were excluded from the study. Separate auxiliary units, such as central offices, and establishments producing solely for the use of a parent company classified in other than the steel industry were also excluded.

³ A few plants use the CWS system but have slightly different minimums and/or wage increments. Such plants were excluded from the occupational portion of the study.

⁴ The gross average hourly earnings published in the Bureau's monthly hours and earnings series for the blast furnace and basic steel products industry group was \$3.29 in March 1962. The difference between this figure and \$3.17 is accounted for largely by the inclusion in the series of premium pay for overtime and for work on weekends, holidays, and late shifts. The remaining amount may be due to differences in survey coverage. Unlike the present wage survey, the Bureau's monthly series includes all establishments classified in industry group 331, as defined in the 1957 edition of the *Standard Industrial Classification Manual*.

to \$5 an hour. In the earnings array, the middle half of these workers earned between \$2.78 and \$3.51. This 73-cent spread compares with a 51-cent interquartile range for time-rated workers and a 56-cent range for incentive-paid workers. Differences in the earnings levels for these two groups of workers explain the wider range recorded for all workers. Two-thirds of the time-rated workers earned less than \$2.80 an hour, compared with less than 5 percent of the incentive-paid workers. At the other extreme, 40 percent of the workers receiving incentive pay earned \$3.50 or more an hour, but less than 1 percent of the time-rated workers earned as much as \$3.50.

As indicated previously, the study of occupational earnings was limited to plants using common job evaluation and rate systems. Although the common job evaluation system consists of 32 job classes (job classes 1 and 2 have the same rate), fewer than 3 percent of the workers were in job class 17 or above at the time of the study, and more than half were in the first 8 job classes.

Workers in steel plants having a common job evaluation system, by job classes, March 1962

Job class	Percent	Cumulative percent
1 and 2	7.0	7.0
3	5.8	12.7
4	7.1	19.9
5	8.9	28.7
6	10.4	39.1
7	8.0	47.1
8	10.1	57.3
9	6.7	64.0
10	5.4	69.3
11	4.1	73.5
12	4.6	78.0
13	3.5	81.5
14	8.4	89.9
15	3.2	93.1
16	4.2	97.3
17 through 32	2.7	100.0

NOTE: Because of rounding, sums of individual percentages do not equal 100.

The 79 jobs for which data are provided in table 2 are representative of some of the more important types of occupations found in the industry. They accounted for approximately 57,000 workers—slightly more than a tenth of the industry's production and related workers at the time of the study. The occupations were limited to the indicated departments except that maintenance and service jobs were found in several departments.

Among the occupations studied, average straight-time hourly earnings ranged from \$2.32

TABLE 1. PERCENT DISTRIBUTION OF PRODUCTION AND RELATED WORKERS IN BASIC IRON AND STEEL ESTABLISHMENTS, BY AVERAGE STRAIGHT-TIME HOURLY EARNINGS¹ AND METHOD OF WAGE PAYMENT, MARCH 1962

Average straight-time hourly earnings ¹	All workers	Time-rated workers	Incentive-paid workers
Under \$2.20	0.1	0.4	
\$2.20 and under \$2.30	4.6	12.9	
\$2.30 and under \$2.40	2.7	7.4	0.2
\$2.40 and under \$2.50	5.5	14.7	.5
\$2.50 and under \$2.60	3.5	9.0	.5
\$2.60 and under \$2.70	3.9	7.8	1.7
\$2.70 and under \$2.80	6.2	14.7	1.6
\$2.80 and under \$2.90	6.4	5.5	6.8
\$2.90 and under \$3.00	8.0	7.4	8.4
\$3.00 and under \$3.10	4.6	3.4	5.3
\$3.10 and under \$3.20	8.0	9.6	7.2
\$3.20 and under \$3.30	8.7	4.7	10.9
\$3.30 and under \$3.40	5.2	.8	7.6
\$3.40 and under \$3.50	6.4	.8	9.5
\$3.50 and under \$3.60	7.1	.3	10.8
\$3.60 and under \$3.70	4.1	.1	6.2
\$3.70 and under \$3.80	2.7	(2)	4.2
\$3.80 and under \$3.90	5.1	.2	7.8
\$3.90 and under \$4.00	1.2	.1	1.8
\$4.00 and under \$4.10	.9	(2)	1.3
\$4.10 and under \$4.20	2.3	(2)	3.6
\$4.20 and under \$4.30	.2	(2)	.3
\$4.30 and under \$4.40	.4	(2)	.7
\$4.40 and under \$4.50	.2	(2)	.3
\$4.50 and under \$4.60	.4	.1	.5
\$4.60 and under \$4.70	.2	(2)	.3
\$4.70 and under \$4.80	.4		.6
\$4.80 and under \$4.90	(2)	(2)	.1
\$4.90 and under \$5.00	.1		.2
\$5.00 and over	.7		1.1
Total	100.0	100.0	100.0
Total number of workers	484,600	170,400	314,200
Average hourly earnings ¹	\$3.17	\$2.70	\$3.42

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

for janitors to \$5.57 for tandem mill rollers. Inclusion of premium pay for work on Sundays and late shifts raised the averages by less than 2 percent for 10 jobs, 2 and under 4 percent for 33 jobs, 4 and under 6 percent for 35 jobs, and 6 percent for 1 job. The largest differences (5-6 percent) were recorded in coke oven, blast furnace, and open-hearth occupations. The percentage differences in electric furnace and blooming and billet mill occupations also tended to be greater than in other processing jobs studied.

Within most of the occupations studied, individual earnings varied widely. This is reflected in the broad range of company averages recorded for the same occupation. For example, company averages for first helpers on open-hearth furnaces ranged from under \$4 to more than \$6 an hour. Similarly, averages for wire drawers ranged from under \$2.80 to about \$4 an hour. Such variations were due to company and establishment differ-

ences in the job class (and, thus, the rate) for a particular occupation and to the extensive use of incentive wage systems.

Since the job class of each occupation in establishments using the CWS job evaluation system is determined by point values assigned to a number

⁵ These factors are: Preemployment training, employment training and experience, mental skill, manual skill, responsibility for material, responsibility for tools and equipment, responsibility for operations, responsibility for safety of others, mental effort, physical effort, surroundings, and hazard.

⁶ Only employees on standard or journeymen rates were included in the repair and maintenance trade or craft occupations studied. Workers at the intermediate and starting rates were excluded.

of rating factors,⁵ it would be expected that the job class assigned to any one occupation would vary somewhat among companies and among plants within the same company. Two or more job classes were, in fact, reported for each of the occupations studied. For some occupations (particularly the maintenance trades) this variation was relatively minor. Thus, virtually all of the bricklayers were in job class 15, and all but a very few of the carpenters were in job class 13.⁶ Among many of the occupations, however, substantial

TABLE 2. NUMBER AND AVERAGE STRAIGHT-TIME HOURLY EARNINGS,¹ INCLUDING PREMIUM PAY FOR SUNDAY AND LATE SHIFT WORK ² OF WORKERS IN SELECTED OCCUPATIONS AND JOB CLASSES, IN BASIC IRON AND STEEL ESTABLISHMENTS HAVING A COMMON JOB EVALUATION SYSTEM,³ MARCH 1962

Department and occupation	Average hourly earnings			Department and occupation	Average hourly earnings		
	Number of workers	Straight-time ¹	Straight-time plus shift ² and Sunday premium pay		Number of workers	Straight-time ¹	Straight-time plus shift ² and Sunday premium pay
COKE WORKS AND BYPRODUCTS				CONTINUOUS HOT-STRIP MILLS—Con.			
Benzol stillmen.....	176	\$3.59	\$3.77	Cold-strip slitters.....	282	\$3.87	\$3.98
Door machine operators.....	490	3.29	3.47	Heaters.....	111	5.17	5.36
Heaters.....	364	3.78	3.97	Loaders.....	387	3.71	3.81
Lidmen.....	521	2.92	3.09	Roughers.....	97	4.80	4.96
Pusher operators.....	396	3.36	3.55	Strip finishers.....	80	4.78	4.94
Wharfmen.....	258	2.63	2.79	Strip-mill cranemen.....	249	3.51	3.69
BLAST FURNACES, DOCKS, AND ORE HANDLING				Tandem-mill rollers.....	443	5.57	5.70
Cinder snappers.....	522	3.09	3.26	Tractor operators.....	905	3.13	3.24
First blowing engineers.....	248	3.39	3.57	PLATES			
Keepers.....	527	3.65	3.85	Burning-machine operators.....	133	3.51	3.61
Keepers' helpers.....	964	3.16	3.33	Layerouts.....	133	3.51	3.62
Larrymen.....	607	3.31	3.49	BARS			
Ore-bridge cranemen.....	291	3.40	3.58	Assistant bar-mill rollers.....	179	4.34	4.46
Sinter-machine operator.....	160	3.25	3.43	Bar catchers.....	314	3.63	3.74
Stock unloaders.....	599	2.82	2.97	Bar-mill roughers.....	282	3.83	3.93
OPEN HEARTH				Chargers.....	234	3.13	3.22
Charging-machine operators.....	655	4.37	4.59	Coilers.....	65	3.38	3.45
First helpers.....	1,645	5.26	5.52	Rod finishers.....	81	4.31	4.38
Ladle cranemen.....	1,064	4.23	4.45	Shearmen.....	183	3.37	3.47
Raw materials stockers.....	867	3.07	3.24	WIRE			
Second helpers.....	1,640	4.30	4.52	Bundlers.....	192	2.93	2.97
Second steel pourers.....	347	4.02	4.24	Nail-machine operators.....	153	3.73	3.78
Stockyard cranemen.....	691	3.49	3.68	Straighten and cut operators.....	89	3.15	3.21
ELECTRIC FURNACES				Wire drawers (continuous).....	1,097	3.59	3.65
First helpers.....	177	4.79	4.99	TUBE FINISHING			
Moldmen.....	139	3.34	3.49	Cut-off machine operators.....	368	3.10	3.18
Stopper makers.....	18	2.97	3.06	Hydrastatic testers.....	185	3.15	3.22
BLOOMING, SLABBING, AND BILLET MILLS				Pipe straighteners.....	273	3.14	3.22
Bloom and slabbing mill rollers.....	174	5.52	5.75	MAINTENANCE AND SERVICES			
Bottom makers.....	257	3.53	3.71	Automotive repairmen.....	692	3.31	3.41
Guide setters.....	48	3.67	3.82	Boiler makers.....	1,122	3.47	3.53
Levermen.....	62	3.98	4.11	Bricklayers.....	1,883	3.55	3.68
Manipulators.....	197	4.26	4.45	Carpenters.....	1,257	3.27	3.33
Soaking-pit cranemen.....	676	4.13	4.33	First power engineers.....	266	3.39	3.57
Soaking-pit heaters.....	439	4.66	4.89	Janitors.....	1,605	2.32	2.39
BLOOM, SLAB, AND BILLET CONDITIONING AND SHIPPING				Laborers.....	5,980	2.34	2.43
Hookers.....	895	2.93	3.07	Locomotive cranemen.....	608	3.23	3.35
Scarfers.....	1,344	3.53	3.69	Locomotive engineers (general).....	1,292	3.60	3.78
CONTINUOUS HOT-STRIP MILLS				Machinists.....	3,598	3.53	3.63
Assorters.....	870	2.59	2.66	Millwrights.....	3,524	3.45	3.58
Banders.....	247	3.22	3.33	Millwright helpers.....	2,314	2.89	3.01
Coilers.....	132	4.18	4.31	Motor inspectors.....	2,383	3.44	3.60
Coil feeders.....	589	3.51	3.64	Pipefitters.....	1,768	3.28	3.36
				Pipefitters' helpers.....	868	2.74	2.81
				Roll turners.....	470	3.48	3.54
				Toolmakers.....	101	3.51	3.52
				Wiremen electricians.....	1,528	3.56	3.62

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

² Includes premium pay for work on Sundays and late shifts, but excludes premium pay for overtime and work on holidays.

³ Tabulation limited to establishments having a common job evaluation system, the same minimum hourly rate of \$2.285 (including an 18½-cent cost-of-living allowance), and the same wage increment (7 cents) between job classes.

proportions of the workers were in several different job classes; e.g., data for tandem-mill rollers in continuous hot-strip mills included 13 job classes.

The majority of the workers in all but six of the occupations studied were paid on an incentive basis. Assorters in continuous hot-strip mills, janitors, laborers, toolmakers, automotive repairmen, and first power engineers were the only occupations predominantly paid on a time-rate basis.

Incentive workers earned substantially more than hourly rated workers employed in the same occupation and job class in each of the 28 instances where comparison was possible. The advantage for incentive workers was approximately 30 percent in 2 classifications (job class 4, hookers, and job class 10, wire drawers), from 15 to 25 percent more in 12 classifications, from 10 to 14 percent more in 13 classifications, and 9 percent more in 1 classification (laborers, job class 2).

Establishment Practices

Provisions in the industry for premium payment for work on late shifts, weekends, and hours outside the regular work schedule, as well as for supplementary benefits applying to production workers are practically uniform, with only minor variations among the smaller companies.⁷ The provisions summarized here were in effect at the time of the study in nearly all steel companies having agreements with the Steelworkers.

Shift Differentials. Hours worked on the afternoon and night shifts were paid for at premium rates of 8 and 12 cents an hour, respectively. Because of the continuous operations required by many steelmaking departments, a large proportion of the workers in the industry are regularly scheduled to work on late shifts. At the time of the study, a fourth of the workers were employed on the afternoon shift and a fifth on the night shift.

Sunday Premium Pay. Many employees were also required to work on Sundays as part of their regular workweek. A premium rate of 25 percent based on the regular rate of pay (average

straight-time hourly earnings for incentive workers) applied to all hours worked on Sundays which were not paid for on an overtime basis.

Overtime Provisions. Overtime at the rate of 1½ times the regular rate of pay was paid for: (1) Hours worked in excess of 8 in a workday and 40 in a payroll week; and (2) hours worked on the sixth or seventh workday (a) in a payroll week during which work was performed on 5 other workdays or (b) in a 7-consecutive-day period during which the first 5 days were worked.

Paid Holidays. Seven holidays with pay were provided: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. (By local agreement, another day may be selected in place of Memorial Day.) Double time and a fourth (total) was paid for all hours worked on a holiday.

Paid Vacations. The length of the vacation period and the amount of pay provided depended on the employee's length of service with the company. The following tabulation indicates the provisions in effect at the time of the study, as well as the changes effective January 1, 1963.

Years of service	Vacation time off	Amount of pay
In effect during 1962		
1 but less than 3.....	1 week.....	1 week.
3 but less than 5.....	1 week.....	1½ weeks.
5 but less than 10.....	2 weeks.....	2 weeks.
10 but less than 15.....	2 weeks.....	2½ weeks.
15 but less than 25.....	3 weeks.....	3 weeks.
25 or more.....	3 weeks.....	3½ weeks.
Effective January 1, 1963		
1 but less than 3.....	1 week.....	1 week.
3 but less than 10.....	2 weeks.....	2 weeks.
10 but less than 25.....	3 weeks.....	3 weeks.
25 or more.....	4 weeks ¹	4 weeks.

¹ Slight variations may exist in practice.

Health, Insurance, and Pension Plans. A broad program that includes group life insurance, hospitalization and surgical insurance for active employees and their dependents, accident and sickness insurance, and pension benefits has been in effect for many years in some companies, and has been general in the industry since 1950.⁸ Workers are also covered by plans providing supplemental unemployment benefits.

—L. EARL LEWIS

Division of Occupational Pay

⁷ There may also be minor variations as to one or more of these practices in those few cases in which production and maintenance employees are represented by independent unions.

⁸ In April 1962, the Steelworkers and major producers signed new contracts which provided improvements in some of these benefits and changes in other agreement terms. (See *Monthly Labor Review*, May 1962, pp. 552-554.)

Supplementary Wage Benefits in Metropolitan Areas, 1961-62

NEARLY ALL office and plant workers received paid holidays and vacations and were covered by some form of health, insurance, or pension plan, according to the Bureau of Labor Statistics third annual survey of supplementary benefits in metropolitan areas in the United States (except Alaska and Hawaii).¹ The study, conducted in late 1961 and early 1962, also revealed that among the health, insurance, and pension plans studied, life insurance coverage was most prevalent—applying to 95 percent of the office workers and 91 percent of the plant workers and representing a 3- and 2-percentage-point increase, respectively, since 1960.² The greatest increase occurred in catastrophe (extended medical) insurance coverage, which rose from 42 and 20 percent of office and plant workers in 1960 to 55 and 26 percent, respectively, in 1962.

There is no consistent pattern of benefits with greater prevalence in one industry division or region. For example, workers in the Northeast had more holidays and generally received longer vacations after shorter periods of service, but larger proportions of the workers in the North Central region were provided with health and insurance plans.

The great majority of manufacturing plant workers were employed in firms that had specific pay provisions for late-shift work. More than a fifth of all manufacturing plant workers within the scope of this survey were employed on late shifts.

Scope and Method of Survey

The survey relates to all 188 Standard Metropolitan Statistical Areas in the United States, excluding Alaska and Hawaii, as revised by the Bureau of the Budget through 1959. Data are based on surveys conducted in 80 labor markets selected to represent all areas. Supplementary wage practices information was collected through visits by field representatives in 48 areas during the fiscal year ending June 30, 1962. Data for the remaining 32 areas were included from the previous year, as field visits are usually made in alternate years.

The survey covered establishments employing 50 workers or more, except in 12 of the largest areas where the minimum size was 100 employees in manufacturing, public utilities, and retail trade. The following tabulation presents the number of office and plant workers within the scope of the survey by industry division³ and economic region.

	Number of nonsupervisory workers in scope of survey	
	Office workers ¹	Plant workers ¹
All areas ²	3,186,900	10,600,700
Industry division:		
Manufacturing.....	1,221,900	6,738,100
Transportation, communication, and other public utilities.....	427,300	1,106,600
Wholesale trade.....	266,900	443,500
Retail trade.....	245,200	1,639,000
Finance, insurance, and real estate.....	848,800	356,900
Services.....	172,300	601,300
Region:		
Northeast.....	1,149,000	3,590,700
South.....	526,600	2,110,100
North Central.....	1,009,600	3,505,300
West.....	501,700	1,394,600

¹ Office workers include all clerical employees but exclude administrative, executive, and professional personnel. Plant workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in nonoffice functions.

² Includes approximately 4,500 office workers and 15,400 plant workers not distributed among the industry divisions.

³ Real estate only. Plant worker employment data were not collected in banks or insurance companies.

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

Estimates of prevalence of supplementary benefits are limited to plans under which the employer contributes at least part of the cost. The estimates are based on the assumption that the benefits apply to all plant or office workers if a majority of such workers are eligible or may qualify eventually. Varying length-of-service requirements affect both the number of workers who receive any particular benefit and the amount of the benefit. For example, relatively long length-of-service requirements in retirement programs limit the number of workers who qualify ultimately, or, in the case of paid vacations, limit the number who receive payment for 3 or 4 weeks at any given time.

¹ A more complete report will be issued as *Wages and Related Benefits, Metropolitan Areas, United States and Regional Summaries, 1961-62* (Pt. II of BLS Bulletin 1303-83).

² See "Supplementary Wage Benefits in Metropolitan Areas, 1959-60," *Monthly Labor Review*, April 1961, pp. 379-387.

³ Government institutions and the construction and extractive industries were excluded from the scope of the study, with the exception of the Oklahoma City survey which included data for crude petroleum and natural gas. The services division for the Los Angeles-Long Beach survey excluded motion picture production and allied services. These data are included only in the all-areas and regional estimates.

Paid Holidays

Virtually all office workers and 95 percent of the plant workers in metropolitan areas were employed in establishments providing paid holidays (table 1). The average number of annual paid holidays amounted to 7.8 and 7.0, respectively, for those office and plant workers who received paid holidays. These averages include both whole and half-day holidays; about 1 out of every 5 office and plant workers received 1 half-day holiday or more. The Northeast region—where office

and plant workers averaged 9.2 and 7.7 days, respectively—reported the most liberal holiday provisions and was the only region in which the average number of holidays exceeded the national average.

Nearly all office workers in each region received paid holidays; they averaged 6.6 days annually in the South, 7.1 days in the North Central region, and 7.6 days in the West. Among plant workers, 86 percent in the South received an average of 6.2 days; 98 percent in the North Central region had 6.8 days; and 95 percent in the West, 6.9 days.

TABLE 1. PAID HOLIDAY PROVISIONS¹ FOR OFFICE AND PLANT WORKERS IN METROPOLITAN AREAS, BY NUMBER OF PAID HOLIDAYS PROVIDED, INDUSTRY DIVISION, AND REGION,² 1961-62³

[Cumulative percent]

Paid holidays provided ¹ and class of worker	All areas	Industry division						Region ²			
		Manu- facturing	Public utilities ⁴	Wholesale trade	Retail trade	Finance ⁵	Services	North- east	South	North Central	West
OFFICE WORKERS											
13 days or more.....	1	(⁶)	(⁶)	1	(⁶)	1	1	1	(⁶)	-----	(⁶)
12½ days or more.....	1	(⁶)	(⁶)	1	(⁶)	1	1	2	(⁶)	-----	(⁶)
12 days or more.....	4	1	2	3	(⁶)	11	1	10	(⁶)	-----	1
11½ days or more.....	5	1	2	5	1	15	4	14	(⁶)	-----	1
11 days or more.....	13	3	10	8	2	34	10	32	1	3	2
10½ days or more.....	14	4	11	9	3	35	11	34	1	3	2
10 days or more.....	18	6	15	13	5	41	13	41	4	5	4
9½ days or more.....	19	7	16	15	5	43	15	44	7	5	5
9 days or more.....	26	13	26	20	8	52	22	57	7	9	9
8½ days or more.....	28	14	26	22	9	56	24	59	8	9	13
8 days or more.....	45	38	45	43	16	67	39	74	21	22	52
7½ days or more.....	47	41	45	56	17	69	43	76	22	24	54
7 days or more.....	77	83	91	67	47	77	61	94	49	68	86
6½ days or more.....	79	85	91	70	49	80	62	95	51	73	87
6 days or more.....	96	97	99	92	88	95	92	99	76	99	99
5½ days or more.....	96	98	99	93	89	96	92	99	77	99	99
5 days or more.....	99	99	99	99	97	99	96	99	96	99	99
Total receiving paid holidays.....	99	99	99	99	98	99	98	99	99	99	99
Average number of paid holidays.....	7.8	7.5	7.9	7.5	6.7	8.9	7.5	9.2	6.6	7.1	7.6
PLANT WORKERS											
13 days or more.....	(⁶)	(⁶)	(⁶)	1	(⁶)	(⁶)	(⁶)	(⁶)	-----	-----	-----
12½ days or more.....	(⁶)	(⁶)	(⁶)	1	(⁶)	(⁶)	(⁶)	(⁶)	-----	-----	-----
12 days or more.....	1	(⁶)	2	2	(⁶)	(⁶)	(⁶)	2	(⁶)	(⁶)	-----
11½ days or more.....	1	(⁶)	2	3	(⁶)	(⁶)	(⁶)	2	(⁶)	(⁶)	-----
11 days or more.....	2	1	8	6	1	2	2	6	(⁶)	(⁶)	-----
10½ days or more.....	2	1	9	7	1	5	5	7	(⁶)	(⁶)	-----
10 days or more.....	4	3	12	10	2	13	13	11	1	1	(⁶)
9½ days or more.....	5	3	13	10	3	13	13	1	1	2	2
9 days or more.....	8	7	19	14	4	14	13	1	1	2	2
8½ days or more.....	9	8	19	15	4	15	13	1	1	2	2
8 days or more.....	26	28	37	34	15	45	47	13	13	13	33
7½ days or more.....	28	30	37	36	16	47	47	13	14	14	33
7 days or more.....	68	78	84	59	36	82	82	41	67	73	73
6½ days or more.....	70	80	84	60	36	84	29	42	70	74	74
6 days or more.....	88	92	97	85	75	89	59	95	61	96	90
5½ days or more.....	88	92	97	86	75	90	60	95	62	96	90
5 days or more.....	92	95	98	95	84	96	65	96	78	96	91
4½ days or more.....	92	95	98	95	84	96	66	96	78	96	91
4 days or more.....	93	96	98	96	85	97	70	97	80	97	91
Total receiving paid holidays.....	95	97	98	97	92	97	78	98	86	98	95
Average number of paid holidays.....	7.0	7.2	7.6	7.2	6.2	6.2	6.2	7.7	6.2	6.8	6.9

¹ All combinations of full and half days that add to the same amount are combined; for example, the proportion of workers receiving a total of 7 days includes those with 7 full days and no half days, 6 full days and 2 half days, 5 full days and 4 half days, etc. Proportions were then cumulated.

² The regions in this study are: *Northeast*—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *South*—Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *North Central*—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and

Wisconsin; and *West*—Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

³ Information on establishment practices is obtained annually in 6 of the largest areas and biennially in a rotating cycle in the remaining areas. Data for a majority of the workers relate to late 1961 and early 1962, for the remainder, to late 1960 and early 1961.

⁴ Transportation, communication, and other public utilities.

⁵ Finance, insurance, and real estate. Data are not shown separately for plant workers in this industry group. Plant workers in real estate firms, however, are included in the all-areas data.

⁶ Less than 0.5 percent.

TABLE 2. PAID VACATION PROVISIONS FOR OFFICE AND PLANT WORKERS IN METROPOLITAN AREAS, BY AMOUNT AND LENGTH OF SERVICE,¹ INDUSTRY DIVISION, AND REGION,² 1961-62³

[Percent distribution]

Amount of vacation pay, length of service, ¹ and class of worker	All areas	Industry division						Region ²			
		Manu- facturing	Public utilities ⁴	Whole- sale trade	Retail trade	Finance ⁵	Services	North- east	South	North Central	West
OFFICE WORKERS											
1 week or more.....	99	99	99	99	99	99	99	99	99	99	99
6 months.....	61	62	46	45	31	82	60	76	52	51	46
1 year.....	99	99	99	99	99	99	99	99	99	99	99
2 years.....	99	99	99	99	99	99	99	99	99	99	99
2 weeks or more.....	99	99	99	99	98	99	98	99	97	99	99
6 months.....	5	3	4	2	(⁶)	12	6	10	2	2	3
1 year.....	77	83	46	71	37	96	74	86	67	72	73
2 years.....	91	92	72	89	90	99	90	93	84	90	93
3 years.....	97	95	97	95	96	99	94	97	92	98	99
5 years.....	99	99	99	99	98	99	97	99	97	99	99
3 weeks or more.....	87	87	96	74	76	92	72	90	72	92	86
3 years.....	2	3	1	1	1	2	6	3	1	2	3
5 years.....	9	8	5	6	15	10	22	14	4	6	9
10 years.....	44	44	28	44	57	48	49	50	30	47	42
15 years.....	85	86	95	72	73	88	71	89	69	89	85
20 years.....	86	87	96	73	75	90	71	90	71	90	86
25 years.....	87	87	96	74	76	92	72	90	72	91	86
30 years or more.....	87	87	96	74	76	92	72	90	72	92	86
4 weeks or more.....	44	35	58	34	51	55	22	53	34	41	38
10 years.....	1	2	(⁶)	(⁶)	2	(⁶)	6	2	1	1	1
15 years.....	3	3	2	1	3	3	9	4	2	2	2
20 years.....	16	15	13	19	21	18	13	19	14	15	14
25 years.....	41	35	53	33	51	49	22	52	32	40	31
30 years or more.....	44	35	58	34	51	55	22	53	34	41	38
PLANT WORKERS											
1 week or more.....	99	99	99	97	99		94	99	96	99	99
6 months.....	17	12	36	24	23		13	23	16	12	20
1 year.....	98	99	99	97	98		93	99	95	99	99
2 years.....	99	99	99	97	99		94	99	96	99	99
2 weeks or more.....	95	95	99	93	93		82	95	86	98	97
1 year.....	21	16	34	37	27		19	25	23	12	28
2 years.....	42	29	60	65	73		49	41	42	33	67
3 years.....	63	50	90	81	89		68	61	60	57	87
5 years.....	94	94	99	92	93		80	94	85	98	97
3 weeks or more.....	76	78	97	67	69		39	76	55	87	81
3 years.....	2	2	2	2	1		1	3	1	1	3
5 years.....	7	5	5	9	18		3	8	3	5	12
10 years.....	32	27	29	39	55		16	32	23	32	44
15 years.....	75	77	96	66	67		37	74	54	85	81
20 years.....	76	78	96	66	68		38	75	55	86	81
25 years.....	76	78	96	67	69		39	76	55	87	81
30 years or more.....	76	78	97	67	69		39	76	55	87	81
4 weeks or more.....	30	27	59	25	37		6	33	24	34	24
10 years.....	1	1	1	(⁶)	3		1	1	(⁶)	1	1
15 years.....	2	1	3	2	4		2	3	1	2	3
20 years.....	13	10	23	16	23		4	14	11	14	12
25 years.....	30	26	55	24	37		6	33	22	34	23
30 years or more.....	30	27	59	25	37		6	33	24	34	24

¹ Includes also payments other than "length of time," such as percentage of annual earnings or flat-sum payments, converted to an equivalent time basis; for example, a payment of 2 percent of annual earnings was considered 1 week's pay. Periods of service were arbitrarily chosen and do not necessarily reflect the individual provisions for progression; for example, the changes in proportions indicated at 10 years' service include changes in provisions occurring between 5 and 10 years. Estimates are cumulative. Thus,

the proportion receiving 3 weeks' pay or more after 5 years includes those who receive 3 weeks' pay or more after fewer years of service.

² For definition of regions, see footnote 2, table 1.

³ See footnote 3, table 1.

⁴ See footnote 4, table 1.

⁵ See footnote 5, table 1.

⁶ Less than 0.5 percent.

Among industry divisions, paid holidays for office workers ranged from an average of 6.7 in retail trade to 8.9 in finance. A third of the office workers in finance received 11 holidays or more annually. Among plant workers who received paid holidays, the average ranged from 6.2 days in retail trade and services to 7.6 days in public utilities. The proportion of plant workers provided paid holidays ranged from 78 percent

in the service industries to 98 percent in public utilities.

Although paid holiday time received by office workers exceeded that for plant workers in each industry division, the difference was smaller (except in services) than the 0.8 day's difference recorded for all industries combined. This is largely explained by the more liberal provisions in finance which accounted for over one-fourth

TABLE 3. PERCENT DISTRIBUTION OF OFFICE AND PLANT WORKERS IN METROPOLITAN AREAS, BY MAXIMUM VACATION PAY AVAILABLE,¹ INDUSTRY DIVISION, AND REGION, 1961-62²

Industry division and region ³	Less than 2 weeks			2 but less than 3 weeks			3 but less than 4 weeks			4 weeks or more		
	All workers	Office workers	Plant workers	All workers	Office workers	Plant workers	All workers	Office workers	Plant workers	All workers	Office workers	Plant workers
All areas.....	4	1	5	17	13	18	45	43	46	34	44	30
Industry division:												
Manufacturing.....	4	1	5	16	12	17	51	52	51	28	35	27
Transportation, communication, and public utilities.....	(4)	(4)	(4)	4	4	3	37	38	37	59	58	59
Wholesale trade.....	5	1	7	26	25	26	41	40	41	28	34	25
Retail trade.....	6	2	7	24	22	24	31	25	32	39	51	37
Finance, insurance, and real estate ⁴	1	(4)	-----	9	8	-----	38	37	-----	52	55	-----
Services.....	15	2	18	38	25	42	37	50	33	10	22	6
Region: ⁵												
Northeast.....	4	(4)	5	16	9	19	41	37	43	38	53	33
South.....	12	(4)	14	30	25	31	33	38	32	26	34	24
North Central.....	1	(4)	2	11	9	12	52	49	52	36	41	34
West.....	2	(4)	3	16	14	16	55	48	57	28	38	24

¹ Includes also payments other than "length of time," such as percentage of annual earnings or flat-sum payments, converted to an equivalent time basis; for example, a payment of 2 percent of annual earnings was considered 1 week's pay.

² See footnote 3, table 1.

³ For definition of regions, see footnote 2, table 1.

⁴ Less than 0.5 percent.

⁵ See footnote 5, table 1.

of all office workers but for comparatively few plant workers.

Paid Vacations

Vacation pay was available to 99 percent of all office and plant workers within the scope of the survey (table 2). With very few exceptions, the amount of pay was graduated on a sliding scale, based on length of service, varying from as little as 1 day's pay for short service to as much as 4 weeks or more of pay for long service.

Vacation pay provisions for virtually all office workers and for 85 percent of the plant workers were expressed in terms of regular or average weekly earnings for a stated number of weeks, depending upon length of service with the employer. Almost 13 percent of the plant workers were in firms (mostly manufacturing firms) in which vacation pay was expressed as a percentage of the workers' annual earnings. Flat-sum and other types of payments to those eligible for vacation applied only to a negligible proportion of all office and plant workers.

Nationally and regionally, vacation pay provisions for employees with relatively short service tended to be more liberal for office workers than for plant workers. Sixty-one percent of the office workers compared with 17 percent of the plant workers qualified for 1 week or more of vacation after 6 months' service. Consistent with this tendency, 2 weeks or more of vacation pay after

1 year of service were available to 77 percent of the office workers and to 21 percent of the plant workers. Provisions were also more liberal for office workers as to maximum vacation pay; 4 weeks or more were available to 44 percent of the office employees in contrast to 30 percent of the plant workers (table 3).

The finance industries provided the most liberal vacations for short-service office workers; 96 percent of the finance workers with 1 year of service qualified for at least 2 weeks of vacation pay. Among other office workers, 2 weeks or more of vacation pay after 1 year of service were available to 83 percent in manufacturing, 74 percent in services, 71 percent in wholesale trade, 46 percent in public utilities, and 37 percent in retail trade. Half of all long-service employees (25 years' service) in public utilities, finance, and retail trade were provided vacations of 4 weeks or more.

Long-service plant workers in public utilities were provided more vacation pay than plant workers in any of the other industries. The proportions of plant workers in establishments that provided at least 3 weeks' vacation after 15 years of service were virtually all in public utilities, three-fourths in manufacturing, two-thirds in wholesale and retail trade, and almost two-fifths in services.

Health, Insurance, and Pension Plans

Coverage under some form of insurance or pension plan was extended to 99 percent of the office

workers and 97 percent of the plant workers in all metropolitan areas (table 4).

The data on insurance and pension plans relate only to the prevalence of such plans. No attempt was made to evaluate either the money cost or the benefits provided. All plans are included for which at least a part of the cost is borne by the employer, except for those legally required (such as workmen's compensation, social security, railroad retirement, and the compulsory temporary disability insurance requirements in New York and New Jersey). Plans included those underwritten by a commercial insurance company and those provided through a union fund or paid directly by the employer out of current operating funds or from a fund set aside for this purpose.

Life insurance coverage—available to 95 percent of the office workers and to 91 percent of the plant workers—was the most common benefit provision. The most widespread health insurance

provision was for hospitalization, which covered 84 and 88 percent of the office and plant workers, respectively. In recent years, the trend has been toward comprehensive health plans encompassing hospitalization, surgical, medical, and catastrophe (extended medical) insurance. Nearly all workers now covered by hospitalization provisions also have surgical coverage. Medical-care insurance was extended to 66 percent of the office workers and to 63 percent of the plant workers. Catastrophe insurance covered 55 and 26 percent of the office and plant employees, respectively. This latter benefit is designed to protect employees when sickness or injury involves expenses beyond the normal coverage of hospitalization, medical, and surgical plans.

About four-fifths of the office and plant workers were covered by plans that provide payments during illness or accident disability. Sickness and accident insurance covered 64 percent of the

TABLE 4. HEALTH, INSURANCE, AND PENSION PLANS¹ FOR OFFICE AND PLANT WORKERS IN METROPOLITAN AREAS, BY TYPE OF PLAN, INDUSTRY DIVISION, AND REGION,² 1961-62³

[Percent distribution]

Type of plan ¹ and class of worker	All areas	Industry division						Region ²			
		Manu- fac- turing	Public utili- ties ⁴	Whole- sale trade	Retail trade	Fi- nance ⁵	Serv- ices	North- east	South	North Central	West
OFFICE WORKERS											
Insurance plans:											
Life.....	95	97	92	93	87	98	83	95	93	95	95
Accidental death and dismemberment.....	55	64	52	58	45	47	43	49	51	58	65
Hospitalization.....	84	90	67	84	82	87	68	81	83	87	85
Surgical.....	83	90	66	81	79	85	66	79	82	86	85
Medical.....	66	72	58	66	46	69	49	63	56	69	74
Catastrophe.....	55	45	71	47	41	71	41	41	54	57	63
Sickness and accident insurance and/or sick leave ⁶	80	88	82	77	83	71	68	84	71	82	79
Sickness and accident insurance.....	40	62	23	42	40	19	28	39	33	51	28
Sick leave:											
Full pay and no waiting period.....	59	62	58	57	33	66	53	71	49	50	63
Partial pay or waiting period.....	7	5	18	5	27	1	4	4	10	9	8
Retirement pension plan.....	78	82	70	69	63	88	53	81	72	78	78
No health, insurance, or pension plan.....	1	1	(7)	2	3	(7)	5	1	2	1	1
PLANT WORKERS											
Insurance plans:											
Life.....	91	94	91	90	84		75	92	85	94	91
Accidental death and dismemberment.....	56	60	53	61	46		46	51	47	62	71
Hospitalization.....	88	94	72	86	79		74	88	81	90	91
Surgical.....	86	93	70	83	76		71	85	80	89	91
Medical.....	63	67	59	63	50		53	60	44	69	82
Catastrophe.....	26	23	59	32	23		11	21	30	24	40
Sickness and accident insurance and/or sick leave ⁶	80	85	73	75	75		55	82	67	90	70
Sickness and accident insurance.....	64	77	32	49	45		45	69	49	78	41
Sick leave:											
Full pay and no waiting period.....	15	9	29	34	24		14	14	17	9	29
Partial pay or waiting period.....	11	7	26	10	19		6	8	12	11	16
Retirement pension plan.....	68	74	72	62	57		29	73	55	71	70
No health, insurance, or pension plan.....	3	2	1	4	5		16	2	7	2	2

¹ Includes those plans for which at least a part of the cost is borne by the employer, except legal requirements such as workmen's compensation, social security, railroad retirement, and compulsory temporary disability insurance required in New York and New Jersey.

² For definition of regions, see footnote 2, table 1.

³ See footnote 3, table 1.

⁴ See footnote 4, table 1.

⁵ See footnote 5, table 1.

⁶ Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately. Sick leave plans are limited to those which definitely establish at least the minimum number of days' pay that can be expected by each employee. Informal sick leave allowances determined on an individual basis are excluded.

⁷ Less than 0.5 percent.

plant workers and 40 percent of the office workers. Sixty-six percent of the office workers, however, were employed in firms that provided paid sick leave, compared with 26 percent of the plant workers. As these figures indicate, some workers were covered by both paid sick leave and sickness and accident insurance.

Private retirement pension plans, which provide monthly payments for the remainder of the worker's life, were available to 78 percent of the

office workers and 68 percent of the plant workers who ultimately qualify for benefits.

The proportions of office and plant workers covered by insurance plans were generally highest in manufacturing. Major exceptions were noted in catastrophe insurance, available to 71 percent of the office workers in public utilities and finance and to 59 percent of the plant workers in public utilities. Although manufacturing led in pension plan coverage of plant workers (74 percent), 88

TABLE 5. SHIFT OPERATION PROVISIONS AND EXTENT OF LATE-SHIFT WORK FOR PLANT WORKERS IN MANUFACTURING ESTABLISHMENTS IN METROPOLITAN AREAS, BY TYPE AND AMOUNT OF PAY DIFFERENTIAL AND REGION,¹ 1961-62²

Shift operation and shift-pay differential	Percent of manufacturing plant workers—									
	In establishments having provisions for late-shift operations ³					Actually working on late shift				
	All areas	North-east	South	North Central	West	All areas	North-east	South	North Central	West
All plants.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Second shift.....	84.1	78.7	81.6	90.1	86.3	15.5	14.0	16.9	16.1	16.2
With shift-pay differential.....	78.9	73.2	65.9	88.6	85.5	14.3	13.1	12.8	15.8	16.0
Uniform cents (per hour) ⁴	51.6	46.4	51.9	54.3	59.7	9.9	8.9	10.3	10.0	11.9
Under 5 cents.....	1.1	1.2	2.2	.4	1.4	.2	.3	.3	.1	.3
5 cents.....	7.5	7.3	10.1	6.4	7.4	1.2	1.2	1.8	1.0	1.1
6 cents.....	3.7	2.7	4.2	5.0	2.1	.8	.6	.7	.5	.1
7 cents.....	2.8	3.2	3.7	2.5	.7	.5	.5	.1	.2	.4
7½ cents.....	1.4	1.9	.6	1.2	1.5	.3	.4	.1	.2	.4
8 cents.....	11.1	10.5	14.3	11.1	8.0	2.2	2.3	3.0	1.9	1.7
9 cents.....	1.1	1.1	1.4	.6	.7	.2	.2	.2	.1	.5
10 cents.....	11.4	9.9	6.2	14.6	13.3	1.9	1.3	1.2	2.7	2.1
11 cents.....	.5	.7	.2	.3	.7	.1	.2	(5)	.1	.2
12 cents.....	5.8	2.5	4.9	6.5	15.5	1.1	.5	.9	1.1	3.3
13 cents.....	.5	.2	.7	1.0	.6	.1	.1	.1	.2	.1
15 cents.....	1.4	1.5	.7	1.4	1.8	.2	.2	.1	.2	.5
Over 15 cents.....	1.3	1.3	1.0	1.4	2.1	.3	.3	.2	.3	.4
Average cents-per-hour differential.....	8.9	8.7	8.1	9.1	9.9	9.0	8.7	8.2	9.1	10.1
Uniform percentage ⁴	22.2	23.4	11.6	29.3	11.2	3.3	3.6	1.9	4.5	1.9
5 percent.....	7.6	3.9	2.9	14.7	3.7	1.2	.8	.4	.2	.6
7 percent.....	1.2	1.5	2.3	2.7	.7	.2	.3	.4	.2	.2
8 percent.....	1.0	.3	1.1	2.0	.1	.2	.1	.2	.2	.2
10 percent.....	11.1	16.2	4.7	10.4	6.0	1.7	2.2	.7	1.8	.9
Average percentage differential.....	7.9	8.9	7.8	7.2	7.8	7.9	8.6	7.8	7.4	7.6
Other ⁵	5.0	3.4	2.4	5.0	14.6	1.0	.6	.5	1.3	2.2
No shift-pay differential.....	5.3	5.5	15.7	1.5	.8	1.1	.9	4.1	.3	.2
Third shift.....	75.8	70.5	71.3	82.2	78.8	6.0	5.5	8.0	5.9	5.0
With shift-pay differential.....	74.0	69.0	65.6	81.6	78.5	5.8	5.3	7.1	5.8	4.9
Uniform cents (per hour) ⁴	44.4	41.5	48.7	48.0	35.2	4.4	3.9	6.2	4.2	3.7
5 cents.....	2.8	1.1	9.7	1.7	1.8	.4	.1	1.8	.1	.3
6 cents.....	1.6	.6	.9	2.7	2.0	.2	.1	.1	.3	.3
7 cents.....	1.1	1.8	1.4	.3	.6	.2	.3	.1	(5)	.1
7½ cents.....	.8	1.4	.3	.5	.9	.2	.1	(5)	(5)	.1
8 cents.....	1.4	.9	3.6	1.1	.3	.2	.1	.6	.1	.2
9 cents.....	1.3	1.1	1.7	1.3	.9	.1	.1	.2	.1	.2
10 cents.....	9.4	11.9	5.3	10.0	5.3	.6	.8	.4	.7	.2
12 cents.....	12.2	10.8	10.6	15.4	8.5	1.6	1.4	1.4	1.8	1.5
12½ cents.....	.8	1.0	.7	.7	.3	.1	.1	.1	.1	(5)
13 cents.....	.4	.6	.7	.2	.2	(5)	.1	.1	(5)	(5)
14 cents.....	1.0	1.7	.7	(5)	.7	.1	.1	.1	(5)	.4
15 cents.....	5.3	4.5	3.7	6.2	7.6	.3	.3	.3	.3	.3
16 cents.....	2.2	.9	4.9	2.3	2.2	.2	.1	.6	.2	.3
Over 20 and under 25 cents.....	.5	.3	.3	.3	1.7	(5)	(5)	(5)	(5)	.2
Average cents-per-hour differential.....	11.7	11.5	11.0	12.0	12.9	11.4	11.5	10.3	11.7	12.7
Uniform percentage ⁴	19.8	21.8	11.3	25.6	7.2	4.9	4.9	.8	1.3	.1
7 percent.....	.9	1.3	2.2	.3	.4	(5)	(5)	.1	(5)	.1
10 percent.....	15.7	17.1	6.8	21.5	5.4	(5)	(5)	.5	1.1	.1
15 percent.....	1.2	1.8	.4	.9	1.8	(5)	(5)	.5	.1	(5)
Average percentage differential.....	10.0	10.1	9.0	10.0	11.3	9.8	9.9	8.7	10.0	10.8
Other ⁵	9.8	5.7	5.7	8.0	36.1	.5	.5	.2	.4	1.2
No shift-pay differential.....	1.7	1.5	5.6	.6	.3	.3	.2	.9	(5)	(5)

¹ For definition of regions, see footnote 2, table 1.

² See footnote 3, table 1.

³ Includes establishments currently operating late shifts and establishments with formal provisions covering late shifts, even though they were not currently operating late shifts.

⁴ Includes differentials in addition to those presented separately.

⁵ Less than 0.05 percent.

⁶ Includes pay at regular rate for more hours than worked, a paid lunch period not given to first-shift workers, a flat sum per shift, and other provisions. Most "other" workers, however, were in establishments which provided one such provision in combination with a cents or percentage differential for hours actually worked.

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

percent of the office workers in finance, compared with 82 percent of those in manufacturing, were in offices reporting pension plans.

Late-Shift Pay Provisions

Eighty-four percent of the manufacturing plant workers were in plants having specific provisions for second-shift operations, and 76 percent were in plants with third-shift provisions (table 5). These estimates were exceeded in the West and North Central regions; corresponding figures for the Northeast and South were somewhat below the national estimates. About 22 percent of all manufacturing plant workers were actually working on late shifts at the time of the survey. Among regions, the proportions of late-shift workers ranged from about 20 percent in the Northeast to 25 percent in the South.

Among those plants having provisions for shift differentials, the primary differential was the addition of uniform cents per hour to the first-shift rate. Next in importance was the addition of a uniform percentage to the first-shift rate. The smallest number of workers received other types of differentials, such as a full day's pay for reduced hours or a full day's pay for reduced hours plus a uniform cents-per-hour differential. This

order of importance held true in all regions except the West, where a full day's pay for reduced hours and combination plans were more important than uniform percentage additions.

A wide variety of cents-per-hour and percentage differentials were included in the all metropolitan area data. To simplify comparisons, average cents-per-hour differentials and average percentage additions to first-shift rates were computed. In firms with provisions for a uniform cents-per-hour differential for the second shift, the average differential was 8.9 cents and ranged from 8.1 cents in the South to 9.9 cents in the West. The average differential for third-shift workers was 11.7 cents, ranging from 11 cents in the South to 12.9 cents in the West.

In firms with uniform percentage additions to first-shift rates, the average differential was 7.9 percent for second-shift workers and 10 percent for third-shift workers. This type of differential was more common in the Northeast and North Central regions than in the South or West. Average percentage differentials for the second shift ranged from 7.2 in the North Central region to 8.9 in the Northeast. For third-shift workers, the average ranged from 9 in the South to 11.3 in the West.

—DONALD J. BLACKMORE
Division of Occupational Pay

. . . a study of the policy of employers in granting vacations with pay, made by the New York Bureau of Women in Industry, . . . showed that 90 percent of the establishments gave vacations with pay to their office workers, 68 percent to their factory foremen, and 18 percent to their production workers. . . . In general, the vacation of factory workers was about half as long as that of office workers . . .

* * * * *

That vacations with pay for factory workers have usually been successful is shown by the fact that only 6 percent of the factories which have tried them have given them up. Employers generally who maintained such a plan . . . reported that vacations given to the factory force increased loyalty to the firm, reduced turnover, and tended to make more contented workers while they also stated that vacation policies stood for fair play and good business.

The report suggests that "perhaps one of the reasons why young people flock to the so-called white-collar jobs rather than taking factory work is because of the little attention given by factory management to a definite yearly let-up from work for rest and recreation."

—From "Vacations with Pay for Office and Factory Workers," *Monthly Labor Review*, September 1925, pp. 206-207.

Foreign Labor Briefs*

Collective Bargaining Contracts in India

EMPLOYERS AND UNIONS IN INDIA recently have been expanding somewhat the scope and significance of collective bargaining beyond the narrow limits which confined it until well after the close of World War II.¹ Governmental support and the parties' acceptance of collective bargaining are now widespread enough to discern some similarities with United States practices. And despite relatively detailed Government regulations, Indian bargainers have found opportunities to introduce some provisions that are at least rare elsewhere.

A recent compilation of 114 agreements by an Indian employers' group² provides enough information to trace a tentative profile of bargaining achievements over the 1954-61 period covered, subject, of course, to the limitations imposed by the sample size, selection, and coverage.

The cotton industry in Ahmedabad, a pioneer of early union-management negotiations, is prominently represented in this collection of agreements. The cotton industry agreements, first concluded in 1920, remained India's only examples throughout that decade, and additional examples were long in coming. The compilation of the Employers' Federation of India is believed to be reasonably representative of total present coverage. The following tabulation accounts for an estimated 450,000 workers, represented by 55 trade unions, and 49 separate companies and members of two industry associations.

Industry	Agreements	Companies	Trade unions
Total	114	¹ 51	55
Cotton textiles	31	¹ 7	10
Chemical and allied industries	16	8	8
Petroleum refining and distribution	14	4	3
Manufacture of electrical and other machinery	13	11	7
Sugar	12	4	4
Automobile repairing	7	2	2
Commerce	7	5	4
Asbestos and cement making	4	1	4
Cigarette manufacture	3	3	2
Iron and steel	2	1	1
Aluminum	2	2	5
Other industries	3	3	5

¹ Includes two associations of employers.

SOURCE: *Collective Agreements: A Study* (Bombay, Employers' Federation of India, 1962), Monograph 4, p. 34.

Governmental specification of the terms of employment historically has impinged upon bargaining and has in some cases displaced it. The state has, however, typically provided for industry and worker representation or consultation in formulating and effecting industry orders (as, for example, in the longshore and transportation industries) or individual factory or enterprise "conditions of work" orders.

Governmental access to the subject matter of bargaining is increased through provisions for conciliation, compulsory arbitration, and litigation before special tribunals. Conciliation is frequently invoked in resolving grievance disputes (still often the subject of strikes) as well as in settling contract terms. In the 1954-61 period, conciliators participated in about 57 percent of the contract settlements. Frequent government intervention at many levels of plant activity, added to government preemption of many bargaining subjects, is cited by the Employers' Federation as a principal impediment to an earlier development of collective bargaining. Unassisted "voluntary" agreements accounted, nevertheless, for a substantial 39 percent of the total compiled in the federation's study (the remainder—about 3.5 percent—are described as "consent awards" negotiated by the parties during litigation of contract terms and adopted as the tribunal's award).

*Prepared in the Division of Foreign Labor Conditions, Bureau of Labor Statistics, from reports and information to that division from other American and foreign sources.

¹ See Van Dusen Kennedy, "In-Plant Role of Unions in Labor Relations in India," *Monthly Labor Review*, March 1956, pp. 304-308.

² *Collective Agreements: A Study* (Bombay, Employers' Federation of India, 1962), Monograph 4.

The federation's endorsement of collective agreements is warm: "In promoting harmony within the plant and in facilitating technical changes, collective agreements are helping the transition of our country from an underdeveloped economy into a modern industrial society."³ Again, in its most recent annual report, the federation's director-general, Dr. N. Das, indicated the vigor and limits of this endorsement: ". . . [during 1961] the federation urged members to do all they could to promote collective agreements [and] grant recognition to such unions as were observing the Code of Discipline"⁴

Types of Clauses

The genesis and circumstances of Indian collective bargaining have shaped some of its features. Recognition clauses, for example, generally affirm the worker's right to organize; union security is accomplished by granting the specified union or unions the right to collect dues near the pay office, by granting the union access to plant bulletin boards, and by permitting stewards to attend committee meetings and perform other union business during worktime. In turn, management's right to hire, discipline, and transfer workers, to plan and direct plant operations, and to require compliance with "reasonable" rules and regulations is also typically stipulated.

In some agreements, employers agree to refrain from antiunion activities, unions agree not to strike during the period of the agreement, and both sides agree to settle any future disputes by recourse to joint consultation or other machinery. A considerable number of the collective agreements provide for joint consultation between workers and management not only for the settlement of individual grievances and collective disputes but also for the promotion of labor welfare, productivity, improved personnel relations, and effective job evaluation.

The agreements usually establish specific wage rates or provide for percentage or other increases over existing wage rates, or for methods of calculating production-related or other incentive wages. A majority also provide for a "dearness" (cost-of-

living) allowance. In some cases, provision is made for incorporating existing dearness allowances into basic wage rates.

Many of the agreements provide for the payment of overtime to white-collar workers. (Overtime for manual workers is governed by the Factories Act of 1948.) Overtime is paid in some cases for work in excess of normal daily hours and in others for work in excess of normal weekly hours. (Hours of work of white-collar workers are often set by the agreements; those of manual workers are set by the Factories Act.) Some agreements provide for shift differentials for nightwork and for handling hazardous materials and allowances for the purchase of bicycles.

Provisions for payment of annual bonuses to the workers vary greatly. Some call for payment of a percentage of the basic wage or a percentage of the combined basic wage and dearness allowance to each worker once a year. Others provide for a bonus based on the company's output. Still others provide for a bonus based on the company's surplus after deducting "prior charges" (income tax, a return on capital, and amounts for depreciation and modernization) from the company's net receipts. Eligibility to receive the bonus is usually restricted to employees who have served for a specified period.

The Factories Act of 1948 provides for 1 day's paid leave for every 20 days of work, and the Employees' State Insurance Act of 1948 provides for a minimum amount of sick leave. Many agreements specify leave in excess of that provided by these two acts. Agreements commonly provide for 3 to 9 paid holidays a year.

A number of these Indian agreements set the age, ranging from 55 to 60 years, at which an employee may retire on a pension and provide for additional pension payments over and above the legislated amounts. Some agreements provide for medical aid, educational facilities, subsidized canteens, housing, warm garments, and other special items.

Sixty-three of the 114 agreements ran from 3 to 6 years. Thirty-seven did not specify any period of duration; where such agreements are reached under statutory conciliation, they are binding for 6 months, after which they continue until terminated by either party. Fourteen were concluded for less than 3 years.

³ Ibid., p. 33.

⁴ Employers' Federation of India, *Twenty-Ninth Annual Report, 1961* (Bombay, 1962), p. 4. The code, promulgated in 1957, enumerates rights and duties for labor and management (see *Labor in India*, BLS Report 188, 1961, pp. 57-58).

Asian Productivity Development

SINCE 1952, Asian countries have been rapidly introducing new production methods and managerial techniques. Substantial assistance has been given by other countries individually and through the International Labor Organization. Perhaps Japan has adopted a greater variety of techniques than any other Asian country, but throughout Asia the tempo of interest in all productivity-increasing methods is quickening.

Japan Productivity Center

From 1952 to 1962, Japan's real national product increased at an average rate of over 9 percent a year, its annual industrial production more than quadrupled, and its urban population achieved a "great breakthrough into the first modern consumer-oriented economy in Asia."¹ This remarkable growth, accomplished from the low post-World War II base, was due in some measure to productivity stimulation begun in 1955 with assistance from the United States and Japanese Governments.

The Japan Productivity Center was established on March 1, 1955. In May of the same year, the Joint Committee of the Productivity Center and the Government of Japan adopted a set of three guiding principles: Management, in taking steps to improve output potential, should keep prices low and should share with labor the fruits of increased production; labor should help to keep production high and should recognize management's need for adequate earnings and for improved technology; the public, through legislation and otherwise, should promote the efficient functioning of economic and social institutions favorable to increased productivity.

During the early period, the center sent study teams to the United States, exchanged professors between Japanese and American universities, brought specialists from the United States to Japan, and began publicizing productivity through pamphlets and periodicals, films and displays, radio programs, and technical exchanges between industries within Japan.

In 1961, the center established a Labor Productivity Institute to educate trade union leaders in the efficient administration of their unions. At about the same time, it established a program for management education. In this same year the Japan Productivity Center reached such a point that the United States ended its technical assistance to the center.

The center is an organization of "supporting members" who subscribe to the aim of increased productivity and will provide monetary assistance for carrying out that aim. The number of members as of March 1962 was about 4,500, most of them corporations.

The 39-man board of directors includes about 25 principals or executives of business firms or employers' organizations, 5 heads or high officers of labor organizations, 2 heads of universities, and others; 7 were full-time or part-time heads of regional productivity centers.

The Japan Productivity Center is comprised of the national headquarters in Tokyo; regional productivity affiliates; a special productivity group for agriculture, forestry, and fishing; groups for productivity in inventory control, material handling, and marketing; regional and industry labor-management productivity groups; and trade union productivity committees; plus a 1,000-member social club.

The special productivity groups concerned with the role of labor and of labor relations in productivity promotion deserve additional comment. One group consists of the National Trade Union Productivity Planning and Implementing Committee and seven corresponding regional committees. The national committee was formed on the initiative of the Japan Trade Union Congress (ZENRO) and independent labor unions. The other group consists of community labor-management productivity councils. The social club is made up of alumni both of productivity study teams that went overseas and of productivity seminars conducted in Japan.

The Japan Productivity Center is financed by private funds, Government funds, and miscellaneous receipts. The private funds available to the center are composed of membership fees,

¹ London *Economist*, Sept. 1, 1962, p. 793.

participation fees for specific programs, income from the sale of publications, and contributions. The Government funds received by the center comprise subsidies, loans and the profits derived from the use of loans, and fees received for work done on contract.

From 1955 to June 30, 1961, a total of 392 study teams and 152 long-term trainees visited the United States. The study teams usually comprised 8 to 12 participants who visited the United States for 5 or 6 weeks. The long-term trainees usually spent 3 to 12 months in intensive study at American universities, government facilities, or other training establishments. Consultants, brought to Japan mainly from the United States, conducted seminars and engaged in special consultations. Usually, a group of three to five seminar leaders conducted intensive lecture and discussion programs in key locations.

Domestic activities of the Japan Productivity Center have included industry programs, labor-oriented programs, research, and publicity. The industry programs cover courses in management techniques for the all management levels; seminars on quality control, industrial financing, management organization, and long-term planning; individual and group guidance for management personnel in a given district or industry; and a Case Clearing House, which receives or prepares case studies and distributes copies of them.

The labor-oriented programs of the Japan Productivity Center include the trade union training provided by the Labor Productivity Institute (established in 1961) in six courses or groups of courses (one course each for leaders of nationwide industry trade unions, for leaders of trade unions in the Kanto and Koshinetsu Areas, for other trade union leaders, for trade union secretaries, and for staff labor specialists, and a set of correspondence courses); job-oriented domestic study teams; lectures on job analysis to trade union leaders and members; and promotion of the establishment of permanent labor-management councils and special labor-management roundtable conferences.

Research and publicity programs include the special studies conducted by the Productivity Research Institute (established in 1956) on the effects of the seniority system, mechanizing business routines, and other subjects; the maintenance of a library; and a publication program.

The technical cooperation of the Japan Productivity Center with Asian countries began in 1959 with the holding of the First Asian Productivity Conference at Tokyo, 16 Asian countries participating. By December 1961, a total of 31 productivity teams from Asian countries, consisting of 300 persons, had visited Japan, mostly under the auspices of the Asian Productivity Organization, established in 1961 and reportedly the first international body organized entirely on the initiative of Asian nations, or the Japan-United States Training Program for Third Countries.

ILO Activities²

Complementing such indigenous programs, the International Labor Organization has been engaged in efforts to increase productivity in Asian countries as part of its program for promoting economic development in the interests of workers and the general population. The earliest of these productivity-promotion efforts was the sending of a productivity experts' mission to India in 1952. The most recent is the provision of assistance to Korea in the establishment of a productivity center.

Burma was 1 of 5 southeast Asian countries visited for 3 months each in 1958-59 by a three-man demonstration team which gave courses and demonstrations in each country in techniques for improving productivity. The Government of Burma in 1960 requested the services of a long-term mission of productivity experts. The mission sent to Burma has been engaged mainly in setting up a national productivity center and providing instructions in new work methods to machine operators in Government-owned factories.

Cambodia in 1962 received an allocation of \$947,000 from the ILO to assist in establishing a training and productivity center at Phnom Penh. The Government of Cambodia is itself providing over \$1 million for the Center.

² This account is based on ILO publications, chiefly *The ILO and Asia* (Geneva, 1962).

In 1957, *Ceylon* was assisted by an expert in port management methods to speed ship turn-around in the port of Colombo.

In *Hong Kong*, from 1956 to the end of 1957, an ILO expert worked in the Technical College, setting up a department of production engineering and giving courses in productivity for industrial management personnel. The Technical College has continued to offer these courses.

In 1952, the ILO sent four experts to *India*, where they carried out demonstration and training projects in the engineering and textile industries. Two years later, when the Indian Ministry of Labour and Employment established a Productivity Center at Bombay, an ILO mission was attached to the Center, and the mission continued to guide and assist the Center for some years. One result of the Center's activity was a substantial reduction in the time spent in servicing and repairing vehicles in the workshops of the transport authorities of Bombay State, Delhi, and Kashmir.

The Government of India established a National Productivity Council in 1957 composed of representatives of the Government, employers' and workers' organizations, and scientific and technical institutions. Among the tangible results of the ILO mission's new activity was the conversion by the Madras City Transport Authority of an operating loss into a substantial profit without the raising of fares.

The ILO contributed \$669,000 in 1962, to supplement the Indian Government's appropriation of \$1.62 million, for the establishment of a National Institute for the Training of Industrial Engineers. When fully in operation, the Institute will have the capacity to train 1,200 engineers annually.

Indonesia was one of the countries visited by the ILO productivity-demonstration mission to southeast Asia in 1958-59. In 1960, the Government of Indonesia requested the assignment to Indonesia of a long-term mission of the same kind. The ILO sent a two-man mission, which functioned through 1961-62 and was expected to remain longer. The mission has assisted in improving working methods in the repair shops of the Indonesian State Railways at Djakarta.

The ILO allocated \$778,500 in 1962 to assist the Government of *Korea* in establishing a

Productivity Center at Seoul. The Government itself has appropriated \$830,000 for this purpose.

An ILO productivity mission visited *Malaya* for 3 months in 1958. The Government of Malaya in 1961 requested the assignment to Malaya of a long-term mission of this kind. Accordingly, two ILO experts on productivity are now stationed in Malaya. In addition, the ILO contributed \$525,400, to supplement the Government's appropriation of \$380,210, for work in the field of management development and productivity promotion.

The ILO sent two productivity experts to *Pakistan* in 1955 to work in the textile industry. During the first year of their 3-year stay in Pakistan, daily production in one privately owned 250-loom mill was increased from 14,000 to 21,000 yards, and the output of bleached and printed cloth in another privately owned mill (where the finishing departments had been a bottleneck) was increased by nearly 100 percent.

The ILO sent an expert in 1959 to study productivity in the jute industry in East Pakistan, and subsequently sent a full mission to improve productivity in that industry; it has also provided over \$1 million in credits and \$210,000 worth of equipment for a training center at Dacca. Sixteen more productivity and management experts were also sent by the ILO to Pakistan, and 8 fellowships to enable Pakistanis to study production methods overseas for a period of 5 years were sponsored by the organization.

Thailand, also assisted by the demonstration mission which visited southeast Asia in 1958-59, requested a long-term ILO productivity mission in 1960. The ILO has provided \$567,300 for the activities of the productivity mission now stationed in Thailand, supplementing the allocation of \$212,600 for this project by the Government of Thailand.

Multilateral activities of the ILO in promoting productivity in Asia include participation in a 2-week seminar held in Tokyo in March 1961.

In the ILO's latest activities in the field of productivity promotion in Asian countries, a growing emphasis on the development of senior managerial personnel is evident. This emphasis derives from the feeling of the International Labor Office that well-trained top managers in the developing countries can make a significant contribution to the improvement of production.

Significant Decisions in Labor Cases *

Labor Relations

Seniority. The National Labor Relations Board ruled¹ that a union committed an unfair labor practice by causing an employer to decrease the seniority of a union member for reasons found to be arbitrary. The employer was also held to have violated the Labor Management Relations Act by agreeing to the union's demand.

The contract between a union and an employer provided that employees would be retained during the slow season according to seniority as set forth in a union-prepared list. Employees who were not to be retained could take a leave of absence without any reduction in seniority. A worker began his leave of absence too early and the employer, under union pressure, reduced his seniority. Subsequent litigation led to the U.S. Supreme Court's remanding the matter to the Board for reconsideration in line with the Court's decision in *Local 357, International Brotherhood of Teamsters v. NLRB*.²

On reconsideration, the Board concluded that the union's action violated sections 8(b)(1)(A) and 8(b)(2) of the act, which forbid labor organizations to restrain or coerce employees in the exercise of their rights under the act or to induce employers to discriminate against employees in regard to employment and thus encourage union membership. In discussing the 8(b)(1)(A) violation, the Board examined the relationships between sections 9, 7, and 8(b)(1)(A). Since section 9 permits a union to be designated as an exclusive collective bargaining agent, the Board reasoned that a union occupying this status must assume a responsibility to represent all employees fairly and impartially. It noted that the circuit court, in its prior disposition of this case, had found that the union had sought a reduction in the employee's seniority for a reason which violated the collective bargaining agreement. It viewed the reduction in seniority as an unfair retroactive imposition of

a union-made rule. The Board concluded, therefore, that the union had breached its duty of fair representation.

Section 7 guarantees the right of employees to bargain collectively through representatives of their own choosing. It was held by the Board to protect employees from union violations of the fair representation requirement implicit under section 9. Since 8(b)(1)(A) deems it an unfair labor practice for unions to restrain or coerce employees in the exercise of their rights under section 7, the Board concluded that the union action in this case violated 8(b)(1)(A).

The Board also held that the employer had interfered with employees in the exercise of rights guaranteed by section 7, thus violating section 8(a)(1). While an employer does not have the same statutory obligation toward his employees as a union, he violates the act to the extent that he participates in arbitrary union action against an employee.

The Board ruled that the union and the employer unlawfully discriminated against the employee to encourage union membership. It interpreted the Supreme Court in *Local 357* as holding that the act is not necessarily violated by conduct which encourages union membership, even where such encouragement was the foreseeable consequence of the conduct. Where the consequences can be foreseen, however, the conduct must be examined to determine whether it was arbitrary or whether it was related to legitimate employer or union purposes. Since the Board believed that the decrease in seniority was arbitrary, it concluded that sections 8(a)(3) and 8(b)(2) had been violated by the employer and union.

In light of the Supreme Court's decision in *Local 357*, dissenting members McCulloch and Fanning questioned the Board's and circuit court's reliance on the conclusion that union action violated the collective bargaining agreement. In the dissenters' view, the real issue was

*Prepared in the U.S. Department of Labor, Office of the Solicitor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

¹ *Miranda Fuel Co. and Michael Lopuch*, 140 NLRB No. 7, Dec. 19, 1962.

² 365 U.S. 667 (1961); see *Monthly Labor Review*, June 1961, pp. 643-647. The Court ruled that exclusive hiring arrangements are not in themselves unlawful.

whether the Board can reasonably conclude that the true purpose of the reduction in seniority was to encourage his or other employees' union membership. The dissenters concluded that there was no evidence of unlawful motivation here nor was any such discrimination the natural or foreseeable consequence of the reduction in seniority. The employee was a union member. His treatment resulted from his absence from the job. The beneficiaries of the union efforts were the other employees who rose on the seniority ladder without regard to union membership. The foreseeable result of this loss in seniority could only be to encourage timely return and continuous work until the annual layoff.

With respect to the alleged 8(b)(1)(A) and 8(a)(1) violations, the dissenters argued that even if the union's action was arbitrary and a breach of its section 9 obligation of fair representation, the appropriate remedy might be to revoke certification rather than to invoke the sanctions imposed for violation of the unfair labor practice provisions.

Arbitration. The U.S. Court of Appeals for the Second Circuit held³ that although courts are obliged under the Labor Management Relations Act to determine whether a party has breached its promise to arbitrate, the question of whether the party seeking arbitration has complied with the technical requirements of the grievance procedures should be left for the arbitrator to decide.

A publisher and a union had a collective bargaining agreement containing arbitration provisions. Prior to the expiration of the contract, the publishing company and another firm consolidated. Since the contract did not expressly purport to bind successors of the publisher, a dispute arose regarding the obligations of the new company to employees under the old agreement. The union demanded that the matter be submitted to arbitration. The company alleged that the union had not complied with grievance procedures set forth in the agreement and was, therefore, not entitled to arbitration.

The court of appeals held that a State law imposing upon consolidated ventures liabilities assumed by their predecessors was inapplicable to the present dispute. The court believed the case to be governed by Federal rather than State

law. It noted the Supreme Court's holding in *Atkinson v. Sinclair Refining Co.*⁴ that matters of "substantive arbitrability" are for the courts to decide. This decision imposed upon the courts a duty to determine whether a reluctant party has breached his promise to arbitrate.

The circuit court refused to hold that Federal law or policy compels the termination of all employee rights upon consolidation of the two publishing firms. A contrary ruling would, in its view, be a manifest injustice, a source of disrupting litigation and labor-management friction. On the other hand, it refused to hold that all collective bargaining agreements survive consolidation. It merely stated that, as viewed in the light of public policy, the present contract was not intended to preclude arbitration to determine the employees' rights under the consolidation.

The court drew a clear distinction between questions of "substantive" and "procedural" arbitrability. Questions of procedural arbitrability involve determinations as to whether the parties have complied with the grievance or arbitration procedures set forth in the collective bargaining agreement and are, therefore, entitled to arbitration. The *Atkinson* decision did not, in the court's view, expressly decide whether such determinations are to be made by a court or by an arbitrator. The court reasoned that the merits of a case should be submitted to arbitration once it has been decided that the reluctant party has breached his obligation to arbitrate. The parties bargained for a decision by an arbitrator because they desired "the benefit of his creativity and expertise." Implementation of an arbitration clause and its procedural requirements are matters to which this expertise is particularly appropriate. The court, therefore, charged the arbitrator with deciding whether the union complied with the procedures set forth in the collective bargaining agreement.

Jurisdiction, No. 1. The U.S. Supreme Court held⁵ that it was authorized to review a State court's temporary order enjoining a picketing which allegedly violated a State "right-to-work" law. The Court found that the disputed conduct was argu-

³ *Livingston v. John Wiley & Sons* (C.A. 2, Jan. 11, 1963).

⁴ 370 U.S. 238 (1962); see *Monthly Labor Review*, August 1962, p. 903.

⁵ *Local 438, Construction and General Laborers' Union v. Curry* (U.S. Sup. Ct., Jan. 21, 1963).

ably under exclusive jurisdiction of the NLRB and that the State court, therefore, lacked jurisdiction.

An employer entered into a municipal construction contract requiring that his employees be paid wages prevailing for similar work in the locality. A union claimed that the employer was breaching this provision and placed a picket at the worksite. In seeking a temporary injunction, the employer charged that the picketing was designed to force the exclusive hiring of union labor in violation of the State's right-to-work law. This contention was sustained by the State's supreme court, which held that the trial court erred in refusing to issue the injunction.

In overturning the temporary order, the U.S. Supreme Court ruled that its review of the case was not precluded by section 1257 of the United States Code, which limits the Court's jurisdiction to final judgments of State courts. It found the temporary injunction to be the State supreme court's final judgment within the meaning of this provision. In its decision, the State court had finally and definitively determined that it had jurisdiction to hear the matter. The High Court pointed out that although the union could clearly appeal the granting of a permanent injunction, that right might prove illusory. The temporary injunction might, in the interim, do harm which could not be cured by any future finding that the State court had no authority to issue a permanent order.

The High Court further noted that the State Court had fully resolved this case on its merits. There was no indication that a hearing to make the order permanent would raise any additional legal questions.

The U.S. Supreme Court distinguished the case of *Montgomery Building & Construction Trades Council v. Ledbetter Erection Co.*,⁶ which involved an application of the rule that decisions upon interlocutory injunctions are not final judgments. That case was decided before a number of the more recent preemption cases and before the jurisdictional relationship between the NLRB and State courts became clear. The Court further pointed out that, unlike the instant situation, the merits of the *Ledbetter* case had not been fully determined by the State court which issued the

temporary injunction. In any event, the Court declined to follow *Ledbetter* to the extent that it might be inconsistent with the decision in this case.

Justice Harlan, though concurring in the result reached by the majority, opposed any overruling or weakening of the *Ledbetter* precedent. He doubted that a determination of jurisdiction should be regarded as a final judgment simply by virtue of its separability from the rest of the case.

He preferred, rather, to rest his opinion on a narrower ground articulated by the Court. Since the State court had, in the instant case, decided all of the legal issues and since the permanent order would therefore be issued as a matter of course, Justice Harlan regarded the judgment as final in every significant sense.

Jurisdiction, No. 2. The U.S. Supreme Court, reversing a decision by a court of appeals, sustained⁷ an NLRB finding of jurisdiction over an unfair labor practice controversy involving a local fuel oil distributor.

The distributor purchased more than \$650,000 worth of fuel oil and related products within the State during fiscal year 1959 from a large supplier that received most of the products from out of State. Gross retail sales during the calendar year 1959 exceeded \$500,000 and met the Board's self-imposed jurisdictional standards for retail concerns.

The Board agreed to hear the case and found that the distributor had engaged in unfair labor practices. This decision was reversed by the court of appeals and remanded to the Board for further consideration because the court doubted that the record adequately demonstrated the existence of jurisdiction.

In a per curiam decision upholding the NLRB finding, the Supreme Court noted that Congress vested in the Board the fullest jurisdictional breadth constitutionally permissible under the Commerce Clause. It held that the activities of the distributor were clearly within the constitutional reach of Congress. Through the National Labor Relations Act, Congress had regulated, "not merely transactions or goods in interstate commerce, but activities which in isolation might be deemed to be merely local but in the interlacing of business across State lines, adversely affect such commerce."

⁶ 344 U.S. 178 (1952); see *Monthly Labor Review*, February 1953, p. 176.

⁷ *NLRB v. Reliance Fuel Oil Corp.* (U.S. Sup. Ct., Jan. 7, 1963).

Chronology of Recent Labor Events

January 2, 1963

A 6-CENT WAGE INCREASE—3 cents on January 1 of 1963 and 1964—was among the terms of a 2-year pact agreed upon by the United Shoe Workers and 50 Boston area shoe factories. Similar wage increases appeared in a contract agreed upon later in the month and covering 2,800 workers represented by the Brotherhood of Shoe and Allied Craftsmen (Ind.) in Brockton, Whitman, and Rockland, Mass. (See also p. 313 of this issue.)

January 4

THE NATIONAL LABOR RELATIONS BOARD—announced the Communications Workers retained representation rights of 17,000 telephone equipment installers in the 44-State Western Electric system by winning a Board election requested by the Teamsters union. The CWA polled 11,388 votes and the Teamsters 4,000; 696 employees voted for no union. (See MLR, Jan. 1963, p. 67.)

January 7

THE U.S. SUPREME COURT refused to review the following lower court decisions:

Smith v. State of Florida. A State law requiring licensing of union business agents is constitutional since it does not apply to or interfere with the agents' bargaining functions.

Texas and New Orleans RR. Co. v. Brotherhood of Railroad Trainmen. The Norris-LaGuardia Act bars injunction against a threatened strike in connection with employer-effected change of working conditions.

Kaiser v. Price Fewell. The Arkansas "right-to-work" law bars a hiring-hall contract that makes the union the only source of job referrals; the Taft-Hartley Act does not prevent the State court from thus interpreting the State statute.

ON THE SAME DAY, the Supreme Court reversed a Federal court of appeals decision that the NLRB could not assert jurisdiction over a dispute involving a local fuel oil distributor who met the Board's retail jurisdictional standards without a finding on the actual or potential effect on commerce of a work stoppage against the distributor. The case was *NLRB v. Reliance Fuel Oil Corp.* (See Chron. item for Nov. 13, 1961, MLR, Jan. 1962, and p. 307 of this issue.)

THE NATIONAL LABOR RELATIONS BOARD ruled that a union violated the Labor Management Relations Act's ban

on hot-cargo agreements by inducing a strike at a construction site allegedly for the purpose of protesting a breach of an agreement on work subcontracting. The Board held that although agreements on subcontracting are permitted in the construction industry by the act, they are merely voluntary and any attempts to enforce them by means of strikes, picketing, or other inducements are illegal. The case was *Local 825, International Union of Operating Engineers and Nichols Electric Co.*

THE NLRB reestablished a principle on unit inclusion under which an employee performing more than one function for an employer may be included in a bargaining unit even though he normally devotes less than half of his worktime to the work done in the unit, provided he demonstrates a substantial interest in the unit's conditions of employment. The *Denver-Colorado Springs-Pueblo Motor Way and Brotherhood of Railroad Trainmen, Local 852* case, which had supplanted this principle, was overruled. The present case was *Berea Publishing Co. and Cleveland Printing Pressmen Union 56.*

January 8

REPRESENTATIVES of the Hatters Union and the Eastern Women's Headwear Association agreed on a 3-year contract, ending a strike of about 10,000 workers in the New York City area. Over the 3-year period, wage increases included in the pact amount to 10 percent for pieceworkers and \$7.50 a week for salaried employees. (See also p. 313 of this issue.)

January 9

A 3-YEAR AGREEMENT ratified between the International Ladies' Garment Workers' Union and the Associated Corset and Brassiere Manufacturers, Inc., and covering 7,000 workers provides weekly wage increases of \$6 for cutters, \$4 for shipping clerks and samplemakers, and 5 percent for operators and other crafts. Fringe benefits were also increased.

January 10

SETTING ASIDE an NLRB decision, the U.S. Court of Appeals for the District of Columbia ruled that an employer was denied due process of law when, in a proceeding in which he was found guilty of an unfair labor practice, he was not permitted by a trial examiner to present bargaining history evidence, whereas presentation of such evidence was permitted the charging parties and the NLRB general counsel. The case was *Wheeler v. NLRB.*

January 14

THE U.S. COURT OF APPEALS in Philadelphia ruled that action against a union for violation of its duty of impartial representation under the Railway Labor Act must include allegations that the union's discrimination was motivated by bad faith. The court affirmed the dismissal of a damage suit by railroad employees charging their

union with failing to eliminate unjustified geographical wage differentials but not ascribing to it either bad faith or improper motive. The case was *Gainey v. Brotherhood of Railway Clerks*.

January 18

DANIEL PATRICK MOYNIHAN, executive assistant to the Secretary of Labor, was nominated by President John F. Kennedy to be Assistant Secretary of Labor for Employment and Manpower. Secretary Moynihan joined the Department of Labor in 1960 as special assistant to the Secretary and succeeds Jerry R. Holleman who resigned in the spring of 1962.

On January 1, Stanley Ruttenberg, former director of the AFL-CIO's research department, had become economic adviser to the Secretary of Labor.

January 21

THE U.S. SUPREME COURT ruled that a Georgia State court had no authority to issue a temporary injunction against picketing that violated the State's "right-to-work" law, because the case arguably involved an unfair labor practice exclusively within the jurisdiction of the NLRB; it held further that the State court's temporary restraining order was reviewable because a Georgia Supreme Court decision asserted final State jurisdiction of the issues. The case was *Local 438, Construction and General Laborers' Union v. Curry*. (See also pp. 306-307 of this issue.)

January 22

BOBBIE BROOKS, INC., and the International Ladies' Garment Workers' Union agreed on a 2-year contract—subject to ratification by members—which establishes craft minimums and raises wage rates for hourly employees about 12½ percent, according to union estimates. In addition to the 3,000 Ladies' Garment Workers in the company's plants who must ratify, the agreement is to cover 4,000 workers in 40 shops doing contract work for Bobbie Brooks. Hourly craft wage minimums established in the contract and effective January 1 and September 3 include: Floor workers, \$1.30 and \$1.40; pieceworkers, \$1.50 and \$1.60; and plant receivers and shippers, \$1.40 and \$1.50. Cutters and spreaders will receive \$2.75 and \$1.80 an hour for the life of the contract.

January 23

REVOCATION of a local union charter following a strike in defiance of an international union's orders was upheld by the U.S. Court of Appeals in Richmond, reversing a lower court's decision. (Chron. item for Mar. 7, MLR, May 1962.) The position of the international president as both prosecutor and judge in the local's trial did not violate due process of law. Further, the court found it lacked jurisdiction, in absence of specific legislation, to correct possible faults in the distribution of power within an international union. The case was *Parks v. International Brotherhood of Electrical Workers*.

THE U.S. COMPTROLLER GENERAL found (in General Accounting Office B-147602) that the Secretary of Labor's ruling that laborers be paid electricians' wages for work usually done by electricians exceeds his authority under the Davis-Bacon Act. The Comptroller interprets the act to permit the determination of prevailing wages only.

January 25

EAST AND GULF COAST longshoremen ended a strike lasting 39 days (Chron. item for Dec. 23, MLR, Feb. 1963) after accepting recommendations of a special Presidential board. (See p. 310 of this issue.) Economic terms of the agreement amounted to about 37 cents an hour.

January 27

MEMBERS of the Machinists union at Lockheed Aircraft Corp.'s Burbank (Calif.) plant ratified a 3-year contract, covering 17,500 employees, which continues existing maintenance-of-membership provisions. Machinists at the Palmdale (Calif.) plant, a part of the same Division, accepted the contract, and a second agreement was ratified at Lockheed Missile and Space Division plants at Sunnyvale and Van Nuys (Calif.), Cape Canaveral, and Honolulu. (See also p. 311 of this issue.) Under the new pacts, the company is to recommend to new employees that they seriously consider joining the union and is to assist in training union stewards. Wage increases and improved fringe benefits are provided, retroactive to July 23, 1962, totaling 28.3 cents an hour over the duration of the agreements. The contracts were accepted before the expiration of an 80-day Taft-Hartley injunction which followed a 36-hour strike. (See Chron. item for Nov. 30, 1962, MLR, Jan. 1963.)

Developments in Industrial Relations*

Wages and Collective Bargaining

Transportation. A strike by the International Longshoremen's Association against East and Gulf Coast shipowners, which lasted 34 days after the expiration of a Taft-Hartley injunction,¹ ended January 25 after involving some 52,000 longshoremen and tying up 556 ships. Terms proposed by the Special Presidential Board, accepted by the New York Shipping Association and ILA New York locals, became the pattern for all East and Gulf Coast ports after resolution of local issues under the urging of Board Chairman Senator Wayne Morse of Oregon and Assistant Secretary of Labor James J. Reynolds, who had participated in the negotiations.

The Board included Professor James J. Healy, Associate Professor of Industrial Relations at Harvard University, and Theodore W. Kheel, New York attorney and arbitrator. They were appointed by President John F. Kennedy on January 16 to assist the parties in reaching a settlement and were directed to propose legislation to settle the strike if either party rejected their recommendations.

Of the 23 injunctions issued under the Taft-Hartley Act, this was the sixth occasion on which a strike had followed the 80-day cooling-off period and the fifth dispute involving the East Coast longshoring industry in which the emergency provisions of the act had been invoked.

The 2-year contract provided wage-rate increases of 15 cents an hour retroactive to October 1, 1962, and 9 cents on October 1, 1963. The cost of the settlement was estimated by Senator Morse to be about 37 cents an hour. Contributions to the pension fund (previously 14 cents a man-hour) were increased 4 cents a man-hour, retroactive to October 1, and an additional 5 cents in October 1963, with 3 cents of the total reportedly allocated for making the fund actuarially sound

for existing benefit levels. The remainder was to increase basic pension benefits, including those of workers already retired, to \$100 a month (previously \$75-\$85, depending on the port), to establish vesting of pension rights after 25 years' service, and to increase death benefits by \$500. Contributions to the health and welfare fund were increased 2½ cents. For the first year of the contract, employers were to contribute an additional 2 cents to the fund for medical clinics, with a survey to be made during this year to improve the effectiveness of the medical care program. An additional paid holiday was to go into effect in the second contract year.

The agreement incorporated a provision suggested by Secretary of Labor W. Willard Wirtz for a Department of Labor study of the problems of manpower utilization and job security in East Coast longshoring. In its report, the Presidential Board stated that improvements in manpower use were essential to support existing wage and benefit levels and that the problem of job security was "inseparably coupled" with the problem of efficient manpower use. It was recommended that the study extend to questions of gang size, work force flexibility, severance pay, closing of eligible work registers for hiring, and automation. Upon completion of the study, there will be negotiations regarding manpower use and job security. If negotiation fails to produce agreement by July 31, 1964, an impartial panel will hear arguments and make recommendations.

A 19-day strike was ended by agreement February 1 on a 2-year contract between the Philadelphia Transportation Co. and the Transport Workers Union, representing 5,600 workers. The contract provided for a 10-cent-an-hour increase immediately and another 10 cents a year later, plus increased benefits reportedly valued at 13 cents. It retained a no-layoff clause that management had sought to eliminate. Steps intended to halt the stoppage had included a common pleas court order placing the company under temporary receivership which was subsequently voided by the Pennsylvania State Supreme Court. Robert H. Stier, president and chief negotiator for the company, resigned after a settlement he had negotiated

*Prepared in the Division of Wage Economics, Bureau of Labor Statistics.

¹ Longshoremen struck for 5 days preceding issuance of the injunction. See *Monthly Labor Review*, February 1963, p. 182.

under the receivership was rejected by the company's executive committee. Subsequently, Pennsylvania Governor William Scranton intervened and the company accepted an agreement substantially like the one previously rejected.

Newspapers. The New York newspaper work stoppage,² idling 20,000 workers of all crafts, continued into February as Local 6 of the International Typographical Union remained on strike for higher wages and shorter hours and in opposition to management's demands for changes in work rules. After unsuccessful attempts by Federal mediators to end the dispute, a panel of jurists investigated the strike at the request of Governor Nelson A. Rockefeller, Mayor Robert F. Wagner, and Secretary of Labor Wirtz in an effort to bring public opinion to bear on the parties. The panel, which consisted of Harold R. Medina, a Federal appellate judge, Joseph O'Grady, a criminal court judge, and David W. Peck, a former appellate justice of the New York Supreme Court, reported: "Indeed it must be said that there has been no real bargaining—bargaining was intended to be postponed for a long period until the strike had taken its toll." Observing that 15 negotiating sessions had taken place since December 8, the report said "all those meetings can be summed up with the statement that neither party moved."

Meanwhile, in Cleveland, negotiations to end the strike against the Cleveland Plain Dealer and the Press News,³ which has idled 3,000 workers, continued through January. By early February, the International Typographical Union, the International Mailers Union (an affiliate of the ITU), and the International Association of Machinists, whose members had been respecting picket lines of the American Newspaper Guild and the Teamsters, had joined the strike. The major issue was the Guild's demand that future employees join the Guild or pay dues; the other unions were concerned with economic issues and working conditions.

Metalworking. Lockheed Aircraft Corp. negotiated two 3-year contracts with the Machinists representing 32,000 workers—one for the Lock-

heed-California Co. Division plants at Burbank and Palmdale, Calif., and the other for the Lockheed Missile and Space Co. Division plants at Sunnyvale and Van Nuys, Calif., and test ranges at Cape Canaveral and Vandenberg Air Force Base, Calif. Both contracts were ratified by union members late in January. Agreement was reached before a final report could be issued by a board of inquiry established in late November under the national emergency provisions of the Taft-Hartley Act (invoked after the beginning of a 36-hour strike⁴ over the union's demand for a union shop).

An injunction, which covered the two Lockheed Divisions, was issued in December barring the strike for 80 days. The primary issue of union security was settled by continuing the previous maintenance of membership clause, but with provisions that the company ask new workers to seriously consider joining the union, that stewards be given company time to urge new workers to join the union, and that the company participate in shop stewards' training.

The economic provisions reportedly were valued at 28.3 cents an hour over the life of the contract. (The union stated that this was the largest economic package of any 1962-63 West Coast aircraft settlement.) A wage-rate increase of 5 to 8 cents an hour was made retroactive to July 23, 1962, while rate increases in July of 1963 and 1964 will be 6 to 8 cents and 6 to 9 cents, respectively. Some 1,450 workers also received retroactive increases of 3 to 16 cents an hour to remove pay inequities. Cost-of-living adjustments totaling 7 cents under previous contracts were incorporated into base rates and escalation was continued.

Fringe changes included an additional paid holiday (the day after Thanksgiving), and improvements in medical insurance, supplemental layoff benefits, and paid vacation provisions. Vacation changes consisted of a third week of vacation after 10 instead of 12 years' service and a fourth week after 25 years. As in the North American Aviation agreement, supplemental layoff benefits were raised from \$50 to \$75 for each year of service, with a maximum of \$1,125 after 15 years. The previous maximum was \$500.

Under the agency shop agreement⁵ reached July 16, 1962, with the Machinists and the Automobile Workers, Douglas Aircraft Co. an-

² See *Monthly Labor Review*, January 1963, p. 70.

³ *Ibid.*

⁴ *Ibid.*, p. 68.

⁵ See *Monthly Labor Review*, September 1962, p. 1034.

nounced in mid-January that it had discharged 22 employees who refused to join a union or pay fees equivalent to union dues. The remainder of the employees who had not been union members complied with the contract provisions. An estimated 25 to 30 percent of the affected workers in the bargaining unit are paying the fee instead of joining the union.

A similar agency fee clause is before the U.S. Supreme Court in a test case involving the UAW and General Motors. The unions and Douglas have agreed to an election if the agency shop is held illegal. If two-thirds of the Douglas workers approve, the contract will contain a union shop clause, which requires full union membership.

Contract negotiations between Boeing Co. and the Machinists covering 45,000 workers were still stalled on the issue of union security at the end of January.⁶ In early January, a special Presidential Board headed by Saul Wallen, Boston attorney, criticized the attitude of Boeing management in reporting the collapse of its mediation efforts.

The union postponed a strike scheduled for January 15 at the request of Federal mediators. After the union membership overwhelmingly rejected the company's offer on January 23, President Kennedy created a board of inquiry under the Taft-Hartley Act to investigate the dispute. A temporary injunction against a threatened strike at midnight January 25, granted by U.S. District Judge William J. Lindberg, was made effective February 1 for 80 days, retroactive to January 25, forestalling the possibility of a strike until April 15. The injunction also included the Rohr Corp. plant at Auburn, Wash., supplier of jet engine accessories for Boeing civilian and military planes.

Following President Kennedy's decision in December to cancel the Skybolt missile program, Douglas Aircraft Co. announced in early January plans to lay off 4,000 of the 6,000 workers employed in the program in southern California. Northrop Corp. announced that 2,000 of the 4,500 workers engaged in Skybolt guidance system development in southern California would be laid off immediately, with the layoff eventually amounting to 3,000. General Electric Co. at Utica, N.Y., announced layoffs of 600 employees. Douglas and Northrop were attempting to absorb some

laid-off workers in other company work and to place them with other aerospace companies. The National Aeronautics and Space Administration expressed hope of recruiting some 1,500 scientists and engineers among those who are laid off.

The Sikorsky Aircraft Division of United Aircraft Corp., at Bridgeport and Stratford, Conn., signed its first contract with the Teamsters on December 28. The UAW had represented the workers for 10 years, but was decertified in an NLRB election in November 1960 after an unsuccessful 3-month strike.⁷ In an NLRB runoff election in December 1961, the Teamsters defeated the Independent Aircraft Guild.⁸ This election was set aside on grounds that the Teamsters had erroneously claimed the backing of other labor organizations. In a March 1962 election, the Teamsters gained bargaining rights. Covering some 5,000 production workers, the 3-year agreement provided an immediate 6- to 11-cent-an-hour wage increase and deferred increases of 6 to 11 cents an hour in each of the subsequent contract years. It also increased life insurance and accident and sickness benefits and extended hospital, surgical-medical, and major medical insurance coverage of dependent children from age 19 to 23.

The Stanley Works and its Stanley Tool Division of New Britain, Conn., reached agreement with two Machinists locals on new 3-year contracts covering about 400 skilled and 2,900 other production workers. The contracts provide immediately a 3-percent increase, with a minimum of 7 cents an hour for skilled workers, and a uniform 7-cent increase for other employees; deferred increases of 2½ percent, with a minimum of 5 cents an hour for all workers, are due in 1964 and 1965. Both contracts provided a ninth paid holiday (the day after Thanksgiving) in 1964, improved sickness and accident and hospitalization benefits, and established a full union shop.

A strike which began July 18 at the Climax Molybdenum Co., a subsidiary of American Metal Climax, Inc., was settled in early January when the Oil, Chemical and Atomic Workers, representing 1,600 miners and plant workers, agreed to a

⁶ See *Monthly Labor Review*, February 1963, p. 180.

⁷ See *Monthly Labor Review*, October 1960, p. 1093 and January 1961, p. 68.

⁸ See *Monthly Labor Review*, February 1962, p. 190.

new contract. In addition to the OCAW, members of the International Brotherhood of Electrical Workers, who were on strike at the same time, agreed to a new contract. A total of some 2,000 workers, including employees of contractors, had been idled. The issues in the strike included the contracting out of work and management rights as well as benefits and wages. A 2½-year contract provided a 20-cent wage increase—10 cents effective immediately—and improved benefits totaling another 18½ cents an hour.

Apparel and Footwear. The Philadelphia Apparel Producers' Association and the Ladies' Garment Workers' Union's Philadelphia Joint Dress Board announced in early January a 3-year contract for 4,000 workers, providing an increase of 5 percent of the base rates for incentive workers, 10 cents an hour for time workers, and \$5 a week for cutters. On September 3, 1963, when the Fair Labor Standards Act minimum goes to \$1.25 an hour, the basic minimum under this contract will become \$1.40, in accordance with past industry practice of maintaining minimums in excess of those required by the FLSA. In addition, craft minimums were established and a sixth paid holiday was added.

A similar agreement effective February 1 was negotiated by the Fashion Apparel Manufacturers Association of Philadelphia with the same union affecting 3,500 workers.

After a week's strike, agreement was reached January 8, 1963, by the United Hatters, Cap and Millinery Workers Union representing about 10,000 workers in five locals with the Eastern Women's Headwear Association representing 350 millinery manufacturers in the New York City area, where an estimated 65 percent of women's hat production is concentrated. The contract provided a 10-percent increase for piece-rate workers: 2½ percent on January 1, 1963, an identical increase on January 1, 1964, and the remainder on January 1, 1965. Salaried workers were to get a \$7.50-a-week increase, one-third retroactive to January 1, 1963, and a third on January 1 of 1964 and 1965. Employer contributions to the pension fund were to be increased to 4 from 3 percent of payroll beginning in 1965, and employers agreed to pay \$100,000 to the union label fund.

About 50 shoe manufacturing factories in the Boston and North Shore areas of Massachusetts on January 2 agreed on a 2-year contract with the United Shoe Workers of America. The 10,000 workers affected received a 3-cent wage increase immediately plus an eighth paid holiday, with another 3-cent wage-rate increase and an increase in life insurance from \$500 to \$1,000 to become effective on January 1, 1964. On September 3, 1963, when the Fair Labor Standards Act minimum goes to \$1.25, minimum rates under the contract will be increased 3 cents, to \$1.32. The agreement provides that machine operators whose jobs are eliminated by new or improved machinery will have priority for any new jobs created by the new equipment and for job openings in their department. Wage rates for such operators will not be reduced to match any reductions in skill or effort required on the new jobs, but if skill or effort requirements are increased, their wages will be resolved by contract grievance and arbitration procedures.

A group of 11 shoe manufacturers in the Brockton, Mass., area and the Brotherhood of Shoe and Allied Craftsmen (Ind.) representing approximately 2,800 workers agreed to a contract on January 18, 1963, providing a 6-cent hourly increase over the 2-year contract period and increased supplemental benefits. Management's demand for the sole right to set piece rates on new or changed shoe patterns, the main issue in the 2-week strike that preceded this settlement, was referred to a union-management committee for study and solution.

Retail Trade. The Women's Apparel Chains Association of metropolitan New York and the International Ladies' Garment Workers' Union agreed in mid-January to a 2½-year contract for some 4,500 office and warehouse workers. The contract provided weekly increases of \$4 immediately and an additional \$3.50 in April 1964. Minimum scales were increased and a severance fund established. The workers ratifying the contract assessed themselves \$1.50 a week for a strike fund.

Government. A settlement reached in late December between the U.S. Naval Ordnance Plant at Louisville, Ky., and the IAM, representing 1,700

civilian employees, was the first reported under Executive Order 10988 (January 17, 1962), in which President Kennedy set forth a new policy for labor unions in Federal agencies and installations.⁹

Although the 1-year agreement did not cover wages and related benefits, which under Federal law cannot be negotiated by the parties, it included a grievance procedure that stipulated advisory arbitration of unresolved grievances, merit promotion policies, seniority job bidding in the event of layoff, a Monday-through-Friday workweek with overtime for Saturday and Sunday work, and the right to take birthdays and religious holidays as annual leave.

The contract specified that there should be union participation on safety committees. Existing practices continued by the agreement included selection of shop personnel for membership in teams used in area wage surveys.

Employees of the Reynolds Electrical and Engineering Co., Inc., an electrical construction contractor, members of the Office Workers International Union, struck and picketed the Atomic Energy Commission's Nevada Test Site, Camp Mercury, near Las Vegas in late January during negotiations for a first contract. The union also filed an unfair labor practice complaint with the NLRB in San Francisco. The strike, in protest against an AEC directive that cut daily subsistence pay from \$7.50 to \$5 and eliminated travel-time pay, involved some 500 office workers and idled some 3,000 craft workers who honored picket lines. Originally the remoteness of work sites in Nevada had been the justification for the subsistence and traveltime pay. The directive implements AEC policy aimed at eliminating uneconomic practices and imposing uniform labor practices, including those concerned with reporting points, hazardous duty pay, and shift premiums.

The Atomic Energy Labor-Management Relations Panel in Washington, D.C., assumed jurisdiction over the dispute and requested the union to remove pickets and continue bargaining with assistance from the Federal Mediation Service. Both parties agreed to this proposal, thus ending the 2-day strike.

⁹ *Ibid.*, pp. III and IV.

Union Affairs

AFL-CIO legislative goals were set forth in a New Year's statement by President George Meany. He saw 1963 as a pivotal year for our Nation and for the world in view of the major unresolved issues on which the AFL-CIO recommends action. To forestall the "coming crisis in employment," he recommended a workweek of 35 hours; increased public investment through aid to education, better health facilities, and additional public works; and tax reductions and reforms. He further recommended health insurance for the aged in the social security system, a national fair employment practices law, and repeal of section 14(b) of the Taft-Hartley Act, that permits State right-to-work laws.

David L. Cole, impartial umpire under AFL-CIO Internal Disputes Plan, held that the International Brotherhood of Electrical Workers violated the AFL-CIO constitution in interunion disputes with the Machinists and International Union of Electrical Workers. The IBEW had sought, in July 1962, the bargaining rights for two groups of electrical maintenance workers who were moved to a new building of the Westinghouse Baltimore Works. One group was represented by the IUE and the other by the IBEW. The IBEW struck to enforce its demand and then petitioned the NLRB for a clarification of bargaining units after Westinghouse got a temporary order restraining the strike.

Mr. Cole declared that IBEW should not ignore established collective bargaining and work relationships and should also make use of the AFL-CIO internal disputes machinery. He also declared that to permit and condone this conduct would defeat the purposes and procedures of the AFL-CIO constitution.

The IBEW had also sought the bargaining rights for 23 maintenance electricians employed by Lockheed Missile and Space Co. at Vandenberg AFB, Calif., in an NLRB hearing. The Board found that these electricians were covered by Machinists' agreement and contract and had been for the past 4 years. In these circumstances IBEW clearly violated the AFL-CIO constitution, Mr. Cole concluded.

Thomas Kennedy, who died January 21, was succeeded by W. A. Boyle as president of the

United Mine Workers of America. Mr. Boyle had been named acting president last November because of Mr. Kennedy's failing health.

Charles Luna succeeded William P. Kennedy as president of the Brotherhood of Railroad Trainmen in January. Mr. Luna had been elected assistant to the president at the 1960 convention of the Railroad Trainmen and was designated as successor when Mr. Kennedy retired.

Other Developments

On January 9, the first claim was filed under the provisions of the Trade Expansion Act of 1962 which allow workers who are unemployed as the

results of imports to apply for Federal adjustment assistance. The claim was filed by the International Union of Mine, Mill and Smelter Workers (Ind.) for 126 workers laid off at the Hanover, N. Mex., zinc mine of New Jersey Zinc Co. The Tariff Commission instituted an investigation on January 14 to determine whether increased imports have caused injury to the establishment; within 60 days it will make recommendations to the President.

The President's authority to certify that a group is eligible to apply for assistance has been delegated by Executive Order to the Secretary of Labor. Assistance includes trade readjustment allowances, or money payments, and training and relocation allowances.

Book Reviews and Notes

EDITOR'S NOTE.—*Listing of a publication in this section is for record and reference only and does not constitute an endorsement of point of view or advocacy of use.*

Special Reviews

British Journal of Industrial Relations. London, England, The London School of Economics and Political Science, Vol. 1, No. 1, February 1963. 137 pp. Annual subscription, \$6.50; 3 years, \$18; single issue, \$2.50.

Publication of the first issue of the *British Journal of Industrial Relations* introduces an important newcomer to the growing family of scholarly journals in this field. In sponsorship, form, and content, it is closely comparable to the *Industrial and Labor Relations Review* and *Industrial Relations* in the United States and to *The Journal of Industrial Relations* in Australia. Three numbers are to be published annually.

The journal is, rather surprisingly, Britain's first to focus exclusively on industrial relations. Its editor is the well-known scholar of British trade unionism and labor economics, Professor B. C. Roberts. Other members of the 15-man editorial committee include a number of writers familiar to American students, such as Professors E. H. Phelps Brown and O. Kahn-Freund of The London School, A. Flanders of Oxford, D. J. Roberston of Glasgow, E. Trist of the Tavistock Institute, and H. A. Turner of Leeds.

According to its Introductory Note, the content of the journal will range widely over the industrial relations field. "The focus of interest will be on the entire field of employmental relationships and the environment in which they are shaped. Problems of industrial relations can only be effectively analyzed in the context of the social changes that are being brought about by population growth and movement, technological in-

novation, economic development, and political revolt against established systems of government, since these are everywhere exerting a tremendous pressure upon traditional patterns of individual and institutional behavior."

Although designed primarily for a British audience of academicians and practitioners, and therefore concerned with contemporary British problems, the journal will strongly emphasize studies of the European Economic Community and of newly industrializing nations in Asia, Africa, and Latin America. The editors feel that analyses of a comparative (i.e., inter-cultural) nature afford the best insights into the working of industrial relations systems.

In keeping with these beliefs and objectives, this issue includes articles on social and labor policies in the European Economic Community, British law protecting the rights of union members who "contract out" of contributing to their union's political fund, immigration and unemployment (especially of "colored workers") in Britain since 1955, Soviet wages, the quality of British union journals, and industrial peace and conflict in South Africa. The technical quality of the articles testifies to the professional competence and subject-knowledge of the authors. Writing style and presentation compare favorably with other similar academic journals in the field.

Apart from a short conventional book review section (4 of the 6 books reviewed are by American authors) and a brief note on two Japanese periodicals, there are two special features which seem particularly praiseworthy. One is a Chronicle of industrial relations events in Britain during the first 11 months of 1962. This serves somewhat the same purpose, although on a much more limited scale, as the "Chronology of Recent Labor Events," the "Labor Month in Review," and the annual review of American labor in the *Monthly Labor Review*. A unique aspect of the Chronicle is that although the main breakdown is by month, once a topic is mentioned, the entire year's events relating to it are given forthwith so that it is not necessary for the reader to search through all the months for continuity.

The other special feature is a seven-page article which examines a number of British books on industrial relations published since 1960 in order to detect changes in the approach and scope of the field's literature. The author, J. H. Smith,

a lecturer in social science at The London School, notes the contribution being made by "serious journalism" (4 of the 7 volumes he selected for study were written by journalists), the emergence of a critical although sympathetic attitude toward the established system of industrial relations and its union, employer, and government participants, and the considerable diversification of writings on industrial relations. Smith contrasts these writings with the classic works of the Webbs and Cole, whose purpose was social and economic reform of society in which trade unionism was to play a major role.

Not only will the new journal be of value to British students and others interested in industrial relations, it will also be an important source of information and ideas to Americans who have become, like the editors of the journal, increasingly impressed by the virtues of travel to foreign lands and study on a cross-cultural, comparative basis. An added benefit to Americans is the opportunity to become acquainted with scholars whose research and thought would otherwise probably not come to their attention. It is hoped that the editors will encourage contributions not only from economists and political scientists but also from other social scientists in Britain and on the Continent who have much to contribute to the field.

It may be picayune to offer, in conclusion, a few minor editorial suggestions for a new publication which is overall exceedingly attractive to the eye. However, the reader might benefit from the identification of the book reviewer's institutional connection. And the "Chronicle, 1962" might have been put in smaller type to conserve space.

—MILTON DERBER

Institute of Labor and Industrial Relations
University of Illinois

Voluntary Health Insurance and Rate Making.

By Duncan M. MacIntyre. Ithaca, N.Y.,
Cornell University Press, 1962. 301 pp.
\$6.50.

Are Blue Cross and Blue Shield becoming "just another insurance company" as they replace uniform community rates with rates adjusted to the experience of each subscriber and service benefits with cash indemnities? Does the trend away from community rates make it more difficult

for the "Blues" to attain their objective of enrolling the entire community? Or is government action required to enroll low-income high-loss-cost consumers, such as the aged, at prices they can afford?

To obtain the facts necessary to answer these and many other health insurance questions objectively, Professor MacIntyre conducted a prodigious amount of field work. From those now active in ratemaking and rating activities he learned the practices of insurance companies, the Blues, and the independent companies. He also rounded out the written history of group health insurance through interviews and correspondence with such Blue Cross pioneers as C. Rufus Rorem and E. A. Van Steenwyk. And most valuable of all, he has organized the information on and discussions of ratemaking procedures scattered throughout the actuarial journals, texts and study materials, and the rest of the health insurance literature.

This technical study, which was financed by a grant from the Health Information Foundation to the New York State School of Industrial and Labor Relations, Cornell University, also includes a well-balanced discussion of the advantages and disadvantages of experience rating and community rating to the Blues, the independent medical care plans (e.g., Kaiser Foundation Health Plan, Health Insurance Plan of Greater New York, Group Health Association), the insurance carriers, the vendors of medical care, and the consuming public. It concludes that (1) the distinctions among various ratemaking and rating schemes are less substantial than competing carriers have alleged, (2) the advantages of pooled or community rating schemes generally have been exaggerated, and (3) the advantages of experience-based rates are more tangible than most health economists have conceded. This leads to the prediction that we "are developing an indigenous approach to health care and health prepayment which will rely heavily on private plans and private financing supplemented, however, by more, rather than less, public or governmental support and activity, especially for high benefit-cost and lower income groups [including the aged]."

—DONALD M. LANDAY

Division of Industrial and Labor Relations
Bureau of Labor Statistics

Psychiatric Insurance: Financing Short-Term Ambulatory Treatment. By Helen Hershfield Avnet. New York, Group Health Insurance, Inc., 1962. 280 pp.

The author reports on a 30-month study of utilization of psychiatric services by 76,000 enrollees of Group Health Insurance, Inc., of New York, when they were allowed up to 15 visits to a psychiatrist at a small fee per visit. The study was conducted by GHI under a grant from the National Institute of Mental Health to determine the feasibility of financing short-term ambulatory psychiatric care (STAPC) by examining the level of demand for STAPC when financial barriers were largely removed. To date, psychiatric care has generally been excluded in prepaid medical care because of the lack of underwriting data and the belief that demand for such care would be so great that the insurer might well face financial disaster.

The study documents the rates of demand by occupation, sex, age, education, marital status, size of family, and other pertinent variables, and shows great variations in demand among groups. As the report points out, the groups sampled are not representative of the general population; therefore, their general utilization rates should not unknowingly be applied to the general population. In general, demand seems to be lower than would have been anticipated from other earlier estimates of need and demand.

The only assessments made of the effect of the psychiatric services were those of the psychiatrists involved in the program. Their reactions give rise to a general question in psychiatric care: Can short-term, out-of-hospital care be beneficial, given psychiatrists' orientation toward long-term care? Many of the psychiatrists stated that the limited number of visits caused them to set realistic goals, and that they were able to do much to relieve symptoms even though they did not alleviate the basic problem. This suggests that short-term care might well be meaningful. Other psychiatrists, however, felt that the short-term care simply left the patient in a worse state than he had been in when he arrived. Further study is essential before firm conclusions can be reached. Most of the psychiatrists did agree that the plan was beneficial in promoting use, especially early use, of psychiatric services.

The study was prompted by current trends in medical care toward growing demand for a broader

spectrum of services under prepayment plans; increasing acceptance of mental illness as a medical problem with good chances of cure; increasing emphasis on short-term care in the mental health field; and the hypothesized need for and success of early psychiatric treatment. These trends suggest that there will be future demand for the inclusion of psychiatric coverage in the health plan package.

Given the findings of the study, the conclusion of the president of GHI that STAPC is insurable seems to be unwarranted, except from a very limited financial viewpoint. Until the medical success of such programs is better documented, it does not seem wise to promote prepayment coverage simply because it is financially feasible. The GHI study does, however, provide a basis for further research upon which general conclusions about the success of STAPC could be based.

—ROY PENCHANSKY

Instructor in Medical Care Administration
Harvard School of Public Health

The United States and the Common Market: A Background Study. By Don D. Humphrey. New York, Frederick A. Praeger, Inc., 1962. 176 pp. \$4.50.

Shaping the World Economy: Suggestions for an International Economic Policy. By Jan Tinbergen. New York, Twentieth Century Fund, 1962. 330 pp. \$4.

The establishment of the Common Market and the rapid economic growth rate of Western Europe are only two phenomena underlying the profound structural changes transforming the non-Communist world. These structural changes in turn raise anew the problem of how to continue the expansion of multilateral trade in the present world setting. Both authors discuss the background of this transformation and suggest policy guidelines for the future.

Professor Humphrey of Tufts University's Fletcher School of Law and Diplomacy illuminates cogently four points. First, in tracing the history of U.S. commercial policy since 1933, he reminds us that there is no longer a dollar shortage world but rather a dollar surplus world. Western Europe's dollar reserve affluence, along with its rapid growth rate, creates both a new structural setting for trade negotiations and, paradoxically, our current balance of payments difficulties.

Second, he builds a persuasive but modest case for the expansion of international trade. Trade liberalization, however, is not a panacea nor can it be a substitute for a national growth policy, which necessarily must be domestic in origin and impetus. On the other hand, wide-scale trade liberalization will not aggravate seriously our persistent unemployment problem.

His third contribution lies in demolishing many of the myths surrounding international trade issues. American exports, in the main, have not been priced out of world markets. The reason for the recent decline in our share of the world export market lies, in part, in the lack of aggressive pricing policies by our exporters. Import-competing industries which suffer a tariff reduction may, in net terms, gain more from increased exports than from domestic losses through imports. His explanations of why imports create exports and of our balance of payments difficulties also help clarify some persistent misconceptions.

Finally, Professor Humphrey discusses our trade liberalization legislation of 1962 and the operational procedures of the Common Market. Whether the latter will be trade creating or trade diverting in impact will depend upon "how successful the Common Market is in accelerating the growth of income compared with third-country losses from trade diversion." Obviously, rising levels of income will help mitigate adverse effects stemming from the formation of regional blocs.

The study by Professor Tinbergen, a Dutch economist of international renown, is broader in scope. The world faces three interrelated challenges: nuclear war, continuing poverty in the developing nations, and the threat from the Communist world. Stated in an oversimplified manner, his main suggestion calls for the multilateralization of policies, approached in an undogmatic fashion. This multilateralization can be achieved either through better utilization of existing international agencies, such as the General Agreement on Tariffs and Trade and the International Monetary Fund, or through the establishment of supranational agencies, such as the Common Market or the European Coal and Steel Community. The non-Communist world's liquidity position, and therefore its monetary system, needs to be strengthened to help dampen

cyclical disturbances, to help stabilize the revenues of primary producing countries, and to provide better geographic distribution of funds for development purposes. Beyond this, commodity agreements and international insurance schemes will be useful in stabilizing the insecure foreign earnings of developing countries. He suggests a larger role for both the United Nations and the uncommitted nations within it. Finally, something akin to the spirit of the Marshall Plan is needed. Some excellent material on underdeveloped areas is included at the end of the study.

While some of Professor Tinbergen's suggestions may be considered controversial, in general his proposals are sound and civilized. Whether they can be implemented in the near future is another matter entirely.

Both studies contain much that is conventional wisdom to the experts. It is to be hoped that these studies reach the wide audience to which they are addressed.

—THOMAS J. LEARY
Washington, D.C.

Theories of Economic Growth and Development. By Irma Adelman. Stanford, Calif., Stanford University Press, 1961. 164 pp. \$5.

Mrs. Adelman has chosen as her task to present a "dynamic analysis" of economic developments that is sufficiently broad to permit inclusion of both the phenomenon of "self-sustained progress" and of "economic stagnation." She feels that some features of the international economic scene lend a sense of urgency to the problem of economic development; for example, the tremendous differences in real income that exist between advanced countries and poor lands. Worse, one can expect the income disparities to grow greater.

The aim of the book is twofold: (1) To obtain a clearer picture of economic development; (2) to suggest reasonable policies to speed development. To achieve this purpose, the author analyzes the "longrun dynamic behavior of economic systems as seen by Smith, Ricardo, Marx, Schumpeter, and the Neo-Keynesians." In addition, she relies heavily on a mathematical framework. For a few definitions of terms used, the reader is referred to other works. This review is restricted to the nonmathematical portions of the book.

Although Mrs. Adelman has adopted a "mathematical schema" as the basis of her book, her

conclusions seem more dependent on political considerations. This is made evident in the last paragraph of the final chapter, Summary and Conclusions, where she writes, "governmental agencies must play an active role in planning and initiating economic development. . . ."

Throughout the book, the author stresses the "sociocultural milieu" in which an economic system operates. She sides with Schumpeter in his disagreement with Marx's contention that relations of production determine the character of society. She comes to the conclusion that "there is no simple explanation for underdevelopment," and that it must be understood in "the context of the entire complex of interrelationships that characterize the economic and social life of the community."

The reviewer agrees with the author that "we must assign to the technical and sociocultural variables the role of prime movers in the initiation of economic development." He also accepts her conclusion that "investment in social capital should not be neglected." But he does not go along with her emphasis on the development of "basic" industries, such as metals and investment goods in general. . . ."

Mrs. Adelman's treatment of Marx requires some special comment. She finds Marx's predictions unfulfilled and his theoretical arguments fallacious, but she devotes a generous 34 pages to his work (as against 18 each to Smith and Ricardo and only 15 to Schumpeter) and concludes that his analysis of economic growth and development "constitutes a tremendous intellectual achievement." Furthermore, she argues that although "his specific conclusions apparently have not been borne out in the course of history, his framework of analysis can still be extremely useful, provided (and this is essential) that it is applied flexibly."

Most authorities would question Marx's "tremendous intellectual achievement" in the field of economics. Here, it seems to us, the reader should judge for himself the following key passages from *Das Kapital*:

(a) "Along with the constantly diminishing number of magnates of capital . . . grows the mass of misery, oppression, slavery, degradation, exploitation. . . ."

(b) "The relative mass of the industrial reserve army increases therefore with the potential energy of wealth. . . . This is the absolute general law of capitalist accumulation."

No economist, certainly not Mrs. Adelman, would defend these statements today. This is not to gainsay the obvious influence of Marx on history. This influence has been great and—on balance—disastrous. The present reviewer declines to countenance, even most indirectly, the export of economic confusion and attendant social mischief to the underdeveloped nations.

—ALBERT S. EPSTEIN

Associate Director of Research
International Association of Machinists

Handbook of African Economic Development. By Guy Benveniste and William E. Moran, Jr. New York, Frederick A. Praeger (for Stanford Research Institute), 1962. 178 pp. \$5.50.

Essays on African Population. Edited by K. M. Barbour and R. M. Prothero. New York, Frederick A. Praeger, 1962. 336 pp. \$7.50.

Despite the burst of interest in African affairs during the past few years, useful economic studies concerning Africa remain rare. In particular, there is still no single volume on African economies to which the general reader—or even the specialist—can go for an overview of the kinds of development problems facing the new countries. An awareness of this lack led Moran and Benveniste to make a "comprehensive review" of African economic growth, but in the introduction to their handbook, we are told that the vastness of the undertaking forced them to draw back. They then decided to limit themselves to the external aspects of African economic growth.

The disparity between the title and the contents of their book is disconcerting. It illustrates a general trend which is making it increasingly difficult to tell a book by its title. By no means is this a handbook of African development. After a short survey of some of the main features of African economies, there are chapters on African, European, and American attitudes (mainly political), foreign aid to the public sector, aid in manpower, private investment, and aspects of African external trade.

Some of the material provides useful summary information, and in places the writing is not without insight. The chapter on aid in manpower and an appendix on international economic cooperation in Africa are especially helpful. But

economists will find that the treatment of basic questions is unsatisfactory; the discussion of the effects of price fluctuations and of marketing board policies, for example, is debatable, to say the least. The level of discussion is very general—too general even for most nonspecialist readers—though this is hard to avoid in any broad treatment of the continent as a whole. The sections on “suggested courses of action” at the end of each chapter are usually so general as to be meaningless.

The book of *Essays on African Population* brings together a collection of 10 papers on African population censuses, population mapping, demographic characteristics, towns, and movements of people. As is inevitable, the essays are uneven in quality and style. Most are addressed to a specialized audience; for example, the papers on postwar west African censuses and population mapping in Ghana and the Sudan are pretty much straight demographers' fare. Of wider general interest will be A. W. Southall's article on population movements in east Africa, R. W. Steel's piece on the towns of tropical Africa, J. Shaul's survey of demographic characteristics in central Africa, and C. J. Martin's discussion of trends in east African population. These provide a good survey of existing information. Students of labor market behavior will be particularly interested in J. Clyde Mitchell's essay on wage labor and population movements in central Africa, which presents some interesting methodological innovations in a study of labor force distribution.

—ELLIOT J. BERG

Center for International Affairs
Harvard University

Wage and Salary Administration. By David W. Belcher. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1962. 598 pp. 2d ed. \$10.60.

The first edition of this book appeared in 1955. The present edition, substantially enlarged, reflects the growth in recent years in the literature on the theory and practice of employee compensation. The exceptionally complete documentation of the original edition has been continued, and this feature in itself makes the volume valuable as a reference source. The addition of questions and problems at the end of each chapter should serve to increase its usefulness as a text.

In Professor Belcher's view, the most important development in recent years has been a “gradual convergence of compensation theory and compensation practice.” Accordingly, he devotes a new chapter of 50 pages to a review of both economic theories of wage and salary determination and theories having their roots in sociological and psychological investigations. But the formidable task of integrating theory and practice, or of showing the impact of one on the other, has not been achieved. It is probably asking too much that this be done in what is basically a textbook. But one wonders if any useful end is served in such a book by brief summaries of the wage theories of Ricardo, Mill, Marx, and others in the economic tradition or of, say, Elliott Jaques of what can loosely be called the behavioral school? It might be better to attempt simply to chart the main currents of contemporary wage theory and to show, to the extent that this can be done, their implications for decisionmaking in the art of wage administration.

Among the other new material is an analysis of compensation policy as reflected in legislation and in employer and union views and objectives. The introductory discussion of internal wage structure has been greatly extended. More attention is also directed to group incentive plans, including profit sharing, and to the compensation of managerial and professional employees. In addition, new material has been incorporated at various places throughout the book; in short, this edition represents a thorough-going revision of the original volume.

Any work on wage administration will give a central place to job evaluation as a procedure for arriving at the structure of rates for broad groups of employees within enterprises. Professor Belcher devotes six chapters to an excellent account of formal job evaluation methods. What appears to be lacking is discussion of less formal procedures through which viable wage rate structures can be developed. The spread of formal plans has not eliminated the use of other approaches in many situations.

Considerable attention is given to the problem of rate determination for individual employees within the framework of formal wage structures, including a balanced analysis of the nature and use of performance rating. A long chapter is devoted to incentive plans for individual workers. Various

arrangements for income security (guaranteed wage, supplemental unemployment insurance, and the like) are discussed. Only one comparatively short chapter deals with fringe benefits, with the discussion focusing largely on conceptual problems and the measurement of company expenditures.

This is a book of substance in a difficult area of administrative activity. In addition to its use as a text, it should prove helpful to company wage administrators and to union officials involved in collective bargaining or the administration of agreements.

—H. M. DOUTY

Assistant Commissioner for Wages
and Industrial Relations
Bureau of Labor Statistics

Essays on Politics and Culture. By John Stuart Mill; edited by Gertrude Himmelfarb. New York, Doubleday & Co., Inc., 1962. xxxi, 494 pp. \$4.95.

Eleven essays by John Stuart Mill on a variety of social and cultural topics are reprinted in this volume. Chronologically, the essays fall into several distinct periods: (a) Those written between 1831 and 1839, which comprise the largest group; (b) a few pamphlets of 1859 vintage; and (c) a lengthier treatise on Theism published posthumously in the early 1870's. Substantively, these studies are of different kinds, as their titles reveal—*Spirit of the Age*, *Civilization*, *Bentham*, *Coleridge*, two on DeTocqueville's *Democracy in America*, *Reorganization of the Reform Party*, *Thoughts on Parliamentary Reform*, *Re-*

cent Writers on Reform, *Nonintervention*, *Theism*. They range from early testing of literary wings—almost juvenilia—to several pieces of first magnitude and maturity; they rise from the passable to the superbly posited in thought and style.

The introduction, contributed by the editor, gives the reader an understanding of the integral nature of the selections. It is a stimulating piece in itself, skillfully done, and no reader should attempt any of the essays without reading it first.

This volume, beyond making available a number of productions of John Stuart Mill which were difficult to come by, throws light upon several processes. There is evidence of facility and power of expression on the part of Mill—from the fledgling *Spirit of the Age* to *Parliamentary Reform*, for example. Developing maturity of thought is also apparent, certainly by the time of the essays on *Bentham* and *Coleridge*. The critical quality of Mill shows itself markedly throughout these works, leaving an impression different in nature of impact and judgment from the finely chiselled and balance of sculpture of the *Liberty* or the *Representative Government*.

Without entering into controversy as to whether Mill is better portrayed as an individual thinker by these lesser works in comparison with the major ones of classic renown, it should be said that this is an ably edited work from which much of value can be drawn.

—CHARLES W. SHULL

Department of Political Science
Wayne State University

Education and Training

The Effect of Federal Programs on Higher Education—A Study of 36 Universities and Colleges. By Harold Orlans. Washington, Brookings Institution, 1962. 361 pp. \$5, cloth; \$2, paper.

Reorientation in Labor Education: A Symposium on Liberal Education for Labor in the University. Edited by Freda H. Goldman. Chicago, Center for the Study of Liberal Education for Adults, 1962. 117 pp.

A Critical Look at Training in American Industry. By Walter R. Mahler. (*In Journal of the American Society of Training Directors*, New York, December 1962, pp. 3-10. \$1.)

Is My Job For You? Talks with Men in Fifteen Exciting Careers. By Dic Gardner. New York, John Day Co., 1962. 128 pp., bibliography. \$3.

How Will I Earn My Living? An Important Decision That Must Be Made by Every Teen-Ager. By Lawrence W. Hess. New York, Vantage Press, Inc., 1962. 139 pp. \$2.75.

Careers in Broadcasting. Edited by John H. Lerch. New York, Appleton-Century-Crofts, 1962. 113 pp. \$3.95.

An Occupational Guide: Key punch and Tabulating Machine Occupations; Electronic Data Processing Occupations. St. Paul, Minnesota Department of Employment Security, Research and Statistics Section, 1962. 18 and 20 pp., bibliographies.

Health and Safety

Source Book of Health Insurance Data, 1962. New York, Health Insurance Institute, 1962. 88 pp.

Federal Work Injuries Sustained During Calendar Year 1961. Washington, U.S. Department of Labor, Bureau of Employees' Compensation, 1962. 18 pp.

Plant Safety. Washington, Bureau of National Affairs, Inc., 1962. 13 pp. (Personnel Policies Forum Survey 67.) \$1.

Safety in Industry: Organization and Administration, 3—The Fundamentals of Accident Prevention. By Sheldon W. Homan. Washington, U.S. Department of Labor, Bureau of Labor Standards, 1962. 14 pp. (Bulletin 247.) 15 cents, Superintendent of Documents, Washington.

Training in Safety. (In Ministry of Labor Gazette, London, December 1962, pp. 453-455. 2s. 6d., H.M. Stationery Office, London.)

Industrial Relations

The Proper Climate for Labor Relations. (Eighth Annual Industrial Relations Conference sponsored by Michigan State University, University of Michigan-Wayne State University, and the Labor Relations Law Section of the State Bar of Michigan, April 18-19, 1962.) Edited by Albert A. Blum. East Lansing, Michigan State University, School of Labor and Industrial Relations, 1962. 103 pp.

Collective Power and Individual Rights in the Collective Agreement—A Comparison of Swedish and American Law. By Clyde W. Summers. (In Yale Law Journal, New Haven, Conn., January 1963, pp. 421-456. \$2.50.)

Management Rights and Labor Arbitration: A Symposium. (In Industrial and Labor Relations Review, Ithaca, N.Y., January 1963, pp. 183-253. \$1.75.)

Southwestern Legal Foundation's Ninth Annual Institute on Labor Law, Dallas, Tex., October 18-20, 1962. (In Labor Law Journal, Chicago, January 1963, pp. 3-145. \$1.)

Organizational Picketing and the NLRB: Five on a Seesaw. By Bernard D. Meltzer. (In University of Chicago Law Review, Chicago, Autumn 1962, pp. 78-95. \$2.25.)

Collective Bargaining in the Trucking Industry, 1962. Washington, American Trucking Associations, Inc., Industrial Relations Department, 1962. 35 pp.

"Flags of Necessity," "Flags of Convenience" or "Runaway Ships"? By Edward B. Shils. (In Labor Law

Journal, Chicago, December 1962, pp. 1009-1046. \$1.)

The Gravamen of the Secondary Boycott. By Howard Lesnick. (In Columbia Law Review, New York, December 1962, pp. 1363-1430. \$1.50.)

Implementing the Profit Sharing Concept: A Research Approach. By Albert B. Chalupsky. (In Personnel Journal, Swarthmore, Pa., January 1963, pp. 29-31, 44. 75 cents.)

Work Stoppages—Metropolitan Areas, 1952-61. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1962. 25 pp. (BLS Report 236.) Free.

[Canadian] *Corporations and Labor Unions Returns Act.* (In Labor Gazette, Canadian Department of Labor, Ottawa, December 1962, pp. 1346-1349. 50 cents, Queen's Printer, Ottawa.)

Industrial Relations in the Australian Iron and Steel Industry, 1876-1962. By Helen Hughes. (In Journal of Industrial Relations, Industrial Relations Society of South Australia, Sydney, October 1962, pp. 120-136. 10s.)

Labor Force

Regional Patterns of Seasonality in the Labor Force and Its Components. By Philip J. Bourque. (In Quarterly Review of Economics and Business, University of Illinois, Champaign, November 1962, pp. 53-67. \$1.50.)

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	Bulletin No.	Pages	Price (cents)
Retail General Merchandise Stores--	1338-2	61	40
Retail Food Stores-----	1338-3	43	35
Retail Automotive Dealers and Gasoline Service Stations-----	1338-4	61	40
Retail Apparel and Accessory Stores-----	1338-5	63	40
Retail Furniture, Home Furnishings, and Household Appliance Stores--	1338-6	61	40
Miscellaneous Retail Stores (Drug Stores and Proprietary Stores)---	1338-7	43	35

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	Bulletin No.	Pages	Price (cents)
Scranton, Pa., August 1962-----	1345-5	18	15
San Bernardino-Riverside-Ontario, Calif., September 1962-----	1345-9	18	20
Omaha, Nebr.-Iowa, October 1962--	1345-12	20	20
Sioux Falls, S. Dak.-----	1345-13	16	20

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	Pages	Price
II, Natural Resources—Minerals and Mining, Mapping and Geodetic Control-----	355	\$1.00
III, Agriculture-----	262	.75
IV, Industrial Development-----	190	.55
V, Transportation-----	155	.50
VI, Health and Nutrition-----	196	.60
VIII, Social Problems of Development and Urbanization-----	89	.35
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IX, Scientific and Technological Policy, Planning, and Organization-----	60	.30
X, International Cooperation and Problems of Transfer and Adaptation-----	63	.30
XI, Human Resources and Training of Scientific and Technical Personnel-----	204	.60
XII, Communications-----	162	.50

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Current Labor Statistics

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¹ This table is included in the January, April, July, and October issues of the *Review*.

NOTE: With the exceptions noted, the statistical series here from the Bureau of Labor Statistics are described in *Techniques of Preparing Major BLS Statistical Series* (BLS Bulletin 1168, 1954), and cover the United States without Alaska and Hawaii.

A.—Employment

TABLE A-1. Estimated total labor force classified by employment status and sex

[In thousands]

Employment status	Estimated number of persons 14 years of age and over ¹														Annual average	
	1963	1962														
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960	
	Total, both sexes															
Total labor force.....	73,323	74,142	74,532	74,923	74,914	76,554	76,437	76,857	74,797	73,654	73,682	73,218	72,564	74,175	73,126	
Civilian labor force.....	70,607	71,378	71,782	72,187	72,179	73,665	73,582	74,001	71,922	70,769	70,697	70,332	69,721	71,603	70,612	
Unemployment.....	4,672	3,817	3,801	3,294	3,512	3,932	4,018	4,463	3,719	3,946	4,382	4,543	4,663	4,806	3,931	
Unemployment rate seasonally adjusted ²	5.8	5.6	5.8	5.5	5.8	5.8	5.3	5.5	5.4	5.5	5.5	5.6	5.8	6.7	5.6	
Unemployed 4 weeks or less.....	1,996	1,697	1,960	1,546	1,681	1,702	1,805	2,536	1,523	1,527	1,578	1,520	1,973	1,897	1,799	
Unemployed 5-10 weeks.....	1,162	840	684	654	630	940	1,037	664	709	629	744	1,133	1,078	964	823	
Unemployed 11-14 weeks.....	361	300	292	229	295	358	255	230	212	307	576	459	359	411	353	
Unemployed 15-26 weeks.....	612	525	469	418	428	341	345	449	608	764	750	728	581	728	502	
Unemployed over 26 weeks.....	541	453	397	447	477	583	576	584	666	719	734	703	672	804	454	
Employment.....	65,935	67,561	67,981	68,893	68,668	69,762	69,504	69,539	68,203	66,824	66,316	65,789	65,058	66,796	66,681	
Nonagricultural.....	61,730	63,495	63,098	63,418	63,103	63,993	63,500	63,249	62,775	61,863	61,533	61,211	60,641	61,333	60,958	
Worked 35 hours or more.....	48,480	49,175	45,107	48,047	49,684	47,264	46,372	49,209	49,711	49,035	48,386	46,418	46,127	47,257	46,388	
Worked 15-34 hours.....	7,235	7,932	11,894	9,426	7,265	6,349	6,598	6,927	7,209	7,213	7,304	8,452	8,003	7,522	8,249	
Worked 1-14 hours.....	3,845	4,143	4,074	3,811	3,475	3,222	3,185	3,365	3,912	3,794	3,915	4,012	4,125	3,610	3,279	
With a job but not at work ³	2,172	2,243	2,021	2,133	2,680	6,657	7,343	3,748	1,944	1,822	1,929	2,328	2,386	2,946	3,042	
Agricultural.....	4,206	4,066	4,883	5,475	5,684	5,770	6,064	6,290	5,428	4,961	4,782	4,578	4,417	5,463	5,723	
Worked 35 hours or more.....	2,522	2,352	3,262	3,688	3,693	3,900	4,270	4,377	3,801	3,196	3,032	2,817	2,429	3,540	3,811	
Worked 15-34 hours.....	957	907	1,069	1,232	1,310	1,285	1,215	1,346	1,149	1,116	1,118	1,061	1,071	1,245	1,279	
Worked 1-14 hours.....	444	490	398	426	462	404	447	446	388	475	432	456	621	477	444	
With a job but not at work ³	249	316	153	129	101	182	133	122	89	172	201	243	286	200	190	
	Males															
Total labor force.....	49,269	49,574	49,719	49,974	50,110	51,657	51,733	51,832	50,272	49,568	49,436	49,304	48,911	49,918	49,507	
Civilian labor force.....	46,585	46,841	47,001	47,269	47,406	48,830	48,911	49,009	47,430	46,717	46,585	46,454	46,105	47,378	47,025	
Unemployment.....	3,080	2,522	2,259	1,881	1,991	2,327	2,406	2,698	2,296	2,534	2,888	3,010	3,034	3,090	2,541	
Employment.....	43,505	44,319	44,743	45,388	45,415	46,503	46,505	46,310	45,134	44,183	43,697	43,435	43,072	44,318	44,485	
Nonagricultural.....	39,839	40,782	40,703	41,131	41,052	41,899	41,732	41,421	40,687	39,925	39,553	39,460	39,165	39,811	39,807	
Worked 35 hours or more.....	33,648	33,946	31,704	33,774	34,789	33,453	32,052	34,624	34,579	34,043	33,505	32,494	32,094	32,884	32,511	
Worked 15-34 hours.....	3,251	3,612	6,130	4,428	3,261	3,315	3,183	3,244	3,223	3,282	3,300	3,884	3,739	3,587	4,100	
Worked 1-14 hours.....	1,593	1,760	1,618	1,628	1,433	1,449	1,337	1,513	1,713	1,573	1,556	1,691	1,843	1,511	1,360	
With a job but not at work ³	1,351	1,461	1,250	1,302	1,588	3,652	2,035	1,171	1,021	1,133	1,361	1,488	1,739	1,826	1,836	
Agricultural.....	3,666	3,537	4,040	4,256	4,363	4,604	4,773	4,889	4,447	4,258	4,144	3,975	3,906	4,508	4,678	
Worked 35 hours or more.....	2,281	2,181	2,908	3,168	3,180	3,327	3,634	3,743	3,365	2,916	2,792	2,592	2,221	3,132	3,365	
Worked 15-34 hours.....	751	656	692	694	780	819	687	733	706	781	821	779	861	827	792	
Worked 1-14 hours.....	400	424	307	281	309	293	332	305	291	400	343	383	551	370	348	
With a job but not at work ³	232	276	133	114	92	165	121	109	85	161	188	220	274	179	172	
	Females															
Total labor force.....	24,054	24,568	24,812	24,949	24,804	24,897	24,703	25,026	24,525	24,086	24,146	23,914	23,652	24,257	23,619	
Civilian labor force.....	24,022	24,537	24,781	24,918	24,773	24,865	24,671	24,993	24,492	24,052	24,112	23,878	23,616	24,225	23,587	
Unemployment.....	1,592	1,295	1,543	1,413	1,620	1,605	1,611	1,764	1,423	1,411	1,493	1,524	1,629	1,747	1,390	
Employment.....	22,430	23,242	23,238	23,505	23,253	23,260	23,059	23,228	23,069	22,641	22,619	22,354	21,986	22,478	22,196	
Nonagricultural.....	21,890	22,714	22,395	22,287	22,051	22,094	21,788	21,827	22,088	21,983	21,980	21,761	21,476	21,223	21,151	
Worked 35 hours or more.....	14,835	15,228	13,404	14,273	14,914	13,782	13,420	14,583	15,130	14,998	14,882	13,923	14,032	14,573	13,627	
Worked 15-34 hours.....	3,983	4,319	5,763	4,998	4,004	3,533	3,415	3,682	3,985	3,929	4,004	4,569	4,265	3,934	4,149	
Worked 1-14 hours.....	2,252	2,383	2,457	2,184	2,042	1,773	1,848	1,847	2,199	2,126	2,358	2,322	2,282	2,098	1,919	
With a job but not at work ³	820	782	771	832	1,092	3,005	3,082	1,713	773	801	736	936	898	1,217	1,206	
Agricultural.....	590	528	843	1,219	1,201	1,166	1,291	1,491	982	808	638	603	511	955	1,045	
Worked 35 hours or more.....	243	172	355	520	512	573	696	634	438	281	241	225	209	408	445	
Worked 15-34 hours.....	236	252	377	538	529	466	530	613	443	335	297	282	211	419	486	
Worked 1-14 hours.....	44	66	91	145	152	110	116	141	97	75	89	73	70	107	96	
With a job but not at work ³	17	40	27	15	9	17	12	13	4	11	13	22	21	22	17	

¹ Estimates are based on information obtained from a sample of households and are subject to sampling variability. Data relate to the calendar week ending nearest the 15th day of the month. The employed total includes all wage and salary workers, self-employed persons, and unpaid workers in family-operated enterprises. Persons in institutions are not included.

Because of rounding, sums of individual items do not necessarily equal totals.

² Unemployment as a percent of labor force.

³ Includes persons who had a job or business but who did not work during the survey week because of illness, bad weather, vacation, or labor dispute. Prior to January 1957, also included were persons on layoff with definite instructions to return to work within 30 days of layoff and persons who had

new jobs to which they were scheduled to report within 30 days. Most of the persons in these groups have, since that time, been classified as unemployed.

NOTE: For a description of these series, see Explanatory Notes (in *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics, current issues).

Figures for periods prior to April 1962 are not strictly comparable with current data because of the introduction of 1960 Census data into the estimation procedure. The change primarily affected the labor force and employment totals, which were reduced by about 200,000. The unemployment totals were virtually unchanged.

TABLE A-2. Employees in nonagricultural establishments, by industry ¹

[In thousands]

Industry	1963		1962											Annual average	
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Total employees.....	54,842	56,482	56,214	56,333	56,252	55,709	55,493	55,777	55,209	54,849	54,056	53,823	53,737	54,077	54,347
Mining.....	617	628	638	645	651	658	648	661	657	647	640	642	647	666	709
Metal mining.....		78.2	78.9	79.4	80.3	83.8	87.8	89.2	88.5	86.9	85.8	86.0	85.5	87.1	93.3
Iron ores.....		24.3	25.1	25.9	26.4	28.3	29.0	29.8	29.7	28.4	27.7	27.9	27.8	27.5	33.2
Copper ores.....		27.8	27.8	27.7	27.9	28.8	28.8	29.2	28.9	28.9	28.8	28.8	28.4	28.9	28.3
Coal mining.....		140.4	142.2	143.8	142.6	141.9	129.9	142.8	145.0	146.5	149.2	153.1	154.0	155.5	182.2
Bituminous.....		131.8	133.4	135.2	134.2	133.4	120.7	134.2	135.9	137.6	140.1	144.0	144.7	145.1	168.2
Crude petroleum and natural gas.....		299.6	300.1	303.0	307.2	309.2	310.1	307.9	304.0	302.0	301.5	302.4	304.7	308.9	313.9
Crude petroleum and natural gas fields.....		171.4	172.1	172.8	175.5	178.0	178.0	177.5	174.9	173.8	173.2	173.2	173.9	176.8	181.7
Oil and gas field services.....		128.2	128.0	130.2	131.7	131.2	132.1	130.4	129.1	128.2	128.3	129.2	130.8	132.2	132.2
Quarrying and nonmetallic mining.....		107.7	116.4	119.1	121.0	122.9	120.2	120.6	119.3	111.7	103.7	100.9	102.3	114.9	119.5
Contract construction.....	2,346	2,533	2,801	2,936	2,978	3,031	2,982	2,839	2,749	2,589	2,328	2,282	2,298	2,760	2,882
General building contractors.....		786.8	861.7	889.1	903.2	929.2	916.4	873.0	843.0	808.5	723.0	719.6	721.0	860.8	911.7
Heavy construction.....		471.1	579.3	648.4	667.6	685.4	675.0	624.5	594.7	506.6	419.5	397.7	398.5	565.6	581.3
Highway and street construction.....		247.0	326.9	379.0	394.5	405.2	393.6	359.6	335.4	268.4	202.4	188.1	187.5	302.8	302.4
Other heavy construction.....		224.1	252.4	269.4	273.1	280.2	281.4	264.9	259.3	238.2	217.1	209.6	211.0	262.9	278.9
Special trade contractors.....		1,274.7	1,360.4	1,398.8	1,407.1	1,416.6	1,390.9	1,341.0	1,311.2	1,273.8	1,185.9	1,164.6	1,178.6	1,333.2	1,388.8
Manufacturing.....	16,550	16,733	16,891	17,028	17,127	16,931	16,782	16,870	16,682	16,636	16,525	16,452	16,370	16,267	16,762
Durable goods.....		9,412	9,533	9,563	9,571	9,402	9,547	9,475	9,422	9,339	9,222	9,222	9,222	9,042	9,441
Nondurable goods.....		7,138	7,252	7,368	7,466	7,556	7,529	7,319	7,323	7,207	7,214	7,186	7,148	7,225	7,321
<i>Durable goods</i>															
Ordnance and accessories.....		221.9	221.4	220.4	220.7	221.6	217.0	211.8	211.6	211.0	209.5	207.0	206.8	200.6	187.3
Ammunition, except for small arms.....		114.6	114.7	114.2	114.0	115.0	113.7	110.7	108.5	108.2	107.3	105.6	105.6	103.1	93.9
Sighting and fire control equipment.....		52.0	52.6	52.5	53.0	53.4	53.3	52.5	52.4	52.5	52.3	52.3	52.1	51.1	50.0
Other ordnance and accessories.....		54.8	54.3	53.7	53.7	53.2	50.0	48.6	50.7	50.3	49.7	49.3	49.1	46.5	43.4
Lumber and wood products, except furniture.....		576.3	591.5	608.6	620.7	629.9	639.6	632.9	635.8	609.6	591.3	572.6	570.0	600.5	636.8
Logging camps and logging contractors.....		87.3	94.0	97.2	101.2	104.5	103.7	101.8	90.3	82.6	77.3	83.5	83.6	91.5	92.6
Sawmills and planing mills.....		262.3	269.2	273.9	277.1	280.1	279.0	281.6	272.5	266.5	259.6	258.8	253.6	268.9	294.7
Millwork, plywood, and related products.....		143.6	146.4	148.9	150.7	152.9	149.2	149.6	145.8	142.6	137.3	136.8	136.5	141.3	146.6
Wooden containers.....		38.6	39.0	40.0	39.6	40.5	40.8	41.2	40.3	39.4	38.9	38.5	38.5	40.8	43.2
Miscellaneous wood products.....		59.7	60.0	60.7	61.3	61.6	60.2	61.6	60.7	60.2	59.5	58.7	57.8	58.0	59.6
Furniture and fixtures.....		381.2	383.8	387.1	388.2	388.0	378.3	378.3	379.3	377.1	375.9	374.1	372.3	367.4	383.4
Household furniture.....		273.8	275.8	276.9	276.0	273.6	266.5	269.1	268.8	269.1	267.7	266.2	264.9	259.6	271.1
Office furniture.....		30.6	30.7	28.5	28.2	30.3	29.2	29.7	29.1	28.5	28.6	28.6	28.5	27.4	28.3
Partitions; office and store fixtures.....		35.0	35.7	37.8	38.0	37.7	37.2	37.1	36.4	35.8	36.1	35.9	35.7	36.2	39.0
Other furniture and fixtures.....		44.4	44.9	45.0	45.8	46.3	45.4	46.4	45.0	43.7	43.5	43.4	43.2	44.2	45.1
Stone, clay, and glass products.....		544.5	560.4	578.2	588.0	592.8	595.6	590.1	589.5	579.1	566.2	546.1	543.4	542.1	566.8
Flat glass.....		30.3	31.0	30.5	30.4	30.1	29.7	29.6	28.6	29.0	29.0	30.2	30.4	27.9	31.1
Glass and glassware, pressed or blown.....		99.6	100.4	101.8	102.8	103.1	103.0	103.9	101.8	100.3	100.0	99.1	97.8	100.6	102.9
Cement, hydraulic.....		38.0	40.3	40.8	41.4	41.7	41.5	41.3	40.0	39.0	36.3	36.0	37.3	40.0	42.8
Structural clay products.....		68.6	70.6	71.4	72.5	73.1	72.1	71.8	71.0	69.5	66.8	64.9	66.1	70.7	76.1
Pottery and related products.....		43.6	44.5	45.3	44.8	44.2	43.5	43.9	43.5	43.9	43.2	44.6	44.1	43.4	47.1
Concrete, gypsum, and plaster products.....		145.0	154.7	160.7	163.2	165.1	163.0	162.2	157.9	149.3	136.2	133.9	133.1	150.2	155.4
Other stone and mineral products.....		120.3	121.4	122.2	122.7	123.5	123.0	122.4	122.0	120.8	120.0	120.2	119.1	119.5	124.0
Primary metal industries.....	1,121.9	1,123.7	1,118.7	1,123.1	1,136.4	1,134.7	1,134.7	1,166.0	1,193.8	1,221.3	1,221.1	1,213.4	1,197.9	1,142.3	1,228.7
Blast furnace and basic steel products.....		554.8	550.8	555.2	566.3	567.5	570.8	594.9	622.5	650.1	651.2	646.3	635.0	599.9	652.5
Iron and steel foundries.....		195.2	194.9	195.5	196.6	193.8	194.0	196.9	196.5	197.0	195.9	195.9	191.7	186.0	203.6
Nonferrous smelting and refining.....		68.3	68.7	69.1	69.4	68.9	67.8	68.8	68.6	68.5	68.6	68.6	68.0	67.4	70.8
Nonferrous rolling, drawing, and extruding.....		176.7	176.7	177.5	177.5	176.8	177.3	178.0	177.6	177.5	177.1	176.2	177.2	169.9	175.6
Nonferrous foundries.....		68.3	67.5	67.1	67.1	67.1	64.7	66.0	67.4	66.6	67.0	66.2	66.0	61.4	65.1
Miscellaneous primary metal industries.....		60.4	60.1	58.7	59.5	60.6	60.1	61.4	61.2	61.6	61.3	60.2	60.0	57.8	61.1
Fabricated metal products.....	1,113.5	1,124.0	1,128.3	1,134.1	1,135.7	1,115.5	1,115.8	1,129.0	1,121.2	1,111.3	1,102.2	1,096.1	1,098.5	1,076.4	1,128.6
Metal cans.....		58.5	57.9	61.0	65.3	65.4	65.7	65.2	62.9	61.6	59.7	58.9	57.9	60.6	62.5
Cutlery, handtools, and general hardware.....		141.5	141.3	140.0	138.4	134.7	133.6	138.7	138.4	137.7	137.9	137.4	137.8	129.7	136.0
Heating equipment and plumbing fixtures.....		77.0	77.8	79.0	78.6	78.8	76.7	77.0	76.3	76.2	76.1	75.8	75.4	75.2	79.0
Fabricated structural metal products.....		322.6	325.8	330.9	335.1	333.7	334.4	332.3	326.9	321.4	317.6	316.8	318.6	325.8	334.3
Screw machine products, bolts, etc.....		87.8	87.8	87.7	87.0	87.0	86.1	87.1	87.5	87.8	87.5	87.2	85.9	80.4	85.6
Metal stampings.....		197.0	196.4	196.4	193.2	180.2	184.3	188.3	191.1	189.0	187.7	186.9	189.9	179.4	197.7
Coating, engraving, and allied services.....		68.2	70.0	69.6	69.2	67.8	67.4	68.9	67.6	67.7	66.9	65.9	65.0	63.9	64.2
Miscellaneous fabricated wire products.....		57.1	57.4	57.7	56.8	55.7	55.6	57.1	56.8	56.0	55.5	55.3	55.4	53.7	56.9
Miscellaneous fabricated metal products.....		114.3	113.9	111.8	112.1	112.2	112.0	114.4	113.7	113.9	113.3	111.9	111.6	107.8	112.4

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

Industry	[In thousands]														Annual average	
	1963	1962														
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960	
Manufacturing—Continued																
<i>Durable goods—Continued</i>																
Machinery.....	1,466.9	1,464.7	1,462.9	1,463.1	1,466.7	1,463.9	1,468.1	1,479.5	1,468.6	1,466.4	1,454.1	1,434.1	1,419.1	1,401.1	1,471.4	
Engines and turbines.....	87.0	86.3	86.5	86.8	86.8	86.8	85.7	86.6	86.7	86.5	85.4	84.0	81.2	80.0	86.8	
Farm machinery and equipment.....	120.9	117.4	118.0	118.7	117.7	119.0	120.5	121.0	121.0	119.5	114.6	107.9	112.4	114.1	119.7	
Construction and related machinery.....	209.5	208.6	207.8	211.1	212.3	211.2	212.0	209.0	207.8	205.4	201.8	199.7	198.1	219.7	219.7	
Metalworking machinery and equipment.....	259.5	258.3	256.4	255.0	253.1	256.7	259.7	260.5	260.8	257.6	254.9	251.3	243.8	258.2	258.2	
Special industry machinery.....	171.0	170.8	171.6	171.6	172.4	172.9	173.5	171.5	170.9	169.4	169.1	168.1	167.9	173.8	173.8	
General industrial machinery.....	220.2	222.5	223.4	223.2	222.9	222.0	222.8	220.1	219.9	218.6	216.2	216.9	211.1	223.0	223.0	
Office, computing, and accounting machines.....	150.0	150.4	150.5	151.9	152.1	151.0	151.8	151.7	151.9	151.7	151.7	151.3	149.3	145.7	145.7	
Service industry machines.....	95.2	96.0	96.2	96.7	96.3	99.7	101.0	99.6	98.7	97.4	96.5	94.4	94.1	99.8	99.8	
Miscellaneous machinery.....	151.4	152.6	152.7	151.7	150.3	149.9	151.6	148.5	148.9	149.1	148.9	148.3	144.6	150.4	150.4	
Electrical equipment and supplies.....	1,549.3	1,561.1	1,561.2	1,566.7	1,538.9	1,529.1	1,534.2	1,513.1	1,505.2	1,498.2	1,494.6	1,486.7	1,436.0	1,445.6	1,445.6	
Electric distribution equipment.....	163.3	163.5	163.5	163.3	163.2	161.7	162.2	159.3	159.8	159.3	160.5	160.2	160.9	163.2	163.2	
Electrical industrial apparatus.....	176.4	176.9	176.6	176.9	175.7	175.7	178.3	175.5	174.8	174.7	174.2	174.5	170.5	177.4	177.4	
Household appliances.....	154.6	154.8	155.6	155.0	151.9	150.7	154.3	154.8	154.5	153.5	152.0	152.0	151.0	157.2	157.2	
Electric lighting and wiring equipment.....	138.6	138.9	139.4	138.8	136.1	133.6	135.4	134.8	134.2	133.2	132.4	131.7	128.5	132.7	132.7	
Radio and TV receiving sets.....	129.4	132.9	135.7	135.2	132.2	129.9	127.8	122.9	118.3	118.0	119.2	121.0	113.1	111.5	111.5	
Communication equipment.....	429.1	427.4	424.7	422.6	420.0	415.7	416.2	412.3	410.8	409.3	405.0	398.0	378.4	366.9	366.9	
Electronic components and accessories.....	246.2	247.6	247.6	248.0	246.5	246.7	245.7	240.0	238.5	238.2	237.8	236.7	227.2	225.2	225.2	
Miscellaneous electrical equipment and supplies.....	119.0	119.1	118.1	116.9	113.3	113.8	114.3	113.5	114.3	112.0	113.5	112.6	106.4	111.4	111.4	
Transportation equipment.....	1,706.3	1,707.6	1,695.4	1,683.9	1,668.7	1,536.2	1,647.4	1,660.4	1,650.6	1,632.2	1,629.0	1,625.2	1,613.1	1,522.5	1,617.3	
Motor vehicles and equipment.....	763.2	755.1	746.8	731.8	607.3	727.5	746.4	738.3	720.9	715.4	714.8	715.3	647.9	727.6	727.6	
Aircraft and parts.....	730.6	726.5	719.7	719.0	709.7	705.1	695.6	692.8	691.9	699.7	699.9	696.7	669.4	673.8	673.8	
Ship and boat building and repairing.....	145.3	144.0	145.5	144.3	144.3	141.8	142.6	144.1	145.5	143.4	142.1	139.2	142.2	141.0	141.0	
Railroad equipment.....	42.0	42.0	43.2	44.8	45.5	43.6	45.4	44.4	43.8	42.5	41.4	37.3	35.8	43.8	43.8	
Other transportation equipment.....	26.5	27.8	28.7	28.8	29.4	29.4	30.3	31.0	30.1	28.0	27.0	24.6	27.3	31.1	31.1	
Instruments and related products.....	361.6	361.7	362.1	361.3	361.3	361.3	357.4	358.2	355.8	355.2	354.6	351.9	351.9	346.4	354.2	
Engineering and scientific instruments.....	74.1	74.3	74.4	74.1	73.6	72.3	72.6	72.5	72.5	72.5	70.9	72.7	73.9	75.7	75.7	
Mechanical measuring and control devices.....	96.5	96.3	95.8	95.7	95.9	95.0	94.7	95.2	95.2	95.3	94.8	94.2	91.8	95.1	95.1	
Optical and ophthalmic goods.....	41.7	41.6	41.8	41.8	41.7	41.8	42.4	42.1	42.2	41.8	41.4	40.7	39.3	40.6	40.6	
Surgical, medical, and dental equipment.....	49.6	49.7	49.6	49.6	49.5	49.2	49.0	48.2	48.1	47.8	47.7	47.7	47.6	47.3	47.3	
Photographic equipment and supplies.....	71.2	71.2	71.0	71.0	71.8	71.4	70.5	69.2	69.1	68.6	68.8	68.8	68.4	69.0	69.0	
Watches and clocks.....	28.6	29.0	29.0	29.1	28.8	27.7	29.0	28.6	28.1	28.6	28.3	27.8	25.3	26.6	26.6	
Miscellaneous manufacturing industries.....	368.5	385.6	409.0	418.1	414.5	407.3	392.4	399.9	391.8	384.8	375.2	370.7	363.4	381.6	392.1	
Jewelry, silverware, and plated ware.....	42.0	42.8	42.6	42.3	41.5	40.0	41.2	41.2	41.3	41.5	41.5	42.0	41.8	43.2	43.2	
Toys, amusement, and sporting goods.....	98.6	116.1	123.1	119.7	117.1	112.4	112.2	107.6	103.0	93.5	89.8	84.6	101.9	102.3	102.3	
Pens, pencils, office and art materials.....	34.4	34.9	35.1	34.6	34.1	32.6	33.2	32.6	32.6	32.2	32.4	32.2	31.2	31.0	31.0	
Costume jewelry, buttons, and notions.....	55.1	57.1	56.9	56.8	56.0	53.1	56.3	55.1	53.9	54.6	53.9	53.0	54.0	57.5	57.5	
Other manufacturing industries.....	155.5	158.1	160.4	161.1	158.6	154.3	157.0	155.3	154.0	153.4	153.1	151.6	152.7	158.1	158.1	
<i>Nondurable goods</i>																
Food and kindred products.....	1,681.9	1,738.7	1,780.7	1,858.5	1,931.1	1,910.5	1,829.6	1,777.9	1,711.5	1,699.1	1,672.0	1,673.4	1,693.9	1,780.2	1,792.7	
Meat products.....	311.6	316.0	315.9	312.7	314.7	313.4	314.4	307.7	305.2	301.1	303.5	309.9	317.0	321.1	321.1	
Dairy products.....	301.1	303.0	306.1	312.3	320.5	322.3	318.8	311.5	308.5	303.8	301.9	302.3	313.3	316.6	316.6	
Canned and preserved food, except meats.....	203.2	227.5	298.1	379.1	359.1	286.7	236.3	204.1	203.1	186.4	187.5	191.7	243.5	241.8	241.8	
Grain mill products.....	124.7	124.9	128.2	130.5	131.1	131.0	128.7	127.4	123.8	124.1	124.6	125.2	128.6	128.4	128.4	
Bakery products.....	306.4	308.9	308.0	307.3	308.0	308.1	308.8	302.1	301.1	301.2	302.0	302.0	305.7	307.5	307.5	
Sugar.....	44.0	45.7	45.1	32.1	30.0	29.3	28.8	27.2	28.2	25.5	27.6	33.8	34.3	36.9	36.9	
Confectionery and related products.....	84.2	87.5	85.1	83.0	76.9	69.1	73.2	73.8	76.1	77.3	78.0	78.3	80.0	79.6	79.6	
Beverages.....	217.8	219.7	223.5	228.6	227.2	229.1	227.7	217.8	212.2	211.7	207.8	209.5	216.5	218.2	218.2	
Miscellaneous food and kindred products.....	145.7	147.5	148.5	145.5	143.0	140.6	141.2	139.9	140.9	140.9	140.5	141.2	141.4	142.8	142.8	
Tobacco manufactures.....	87.7	92.0	96.2	111.2	117.6	102.6	76.9	76.2	75.7	77.0	80.5	86.4	90.2	90.5	94.1	
Cigarettes.....	37.2	37.0	37.0	37.9	37.9	37.9	37.9	37.6	37.0	36.6	36.7	36.6	36.9	37.0	37.2	
Cigars.....	23.0	22.9	22.6	22.8	22.6	22.0	22.9	23.1	23.3	23.5	23.6	23.4	24.8	27.9	27.9	
Textile mill products.....	857.6	863.4	876.2	881.3	883.7	885.8	872.9	890.9	884.4	883.2	881.8	880.0	879.1	879.8	914.6	
Cotton broad woven fabrics.....	242.1	243.1	243.2	244.2	245.0	243.4	247.0	246.1	247.2	248.4	249.3	251.6	251.2	260.4	260.4	
Silk and synthetic broad woven fabrics.....	70.6	70.3	70.1	70.5	70.6	68.7	70.4	69.7	69.3	69.7	70.0	70.5	69.8	73.4	73.4	
Weaving and finishing broad woolsens.....	49.3	49.6	50.8	51.5	52.2	52.2	52.9	52.2	52.0	51.4	51.5	50.3	52.3	56.0	56.0	
Narrow fabrics and smallwares.....	27.3	27.5	27.2	27.4	27.3	26.6	27.4	27.6	27.6	27.6	27.5	27.3	26.6	27.6	27.6	
Knitting.....	203.9	210.3	214.4	215.3	217.2	213.0	217.6	214.2	212.1	209.6	206.7	205.4	211.1	214.4	214.4	
Finishing textiles, except wool and knit.....	71.6	71.5	71.6	71.2	71.1	70.6	72.2	71.8	72.1	72.2	71.8	71.8	70.8	74.3	74.3	
Floor covering.....	35.1	35.1	34.7	34.2	33.1	33.0	33.4	33.5	33.8	34.1	34.3	33.8	33.1	35.9	35.9	
Yarn and thread.....	102.1	102.3	102.9	103.0	103.8	101.3	103.6	103.1	103.1	103.2	103.2	102.4	100.4	103.7	103.7	
Miscellaneous textile goods.....	66.4	66.5	66.4	66.4	65.5	64.1	66.4	66.2	66.0	65.9	65.7	66.0	64.6	69.0	69.0	

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

[In thousands]

Industry	1963		1962										Annual average		
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Manufacturing—Continued															
<i>Nondurable goods—Continued</i>															
Apparel and related products.....	1,216.1	1,235.7	1,252.7	1,258.5	1,264.2	1,266.7	1,207.8	1,230.5	1,216.3	1,232.4	1,241.2	1,227.5	1,195.1	1,199.5	1,228.4
Men's and boys' suits and coats.....	119.2	118.5	118.5	119.3	120.2	119.8	115.2	119.4	115.6	115.9	116.8	117.2	116.4	116.4	121.5
Men's and boys' furnishings.....	331.4	334.9	334.9	335.2	336.4	336.1	324.7	331.2	324.7	320.5	317.8	314.1	307.4	302.2	307.5
Women's, misses', and juniors' outerwear.....		340.5	343.4	342.3	349.7	356.7	335.5	342.2	355.5	340.5	362.2	356.2	342.5	348.3	361.3
Women's and children's undergarments.....		124.0	126.0	126.7	124.6	123.3	116.7	120.0	119.2	120.4	121.4	119.9	118.7	118.0	119.7
Hats, caps, and millinery.....		33.5	32.9	35.8	36.2	36.8	32.0	31.7	31.8	38.7	41.1	40.2	37.9	34.9	36.2
Girls' and children's outerwear.....		75.7	76.8	77.2	77.2	78.6	78.2	79.2	75.3	74.0	78.4	77.9	74.8	74.4	76.1
Fur goods and miscellaneous apparel.....		68.2	72.3	73.3	72.2	71.6	67.8	68.7	66.2	67.3	66.8	66.7	63.7	69.5	69.0
Miscellaneous fabricated textile products.....		143.2	147.9	148.7	147.7	143.8	137.7	138.1	142.5	140.1	136.7	135.3	133.7	135.8	136.9
Paper and allied products.....	598.5	605.2	606.4	608.8	610.7	610.4	602.2	607.3	598.7	598.4	593.8	590.2	591.3	589.5	593.3
Paper and pulp.....		226.3	226.8	227.9	229.0	231.4	227.7	228.5	224.9	224.8	224.6	223.8	223.6	224.5	224.4
Paperboard.....		68.5	68.3	68.3	67.7	66.7	66.4	68.1	67.5	67.5	65.9	65.4	65.5	66.8	69.3
Converted paper and paperboard products.....		129.6	129.7	130.5	130.6	130.4	129.3	130.2	128.6	128.5	126.9	126.5	127.1	124.3	124.4
Paperboard containers and boxes.....		180.8	181.6	182.1	183.4	181.9	178.8	180.5	177.7	177.6	176.4	174.5	175.1	174.0	175.1
Printing, publishing, and allied industries.....	912.2	921.5	945.7	945.0	941.3	934.0	930.7	933.4	929.0	930.8	930.0	926.6	925.4	926.3	917.2
Newspaper publishing and printing.....		325.9	348.5	346.6	345.1	345.5	343.1	343.7	341.0	342.5	341.3	339.9	338.6	339.1	332.6
Periodical publishing and printing.....		69.3	69.4	68.9	68.3	66.1	66.4	66.4	68.5	68.7	69.5	69.9	70.8	71.0	71.0
Books.....		75.1	75.7	76.0	76.4	75.8	76.1	75.4	74.4	74.5	74.1	74.1	74.0	73.0	71.1
Commercial printing.....		294.4	293.8	293.8	292.2	288.9	289.2	292.0	291.1	291.4	291.2	290.7	290.5	289.8	289.2
Bookbinding and related industries.....		48.5	48.4	48.7	49.3	49.5	48.3	48.0	47.3	47.2	47.4	46.6	46.6	47.1	47.0
Other publishing and printing industries.....		108.3	109.9	111.0	110.0	108.2	107.6	107.9	106.7	106.5	106.1	105.4	104.9	106.3	106.3
Chemicals and allied products.....	849.4	848.7	852.0	853.6	855.9	858.0	855.0	851.2	851.9	854.9	843.7	838.4	833.3	830.2	829.6
Industrial chemicals.....		284.5	285.2	284.9	285.1	287.8	288.9	287.7	284.6	286.0	284.2	284.6	284.8	284.8	286.8
Plastics and synthetics, except glass.....		162.4	163.3	163.2	164.3	163.4	162.9	158.4	159.7	159.7	158.3	158.1	157.1	152.3	153.2
Drugs.....		111.6	111.3	110.6	110.5	111.4	110.7	110.0	108.7	108.8	108.3	108.3	107.5	106.6	107.4
Soap, cleaners, and toilet goods.....		99.9	101.2	101.8	101.8	101.2	99.2	99.4	98.0	98.1	97.7	95.4	95.1	96.5	92.2
Paints, varnishes, and allied products.....		61.7	62.0	62.8	63.6	64.7	64.5	64.2	63.0	62.2	61.6	61.5	61.0	62.4	63.5
Agricultural chemicals.....		42.3	41.6	42.9	42.7	40.7	40.5	43.3	52.5	53.9	48.1	45.1	42.7	44.7	44.8
Other chemical products.....		86.3	87.4	87.4	87.9	88.8	88.3	88.2	85.4	86.2	85.5	85.4	85.1	82.9	81.8
Petroleum refining and related industries.....	185.5	186.9	189.1	190.7	192.8	199.9	200.9	200.9	199.3	198.3	197.1	197.6	197.6	203.0	211.7
Petroleum refining.....		153.4	154.3	154.9	156.4	163.5	165.0	165.3	164.6	165.0	164.8	165.2	165.5	170.0	177.6
Other petroleum and coal products.....		33.5	34.8	35.8	36.2	36.4	35.9	35.6	34.7	33.3	32.3	32.4	32.1	33.0	34.1
Rubber and miscellaneous plastic products.....	395.2	396.1	398.2	399.9	397.7	392.1	394.5	391.4	385.0	380.4	381.8	381.3	380.5	365.1	374.0
Tires and inner tubes.....		105.7	105.3	105.3	105.7	104.5	103.5	104.5	103.0	102.5	103.0	103.3	103.4	101.0	106.8
Other rubber products.....		164.5	164.4	164.7	164.3	161.4	157.1	161.5	158.8	157.2	157.0	157.1	157.4	149.1	153.3
Miscellaneous plastic products.....		125.9	128.5	129.9	127.7	126.2	123.9	125.4	123.2	120.7	121.8	120.9	119.7	114.9	113.8
Leather and leather products.....	353.6	358.9	361.0	358.6	360.8	368.6	358.4	363.5	355.4	359.5	363.7	363.5	361.3	361.0	365.8
Leather tanning and finishing.....		33.0	33.1	32.9	32.8	32.8	31.6	32.7	32.2	32.0	32.5	33.1	33.5	33.0	34.1
Footwear, except rubber.....		238.1	235.8	233.4	236.9	243.5	239.2	241.7	236.6	238.8	241.7	241.6	241.8	239.3	242.6
Other leather products.....		87.8	92.1	92.3	91.1	92.3	87.6	89.1	86.6	88.7	89.5	88.8	86.0	88.7	89.1
Transportation and public utilities.....	3,804	3,939	3,934	3,959	3,959	3,963	3,948	3,965	3,924	3,904	3,880	3,863	3,863	3,923	4,017
Railroad transportation.....		789.5	781.8	792.5	784.4	810.2	811.1	819.2	815.1	808.1	803.2	799.2	800.8	819.5	886.9
Class I railroads.....		681.6	683.1	692.9	685.0	710.6	711.8	719.0	715.0	706.8	702.0	698.9	700.6	717.4	780.5
Local and interurban passenger transit.....		269.1	266.9	267.0	265.2	253.6	254.4	261.0	266.0	266.6	262.5	267.4	270.5	270.0	282.6
Local and suburban transportation.....		86.8	87.1	87.7	87.9	87.7	87.8	88.6	88.6	88.4	82.9	88.6	90.0	91.5	94.6
Taxicabs.....		109.5	107.0	105.7	105.0	103.0	102.7	104.2	105.5	107.1	109.6	109.3	109.6	109.5	120.4
Intercity and rural buslines.....		47.9	47.9	48.4	49.7	50.1	50.4	49.6	48.7	47.9	46.7	46.5	47.9	48.2	47.2
Motor freight transportation and storage.....		925.8	939.0	947.9	942.1	927.5	920.3	919.2	893.2	887.1	878.8	872.2	866.9	875.2	873.8
Air transportation.....		210.1	209.2	210.8	210.0	199.2	193.1	207.6	206.7	204.9	203.8	200.9	200.4	197.3	191.0
Air transportation, common carriers.....		189.1	188.3	189.5	188.5	177.8	172.0	185.0	184.0	182.3	181.1	179.4	179.5	175.6	171.6
Pipeline transportation.....		20.5	20.6	20.8	21.2	21.6	21.6	21.6	21.3	21.3	21.3	21.3	21.4	22.2	23.1
Other transportation.....		306.0	296.6	296.0	300.7	302.6	299.9	301.2	302.6	298.3	296.6	289.3	288.2	302.1	308.0
Communication.....		815.6	816.9	818.8	823.6	829.1	829.1	822.3	816.9	816.6	813.8	812.9	813.3	826.2	838.7
Telephone communication.....		686.0	687.5	688.3	693.2	699.1	698.5	692.5	687.9	687.0	685.2	684.3	684.2	694.8	706.0
Telegraph communication.....		35.7	35.7	35.8	36.2	36.6	36.8	36.8	36.6	36.5	36.5	36.4	36.4	37.1	38.3
Radio and television broadcasting.....		92.0	91.8	92.8	92.3	91.5	91.9	91.2	90.5	91.2	90.3	90.3	90.7	92.4	92.4
Electric, gas, and sanitary services.....		602.5	603.4	604.9	612.1	619.2	618.3	612.7	602.3	600.9	600.1	600.2	601.6	610.7	613.0
Electric companies and systems.....		247.6	247.7	248.3	251.4	253.8	253.9	251.6	247.6	247.6	247.4	247.7	248.0	252.2	254.3
Gas companies and systems.....		151.3	151.7	151.8	153.4	155.3	154.9	153.7	151.1	150.7	150.7	150.9	151.2	153.1	153.4
Combined utility systems.....		173.7	174.0	174.5	176.8	178.7	178.1	176.5	173.2	172.6	172.3	172.2	172.9	175.3	175.0
Water, steam, and sanitary systems.....		29.9	30.0	30.3	30.5	31.4	31.4	30.9	30.4	30.0	29.7	29.4	29.5	30.1	30.3

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

Industry	1962														Annual average	
	1963		1962												1961	1960
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960	
Wholesale and retail trade	11,532	12,426	11,842	11,682	11,627	11,558	11,540	11,582	11,476	11,470	11,223	11,188	11,270	11,368	11,412	
Wholesale trade.....	3,086	3,126	3,113	3,113	3,105	3,107	3,091	3,074	3,034	3,028	3,022	3,021	3,021	3,008	3,009	
Motor vehicles and automotive equipment.....		226.5	226.0	226.4	226.9	226.8	226.3	224.2	221.1	220.4	219.4	219.3	218.5	215.6	213.6	
Drugs, chemicals, and allied products.....		199.1	199.2	198.4	196.8	196.9	195.4	194.4	193.2	192.5	191.6	190.6	189.4	188.3	183.8	
Dry goods and apparel.....		135.1	135.1	135.7	135.1	135.9	135.8	134.5	132.5	132.1	131.9	131.0	130.4	130.7	130.8	
Groceries and related products.....		501.4	502.7	497.9	492.8	491.8	498.9	499.7	490.1	491.2	491.3	488.9	492.0	491.5	494.0	
Electrical goods.....		216.3	215.8	215.2	214.1	215.3	215.2	213.5	210.2	210.1	209.4	209.3	206.5	204.8	208.1	
Hardware, plumbing and heating goods.....		143.6	144.1	144.8	145.0	145.4	145.3	144.9	143.1	141.7	141.3	141.1	141.3	142.6	145.1	
Machinery, equipment, and supplies.....		513.0	512.2	511.9	514.5	513.5	512.1	508.5	502.6	500.0	497.4	493.6	490.5	483.6	479.1	
Retail trade.....	8,446	9,300	8,729	8,569	8,522	8,451	8,449	8,508	8,442	8,442	8,201	8,167	8,249	8,361	8,403	
General merchandise stores.....		2,075.4	1,700.9	1,590.5	1,556.8	1,512.8	1,501.5	1,526.8	1,523.9	1,534.6	1,460.6	1,443.2	1,507.7	1,554.8	1,563.1	
Department stores.....		1,260.6	1,014.2	936.2	911.0	885.7	878.1	898.5	897.4	901.9	858.4	850.8	894.8	910.6	914.4	
Limited price variety stores.....		432.8	347.8	329.7	326.9	311.5	308.4	312.3	317.9	324.5	304.4	295.3	308.5	330.0	335.4	
Food stores.....		1,419.7	1,396.7	1,383.6	1,368.7	1,365.0	1,376.6	1,374.9	1,370.1	1,373.8	1,363.6	1,366.6	1,361.0	1,358.3	1,356.1	
Grocery, meat, and vegetable stores.....		1,239.3	1,226.2	1,216.5	1,204.0	1,202.2	1,211.3	1,208.8	1,201.4	1,198.7	1,197.2	1,195.0	1,194.0	1,186.9	1,181.6	
Apparel and accessories stores.....		802.8	695.7	674.6	663.3	630.5	630.2	663.0	668.5	707.2	672.6	617.7	638.7	645.7	637.2	
Men's and boys' apparel stores.....		147.4	117.1	111.0	108.9	106.6	107.9	113.2	108.9	111.3	103.1	105.0	111.3	107.7	104.3	
Women's ready-to-wear stores.....		304.5	268.4	259.9	252.8	241.1	242.0	251.7	256.9	264.3	240.9	236.1	241.7	246.2	243.1	
Family clothing stores.....		130.6	106.7	101.6	100.8	95.7	95.8	100.3	99.6	102.2	95.0	95.1	99.7	96.8	94.7	
Shoe stores.....		131.8	119.4	119.7	121.7	114.7	114.7	120.5	123.5	140.3	110.4	108.0	110.6	116.0	119.0	
Furniture and appliance stores.....		431.8	419.6	414.5	413.0	409.1	407.8	410.0	407.6	409.8	408.5	410.3	412.1	405.4	409.2	
Eating and drinking places.....		1,647.2	1,658.7	1,670.5	1,686.0	1,700.9	1,699.2	1,706.3	1,663.7	1,634.2	1,582.3	1,571.8	1,569.2	1,617.6	1,626.5	
Other retail trade.....		2,923.1	2,857.6	2,834.8	2,834.3	2,832.7	2,833.5	2,826.7	2,808.5	2,782.3	2,760.0	2,757.9	2,760.2	2,776.9	2,811.1	
Motor vehicle dealers.....		696.2	692.3	684.8	683.4	683.9	681.8	675.3	669.5	667.3	663.8	663.8	659.9	656.5	674.6	
Other vehicle and accessory dealers.....		142.1	138.3	133.9	134.7	135.6	136.3	136.4	132.9	130.7	126.2	125.2	129.2	138.3	142.8	
Drug stores.....		405.4	386.9	384.7	382.2	382.5	378.0	379.5	377.1	375.4	375.4	374.0	375.6	372.9	369.5	
Finance, insurance, and real estate	2,803	2,807	2,808	2,807	2,813	2,841	2,839	2,808	2,780	2,770	2,754	2,749	2,747	2,748	2,684	
Banking.....		723.2	720.9	720.0	719.9	729.0	725.1	715.4	705.1	704.2	702.8	701.5	698.3	695.1	674.7	
Credit agencies other than banks.....		269.8	268.6	267.3	268.3	271.2	271.5	268.2	264.9	265.0	264.2	264.2	264.6	262.5	256.2	
Savings and loan associations.....		87.4	87.0	86.6	86.1	86.6	87.4	85.1	83.6	83.9	82.9	82.8	82.7	78.6	72.4	
Personal credit institutions.....		142.0	141.2	140.5	142.1	143.5	143.0	141.5	141.2	141.6	141.8	141.4	142.4	145.2	146.0	
Security dealers and exchanges.....		120.1	121.1	122.8	125.5	130.8	132.4	131.9	131.8	133.0	133.1	132.5	131.7	126.8	114.2	
Insurance carriers.....		871.1	869.9	868.5	869.4	875.0	871.7	864.0	859.0	860.4	860.0	859.2	856.0	856.7	839.0	
Life insurance.....		474.2	473.1	472.3	472.5	474.0	472.3	469.6	468.7	469.9	469.9	469.4	468.4	468.4	459.0	
Accident and health insurance.....		52.7	52.8	52.7	52.8	53.3	53.2	52.8	52.0	52.2	52.0	51.9	51.4	51.6	50.9	
Fire, marine, and casualty insurance.....		301.6	301.6	300.9	301.7	304.2	302.8	298.9	296.4	296.4	296.8	296.0	294.9	295.1	287.3	
Insurance agents, brokers, and services.....		202.3	202.3	201.0	201.2	204.0	203.0	201.0	198.8	198.9	198.8	198.7	198.1	199.8	196.2	
Real estate.....		544.9	549.6	551.9	553.0	554.9	559.4	552.6	545.2	533.3	520.0	518.2	523.3	531.4	527.3	
Operative builders.....		29.1	30.8	32.2	31.8	32.4	32.7	30.3	31.0	29.9	27.0	25.5	29.2	32.5	36.1	
Other finance, insurance, and real estate.....		75.2	75.1	75.7	75.8	76.0	75.7	75.4	75.4	75.0	74.9	74.8	74.6	75.9	76.7	
Services and miscellaneous	7,751	7,803	7,830	7,870	7,856	7,867	7,884	7,881	7,769	7,690	7,573	7,545	7,510	7,516	7,361	
Hotels and lodging places.....		605.8	605.9	616.5	654.1	745.6	742.1	672.6	604.6	584.2	565.7	563.0	552.9	587.7	567.7	
Hotels, tourist courts, and motels.....		563.2	562.1	570.1	597.9	640.3	638.9	612.7	554.4	539.0	524.0	521.9	511.8	531.3	511.1	
Personal services:																
Laundries, cleaning and dyeing plants.....		494.1	498.2	503.4	503.9	504.6	514.1	518.8	513.3	507.1	496.8	496.2	500.6	510.5	521.0	
Miscellaneous business services:																
Advertising.....		112.5	112.4	111.6	111.4	112.1	111.6	110.4	112.1	112.3	112.1	110.0	109.2	110.4	109.9	
Motion pictures.....		164.3	167.7	174.5	180.7	183.2	182.0	179.8	178.1	178.6	167.3	167.0	168.4	184.4	189.3	
Motion picture filming and distributing.....		36.6	36.3	36.2	37.2	36.9	36.1	35.2	35.0	37.9	39.6	39.9	41.0	43.5	43.5	
Motion picture theaters and services.....		127.7	131.4	138.3	143.5	146.3	145.9	144.6	143.1	140.7	127.7	127.1	127.4	140.9	145.8	
Medical services:																
Hospitals.....		1,201.4	1,202.4	1,196.9	1,192.8	1,192.3	1,194.5	1,186.5	1,174.2	1,173.3	1,170.2	1,166.8	1,158.9	1,141.7	1,105.0	
Government	9,439	9,615	9,470	9,406	9,241	8,860	8,870	9,171	9,172	9,143	9,133	9,102	9,032	8,828	8,520	
Federal Government ³	2,336	2,492	2,348	2,333	2,336	2,365	2,368	2,354	2,313	2,306	2,294	2,289	2,281	2,279	2,270	
Executive.....		2,462.4	2,318.8	2,303.8	2,306.4	2,335.5	2,338.5	2,324.2	2,284.0	2,276.9	2,264.8	2,259.8	2,252.2	2,250.9	2,242.6	
Department of Defense.....		961.9	965.1	964.0	962.6	972.9	973.4	970.2	961.3	958.6	956.7	956.9	955.7	943.7	940.6	
Post Office Department.....		742.7	587.8	583.9	587.1	589.2	589.9	587.0	582.2	580.2	578.7	578.2	579.0	596.7	586.7	
Other agencies.....		757.8	765.9	755.9	756.7	773.4	775.2	767.0	740.5	738.1	729.4	724.7	717.5	710.5	715.3	
Legislative.....		23.7	23.9	24.0	23.9	24.1	23.9	23.9	23.4	23.3	23.5	23.4	23.4	23.2	22.6	
Judicial.....		5.6	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.1	4.9	
State and local government ⁴	7,103	7,123	7,122	7,073	6,905	6,495	6,502	6,817	6,859	6,837	6,839	6,813	6,751	6,548	6,250	
State government.....		1,784.8	1,786.2	1,779.9	1,725.2	1,670.7	1,677.6	1,729.9	1,731.8	1,721.5	1,716.5	1,707.1	1,686.4	1,663.6	1,592.7	
Local government.....		5,337.8	5,336.0	5,293.0	5,180.1	4,824.8	4,824.4	5,087.5	5,127.3	5,115.6	5,122.3	5,106.3	5,064.6	4,884.5	4,657.0	
Education.....		3,680.0	3,677.0	3,629.0	3,410.9	2,935.4	2,949.2	3,318.7	3,438.7	3,448.2	3,460.0	3,451.5	3,403.5	3,175.4	2,983.3	
Other State and local government.....		3,442.6	3,445.2	3,443.9	3,494.4	3,556.6	3,552.8	3,498.7	3,420.4	3,388.9	3,378.8	3,361.9	3,347.5	3,373.9	3,266.4	

¹ Beginning with the December 1961 issue, figures differ from those previously published for three reasons. The industry structure has been converted to the 1957 Standard Industrial Classification; the series have been adjusted to March 1959 benchmark levels indicated by data from government social insurance programs; and, beginning with January 1959, the estimates are prepared from a sample stratified by establishment size and, in some cases, region. For comparable back data, see *Employment and Earnings Statistics for the United States, 1909-60*, (BLS Bulletin 1312). Statistics from April 1959 forward are subject to further revision when new benchmarks become available.

In addition, data include Alaska and Hawaii beginning in January 1959. This inclusion increased the nonagricultural total by 212,000 (0.4 percent) for the March 1959 benchmark month, with increases for industry divisions ranging from 0.1 percent in mining to 0.8 percent in government.

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 ending nearest the 15th of the month. Therefore, persons who worked in more than 1 establishment during the reporting period are counted more than once. Proprietors, self-employed persons

TABLE A-3. Production workers in nonagricultural establishments, by industry¹

(In thousands)

Industry	1963	1962												Annual average	
	Jan. ²	Dec. ³	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Mining	489	501	507	512	517	508	520	517	508	502	504	507	527	567	
Metal mining.....	63.6	64.4	64.7	65.4	68.5	72.7	73.9	73.1	71.7	70.7	70.9	70.2	71.5	76.9	
Iron ores.....	20.0	20.8	21.6	22.1	23.8	24.4	25.1	25.0	23.7	23.0	23.2	23.1	22.8	28.6	
Copper ores.....	22.8	22.8	22.6	22.7	23.5	23.7	24.0	23.8	23.9	23.8	23.9	23.4	23.7	22.6	
Coal mining.....	123.5	125.0	126.6	125.0	124.7	113.7	125.0	127.1	128.6	131.6	135.1	135.9	136.7	161.2	
Bituminous.....	115.9	117.3	118.9	117.6	117.3	105.6	117.4	119.1	120.8	123.6	127.1	127.8	137.7	148.9	
Crude petroleum and natural gas.....	213.2	214.0	215.8	219.8	221.2	221.5	220.1	216.4	214.5	214.9	215.8	218.0	223.1	229.1	
Crude petroleum and natural gas fields.....	102.4	103.0	103.2	105.2	107.2	107.0	107.2	105.0	104.0	104.2	104.1	104.8	108.4	113.8	
Oil and gas field services.....	110.8	111.0	112.6	114.6	114.0	114.5	112.9	111.4	110.5	110.7	111.7	113.2	114.6	115.3	
Quarrying and nonmetallic mining.....	88.4	97.2	99.6	101.3	102.8	100.2	100.8	99.9	92.8	84.9	82.1	82.9	95.4	99.6	
Contract construction	2,131	2,397	2,529	2,570	2,621	2,573	2,431	2,344	2,186	1,927	1,882	1,893	2,344	2,458	
General building contractors.....	667.7	742.0	769.2	784.2	809.4	796.5	753.4	724.6	690.7	605.5	601.6	601.8	740.4	788.3	
Heavy construction.....	403.2	510.0	577.8	596.1	612.2	602.3	552.9	523.6	436.5	350.5	330.7	329.0	492.8	509.0	
Highway and street construction.....	215.6	295.2	346.6	361.8	372.4	361.2	327.8	303.7	237.5	173.0	159.7	157.9	271.2	270.6	
Other heavy construction.....	187.6	214.8	231.2	234.3	239.8	241.1	225.1	219.9	199.0	177.5	171.7	171.1	221.6	238.4	
Special trade contractors.....	1,060.1	1,145.2	1,181.6	1,189.6	1,199.5	1,173.9	1,125.0	1,095.5	1,058.7	971.4	949.6	962.4	1,110.8	1,160.7	
Manufacturing	12,193	12,371	12,518	12,661	12,751	12,544	12,403	12,516	12,372	12,338	12,240	12,187	12,118	12,562	
Durable goods.....	6,868	6,937	6,994	7,027	7,034	6,862	6,925	7,025	6,975	6,931	6,857	6,820	6,764	6,613	7,021
Nondurable goods.....	5,325	5,434	5,524	5,634	5,717	5,682	5,478	5,491	5,397	5,407	5,383	5,367	5,354	5,431	5,541
<i>Durable goods</i>															
Ordnance and accessories.....	100.8	101.5	101.7	100.9	101.3	101.5	98.6	96.7	97.5	96.4	96.4	96.8	94.3	89.4	
Ammunition, except for small arms.....	41.4	41.7	41.5	41.8	42.7	43.0	41.7	40.5	40.6	40.0	40.0	40.3	39.6	37.0	
Sighting and fire control equipment.....	22.1	22.4	22.2	22.2	21.8	21.9	21.8	22.1	22.3	22.3	22.4	22.4	22.5	22.7	
Other ordnance and accessories.....	38.0	37.6	37.2	37.3	37.0	33.7	33.2	34.9	34.6	34.1	34.0	34.1	32.2	29.7	
Lumber and wood products, except furniture.....	516.1	529.6	546.9	558.4	567.2	576.0	568.4	571.4	546.0	527.4	509.3	512.9	506.7	534.8	
Logging camps and logging contractors.....	81.9	89.2	92.3	96.3	99.5	98.3	96.4	84.8	77.0	71.2	77.8	78.2	85.2	87.1	
Sawmills and planing mills.....	239.2	245.7	250.1	253.1	255.6	254.3	256.9	248.3	242.6	235.7	234.5	229.4	243.4	268.5	
Millwork, plywood, and related products.....	121.9	124.7	127.0	128.6	130.4	126.7	127.3	123.9	120.3	115.9	115.0	114.6	111.9	124.1	
Wooden containers.....	34.9	35.3	36.3	35.9	36.9	36.9	37.5	36.5	35.5	35.1	35.0	34.6	36.8	39.1	
Miscellaneous wood products.....	51.7	52.0	52.7	53.3	53.6	52.2	53.3	52.5	52.0	51.4	50.6	49.7	49.9	51.4	
Furniture and fixtures.....	316.4	319.1	322.5	323.7	323.0	322.7	313.3	316.9	314.1	312.7	311.0	309.7	307.7	303.9	
Household furniture.....	233.7	236.1	237.3	235.9	233.8	226.9	229.4	229.3	229.9	228.2	227.2	225.5	221.5	232.3	
Office furniture.....	24.6	24.7	22.6	22.4	24.4	23.2	23.9	23.3	22.8	22.9	22.9	22.8	21.8	22.8	
Partitions, office and store fixtures.....	26.5	27.0	28.9	29.1	28.8	28.3	27.8	27.0	26.5	26.7	26.5	26.3	26.6	29.2	
Other furniture and fixtures.....	34.3	34.7	34.9	35.6	35.7	34.9	35.8	34.5	33.5	33.2	33.1	33.1	34.0	34.5	
Stone, clay, and glass products.....	430.6	447.1	465.1	474.2	478.9	480.9	476.4	476.1	466.6	454.5	434.8	432.4	431.5	455.1	
Flat glass.....	24.9	25.6	25.3	25.0	24.8	24.4	24.5	23.8	24.2	24.3	25.6	25.9	23.7	27.0	
Glass and glassware, pressed or blown.....	85.1	85.8	87.0	87.8	87.5	87.6	88.6	86.5	84.9	84.5	83.8	82.4	84.5	86.9	
Cement, hydraulic.....	30.2	32.5	32.9	33.5	33.9	33.7	33.4	32.1	31.1	28.5	28.2	29.5	32.2	34.9	
Structural clay products.....	58.3	60.4	61.0	62.3	62.8	62.0	61.4	60.8	59.3	56.5	54.8	55.8	60.4	65.9	
Pottery and related products.....	36.8	37.8	38.6	38.0	37.5	37.1	37.2	36.9	37.3	36.5	37.9	37.5	36.9	40.3	
Concrete, gypsum and plaster products.....	111.8	121.3	126.9	129.4	131.4	129.6	129.0	125.4	117.2	104.6	102.5	101.7	118.1	123.5	
Other stone and mineral products.....	87.6	89.0	89.7	90.5	90.8	90.3	90.1	89.4	88.7	87.9	87.6	87.0	87.4	91.8	
Primary metal industries.....	897.7	899.9	894.2	897.5	910.9	906.3	903.4	935.5	964.5	991.3	991.4	983.5	969.3	914.5	
Blast furnace and basic steel products.....	442.0	437.4	440.8	451.9	450.3	451.9	475.4	503.3	530.0	631.6	527.1	516.0	482.0	529.3	
Iron and steel foundries.....	165.0	164.5	165.0	166.1	163.4	163.1	166.6	166.5	167.1	165.9	165.7	161.9	156.0	172.4	
Nonferrous smelting and refining.....	52.8	53.0	53.5	53.8	53.0	51.8	52.9	53.0	53.0	52.9	52.8	52.3	51.7	54.9	
Nonferrous rolling, drawing, and extruding.....	135.3	135.4	135.8	136.2	135.3	135.4	136.9	136.5	136.5	136.2	134.9	136.4	129.0	133.6	
Nonferrous foundries.....	56.9	56.0	55.9	55.9	56.1	53.4	54.7	56.4	55.6	55.8	55.2	55.1	50.4	53.7	
Miscellaneous primary metal industries.....	47.9	47.9	46.5	47.0	48.2	47.8	49.0	48.8	49.1	49.0	47.8	47.6	45.4	48.2	
Fabricated metal products.....	851.4	860.4	864.7	870.7	872.1	850.9	851.6	867.6	860.7	851.2	842.8	836.7	840.0	819.6	
Metal cans.....	48.1	47.5	50.4	54.8	54.9	55.2	55.0	52.9	51.7	50.0	49.2	48.0	51.7	54.1	
Cutlery, handtools, and general hardware.....	111.9	111.8	110.6	108.8	105.1	104.4	109.4	109.4	108.6	108.8	108.4	108.8	101.4	107.3	
Heating equipment and plumbing fixtures.....	57.0	58.1	58.9	58.6	58.5	56.8	56.9	56.3	56.0	55.9	55.7	55.4	55.2	58.7	
Fabricated structural metal products.....	226.6	229.0	234.7	238.4	236.7	237.2	236.2	231.3	226.8	223.1	222.1	223.8	230.3	238.1	
Screw machine products, bolts, etc.....	69.1	69.2	68.9	68.5	68.2	67.4	68.8	69.1	69.3	69.1	68.8	67.7	62.6	67.2	
Metal stampings.....	160.0	159.4	159.3	156.3	143.4	147.5	152.3	154.8	152.6	151.6	150.8	154.2	143.7	160.7	
Coating, engraving, and allied services.....	57.0	58.7	58.4	57.9	56.3	56.0	57.6	56.4	56.4	55.5	54.7	53.8	53.0	53.8	
Miscellaneous fabricated wire products.....	45.5	46.0	46.3	45.3	44.2	43.9	45.3	45.1	44.6	44.0	43.8	44.9	42.2	45.5	
Miscellaneous fabricated metal products.....	85.2	85.0	83.2	83.5	83.6	83.2	86.1	85.4	85.2	84.8	83.2	83.1	79.6	83.6	

See footnotes at end of table.

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TABLE A-3. Production workers in nonagricultural establishments, by industry¹—Continued

Industry	[In thousands]														
	1963		1962										Annual average		
	Jan. ²	Dec. ³	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Machinery.....	1,018.8	1,018.7	1,016.7	1,018.1	1,020.7	1,015.3	1,019.6	1,034.5	1,026.5	1,024.9	1,013.8	997.4	981.6	964.5	1,030.4
Engines and turbines.....	58.1	57.5	57.7	57.5	57.8	56.8	58.2	58.6	58.6	57.4	56.5	56.5	53.3	51.2	56.1
Farm machinery and equipment.....	87.4	83.9	84.5	85.1	83.8	84.9	86.7	87.2	87.3	85.8	82.0	75.2	78.6	78.6	79.6
Construction and related machinery.....	139.4	138.3	137.6	140.8	141.3	140.3	141.7	139.5	138.2	135.8	132.5	130.4	128.2	128.2	144.5
Metalworking machinery and equipment.....	193.7	192.5	191.2	189.8	187.4	191.1	194.2	195.2	195.6	192.4	190.2	187.1	180.1	194.0	
Special industry machinery.....	118.1	117.9	119.0	118.7	119.0	119.2	120.1	118.6	118.1	117.2	117.1	115.5	116.2	122.3	
General industrial machinery.....	147.9	151.0	151.7	151.6	151.6	150.9	152.3	150.0	149.9	148.8	143.7	147.7	143.0	154.9	
Office, computing and accounting machines.....	92.8	93.3	93.4	94.4	94.3	93.1	94.9	95.2	95.7	95.7	95.6	95.4	94.5	95.2	
Service industry machines.....	64.4	64.8	65.3	66.0	65.3	68.7	70.1	69.1	68.3	67.2	66.5	64.2	63.8	69.7	
Miscellaneous machinery.....	116.9	117.5	117.7	116.8	114.8	114.6	116.3	113.1	113.2	113.5	113.3	112.8	109.0	114.2	
Electrical equipment and supplies.....	1,046.6	1,053.6	1,060.1	1,062.0	1,059.2	1,041.1	1,031.4	1,038.9	1,024.7	1,018.8	1,013.5	1,012.7	1,007.7	963.3	986.9
Electric distribution equipment.....	108.7	109.1	109.1	109.0	108.6	107.0	107.6	104.8	105.6	105.3	105.9	105.7	105.3	105.3	108.3
Electrical industrial apparatus.....	120.4	120.8	120.3	120.7	119.5	120.6	122.0	119.7	119.5	119.3	119.0	118.9	114.8	121.5	
Household appliances.....	118.5	118.8	119.5	118.8	115.4	114.3	117.7	118.6	118.2	117.1	115.8	115.8	114.8	114.8	
Electric lighting and wiring equipment.....	108.5	108.9	109.5	109.2	106.1	104.2	105.8	105.6	104.9	104.1	103.1	102.5	99.9	103.6	
Radio and TV receiving sets.....	96.3	100.2	102.7	102.3	99.7	97.6	95.4	90.8	86.2	86.0	87.7	90.1	82.6	82.2	
Communication equipment.....	228.7	227.7	226.7	225.3	222.4	217.8	219.5	219.0	218.5	216.2	216.2	212.2	200.4	201.4	
Electronic components and accessories.....	181.3	183.4	183.8	184.5	183.4	183.1	183.3	179.6	178.2	178.0	177.7	176.3	165.5	164.4	
Miscellaneous electrical equipment and supplies.....	91.2	91.2	90.4	89.4	86.0	86.8	87.6	86.6	87.7	85.5	87.3	86.2	79.9	84.9	
Transportation equipment.....	1,167.3	1,168.9	1,159.6	1,149.8	1,133.3	1,007.7	1,120.6	1,136.6	1,132.8	1,117.7	1,117.9	1,118.6	1,110.8	1,035.0	1,132.7
Motor vehicles and equipment.....	596.7	589.3	581.0	566.3	441.2	561.3	580.0	573.1	557.0	551.1	552.8	554.6	491.7	566.5	
Aircraft and parts.....	398.6	396.4	391.4	389.3	388.0	384.2	378.4	380.4	381.9	392.9	395.3	394.8	378.7	392.5	
Ship and boat building and repairing.....	121.7	120.7	122.2	121.0	120.7	118.6	119.6	121.0	122.1	120.3	118.8	115.9	117.8	116.6	
Railroad equipment.....	30.7	30.8	31.9	33.3	33.8	32.5	33.9	33.0	32.3	31.1	30.3	26.2	24.8	32.0	
Other transportation equipment.....	21.2	22.4	23.3	24.4	24.0	24.0	24.7	25.3	24.4	22.5	21.1	19.3	21.9	25.1	
Instrument and related products.....	229.2	229.2	230.5	230.5	229.9	229.4	225.8	228.5	226.8	226.3	226.7	224.9	224.8	221.6	232.0
Engineering and scientific instruments.....	39.1	39.4	39.3	39.1	38.6	37.7	38.4	38.2	38.2	38.5	37.0	38.5	40.4	42.8	
Mechanical measuring and control devices.....	62.8	62.7	62.4	62.3	62.2	61.2	61.3	61.9	62.1	62.2	62.0	61.7	59.8	63.3	
Optical and ophthalmic goods.....	30.1	30.2	30.5	30.2	30.4	30.3	31.1	30.8	31.0	30.8	30.6	29.9	29.1	30.7	
Surgical, medical, and dental equipment.....	34.3	34.5	34.4	34.5	34.3	33.9	33.8	33.2	33.0	33.0	33.0	33.0	33.0	33.1	
Photographic equipment and supplies.....	40.1	40.5	40.5	40.4	40.7	40.5	40.4	39.5	39.3	39.1	39.4	39.3	39.4	41.1	
Watches and clocks.....	22.8	23.4	23.4	23.4	23.2	22.2	23.5	23.2	22.7	23.1	22.9	22.4	20.1	21.1	
Miscellaneous manufacturing industries.....	292.7	308.5	332.4	341.6	337.8	330.6	316.1	322.4	314.7	308.2	299.2	294.6	287.5	306.2	316.0
Jewelry, silverware, and plated ware.....	32.6	33.4	33.3	33.0	32.3	30.8	32.0	31.9	31.9	32.2	32.3	32.9	32.7	33.9	
Toys, amusement, and sporting goods.....	80.8	99.0	105.8	102.2	99.6	95.3	94.0	90.1	86.0	76.6	73.0	68.0	85.3	86.4	
Pens, pencils, office and art materials.....	25.9	26.3	26.6	26.2	25.8	24.3	24.9	24.3	24.2	23.8	24.0	23.7	23.0	23.0	
Costume jewelry, buttons and notions.....	45.9	47.8	47.5	47.4	46.7	43.8	45.6	45.6	44.5	45.1	44.5	43.8	44.5	47.3	
Other manufacturing industries.....	123.3	125.9	128.4	129.0	126.2	121.9	124.6	122.8	121.6	121.5	120.8	119.1	120.7	125.4	
<i>Nondurable goods</i>															
Food and kindred products.....	1,094.0	1,147.6	1,187.6	1,265.6	1,329.7	1,303.5	1,223.8	1,175.8	1,121.0	1,110.9	1,086.0	1,088.3	1,108.6	1,190.8	1,211.3
Meat products.....	251.3	254.7	265.0	251.0	253.1	251.5	253.0	246.4	243.5	239.1	241.8	248.2	254.3	257.9	
Dairy products.....	148.6	149.9	152.1	156.9	162.4	164.8	163.2	158.6	155.8	152.6	151.6	152.4	163.0	169.7	
Canned and preserved food, except meats.....	165.8	190.4	260.6	338.1	318.2	246.4	197.8	166.5	166.0	149.7	151.0	154.8	206.2	206.1	
Grain mill products.....	86.7	86.9	90.2	91.8	92.1	92.0	90.1	88.6	85.2	85.9	86.3	86.8	89.6	89.8	
Bakery products.....	176.5	178.7	179.2	177.8	177.2	177.3	176.4	172.6	171.8	171.3	171.1	170.8	174.7	176.6	
Sugar.....	38.1	39.8	38.9	26.1	24.1	23.4	22.8	21.5	22.4	20.0	22.0	28.2	28.4	30.3	
Confectionery and related products.....	67.9	71.0	69.4	67.3	61.4	63.7	57.2	57.8	60.1	61.2	61.8	62.5	62.8	63.5	
Beverages.....	114.5	115.7	118.9	122.4	119.3	121.4	120.9	114.7	110.5	110.6	107.0	109.0	116.8	118.3	
Miscellaneous food and kindred products.....	98.2	100.5	101.3	98.3	95.7	93.3	94.4	94.3	95.6	95.6	95.7	95.9	96.2	99.0	
Tobacco manufactures.....	76.0	80.1	84.1	98.7	105.1	90.4	65.2	64.7	64.5	65.9	69.3	75.1	78.8	79.4	83.3
Cigarettes.....	31.1	30.9	30.8	31.7	31.8	31.7	31.5	31.0	30.8	30.8	30.8	31.1	31.5	32.2	
Cigars.....	21.3	21.3	20.9	21.1	20.9	20.3	21.3	21.5	21.7	21.9	22.0	21.7	23.1	26.0	
Textile mill products.....	768.8	780.0	787.7	792.5	795.7	798.2	786.0	803.4	797.4	796.2	793.9	792.9	792.5	793.2	826.7
Cotton broad woven fabrics.....	224.7	225.4	225.5	226.5	227.8	228.0	229.7	228.8	228.8	230.9	231.2	232.2	234.6	234.1	
Silk and synthetic broad woven fabrics.....	64.0	63.6	63.3	63.9	63.9	62.1	63.7	63.1	62.8	63.2	63.4	63.8	63.1	66.9	
Weaving and finishing broad woolsens.....	43.5	43.8	44.9	45.7	46.3	46.3	47.2	46.5	46.3	45.7	45.7	44.5	46.2	49.5	
Narrow fabrics and smallwares.....	24.0	24.2	23.9	24.1	23.9	23.3	24.1	24.2	24.3	24.2	24.2	24.0	23.2	24.1	
Knitting.....	182.8	189.4	193.2	194.2	196.3	192.5	196.7	193.6	191.6	188.7	186.3	185.1	190.7	194.3	
Finishing textiles, except wool and knit.....	61.1	61.2	61.3	61.1	61.0	60.5	62.1	61.6	62.0	61.8	61.8	61.8	60.9	64.1	
Floor covering.....	29.3	29.2	28.8	28.4	27.4	27.4	27.8	27.9	28.2	28.4	28.6	28.2	27.8	30.4	
Yarn and thread.....	94.6	94.8	95.4	95.5	96.2	93.9	96.2	95.9	95.7	95.3	95.4	94.9	93.0	95.9	
Miscellaneous textile goods.....	56.0	56.1	56.2	56.3	55.4	54.0	55.9	55.8	55.4	55.4	55.3	55.6	53.7	57.5	

See footnotes at end of table.

TABLE A-3. Production workers in nonagricultural establishments, by industry¹—Continued

[In thousands]

Industry	1963		1962										Annual average		
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Manufacturing—Continued															
<i>Nondurable goods—Continued</i>															
Apparel and related products.....	1,080.4	1,098.2	1,113.1	1,118.5	1,125.3	1,128.7	1,071.2	1,092.6	1,079.9	1,096.1	1,105.5	1,093.1	1,062.4	1,066.8	1,094.2
Men's and boys' suits and coats.....	106.5	105.8	106.4	107.6	107.5	103.1	106.7	103.6	103.7	104.6	105.2	104.4	104.4	104.3	108.9
Men's and boys' furnishings.....	300.4	303.7	304.4	305.7	305.8	294.2	300.6	294.7	290.4	288.0	285.2	278.5	273.7	279.6	
Women's, misses' and juniors' outerwear.....	305.4	307.5	305.7	313.5	320.9	300.2	306.7	305.0	319.9	327.0	320.8	307.8	313.7	325.8	
Women's and children's undergarments.....	109.7	111.5	112.0	110.2	109.2	103.0	108.2	105.2	105.5	107.6	106.1	105.1	104.8	106.2	
Hats, caps, and millinery.....	29.5	28.8	31.8	32.1	32.7	28.2	27.8	28.0	34.7	37.2	36.4	34.1	31.1	32.4	
Girls' and children's outerwear.....	68.0	68.7	69.1	69.1	70.5	69.9	70.5	67.1	66.1	70.2	69.4	67.0	66.4	67.5	
Fur goods and miscellaneous apparel.....	59.4	63.2	64.1	63.0	62.3	58.8	59.4	57.5	58.5	57.7	57.9	54.8	60.2	60.2	
Miscellaneous fabricated textile products.....	119.3	123.9	125.0	124.1	119.8	113.8	114.7	118.8	116.3	113.2	112.1	110.7	112.6	113.6	
Paper and allied products.....	473.3	479.6	480.8	483.9	485.3	484.0	476.3	482.7	475.4	475.1	470.9	467.8	469.8	469.5	474.0
Paper and pulp.....	182.6	183.1	183.9	184.9	186.6	183.0	183.9	181.2	181.1	181.2	180.5	180.8	181.4	181.9	
Paperboard.....	55.0	54.8	54.9	54.4	53.4	52.8	55.2	54.6	54.6	53.0	52.5	52.7	54.0	55.4	
Converted paper and paperboard products.....	97.5	97.5	98.6	98.6	98.3	97.5	98.7	97.3	97.3	95.7	95.5	96.4	94.9	95.7	
Paperboard containers and boxes.....	144.5	145.4	146.5	147.4	145.7	143.0	144.9	142.3	142.1	141.0	139.3	139.9	139.1	140.1	
Printing, publishing, and allied industries.....	581.2	590.4	604.3	605.6	602.6	595.9	592.1	596.8	594.6	596.1	596.1	593.2	592.0	595.7	591.5
Newspaper publishing and printing.....	167.2	179.9	178.9	177.9	177.9	177.4	175.0	177.1	176.4	177.0	176.7	175.6	174.6	175.5	172.4
Periodical publishing and printing.....	28.1	28.2	28.2	27.8	26.7	26.4	26.4	27.4	27.6	28.7	28.9	29.0	29.7	29.8	
Books.....	45.6	46.2	46.7	46.7	46.7	46.0	46.4	46.1	45.6	45.6	45.2	45.2	44.4	43.0	
Commercial printing.....	232.6	232.0	232.3	231.4	228.0	228.0	230.8	230.2	230.8	230.5	229.9	229.8	230.3	229.5	
Bookbinding and related industries.....	39.1	39.1	39.3	39.8	40.1	39.0	38.5	38.0	38.0	38.2	37.5	37.5	38.0	38.1	
Other publishing and printing industries.....	77.8	78.9	80.2	78.0	77.7	77.3	77.9	77.0	77.1	76.7	76.1	75.9	77.9	78.8	
Chemicals and allied products.....	517.1	515.7	518.6	520.3	522.7	522.9	521.0	520.4	524.6	527.1	517.8	512.5	509.4	506.1	510.8
Industrial chemicals.....	164.4	164.9	164.6	165.3	166.9	167.6	167.3	165.8	166.6	165.1	164.9	165.9	164.7	169.0	
Plastics and synthetics, except glass.....	110.4	111.0	110.8	111.9	110.8	110.7	107.0	108.9	109.2	108.1	107.9	107.2	102.6	103.5	
Drugs.....	60.2	60.1	59.4	59.2	60.0	59.6	59.6	58.7	58.9	58.8	59.0	58.6	58.2	58.8	
Soap, cleaners, and toilet goods.....	61.0	62.2	62.8	62.9	62.2	60.0	60.9	59.4	59.6	59.5	57.2	56.7	58.4	56.1	
Paints, varnishes, and allied products.....	34.7	35.2	35.8	36.6	37.3	37.6	37.3	36.3	35.5	35.1	34.9	34.7	35.5	36.7	
Agricultural chemicals.....	28.1	27.5	28.9	28.4	26.5	26.4	29.0	38.4	39.8	34.2	31.4	29.3	30.9	31.0	
Other chemical products.....	56.9	57.7	58.0	58.4	59.2	59.1	59.3	57.1	57.5	57.0	57.2	57.0	55.8	55.6	
Petroleum refining and related industries.....	117.5	118.6	120.4	121.3	122.5	128.4	129.7	129.9	128.7	128.4	126.9	127.4	127.2	130.6	137.7
Petroleum refining.....	95.2	95.8	95.9	96.8	102.6	104.2	104.5	104.1	105.1	104.7	105.0	105.0	107.1	113.1	
Other petroleum and coal products.....	23.4	24.6	25.4	25.7	25.8	25.5	25.4	24.6	23.3	22.2	22.4	22.2	23.5	24.6	
Rubber and miscellaneous plastic products.....	305.4	306.7	308.9	310.9	308.5	303.4	296.1	303.5	297.6	293.5	294.9	294.9	294.1	280.2	288.7
Tires and inner tubes.....	77.1	76.5	77.0	76.5	77.0	75.8	75.0	76.1	74.8	74.2	74.8	75.1	75.2	73.0	78.2
Other rubber products.....	129.9	130.1	130.7	129.9	127.5	122.9	127.7	125.1	123.7	123.7	124.2	124.4	117.0	120.8	
Miscellaneous plastic products.....	99.7	102.3	103.7	101.6	100.1	98.2	99.7	97.7	95.6	96.4	95.6	94.5	90.2	89.7	
Leather and leather products.....	311.7	317.0	318.8	316.6	319.1	326.6	316.4	321.3	313.3	317.7	321.8	322.0	319.3	318.8	322.9
Leather tanning and finishing.....	29.3	29.1	29.0	28.8	28.8	27.7	28.7	28.1	28.1	28.5	29.1	29.4	28.9	29.9	
Footwear, except rubber.....	212.6	210.3	208.1	211.6	218.1	213.8	216.4	211.3	213.4	216.3	216.7	216.6	213.8	216.4	
Other leather products.....	75.1	79.4	79.5	78.7	79.7	74.9	76.2	73.9	76.2	77.0	76.2	73.3	76.2	76.5	
Transportation and public utilities:															
Local and interurban passenger transit:															
Local and suburban transportation.....	83.1	83.5	83.9	84.2	83.9	84.1	85.0	85.0	83.9	78.7	84.1	85.3	86.7	89.2	
Intercity and rural buslines.....	44.4	44.4	44.9	46.2	46.6	46.9	46.4	45.5	44.4	43.5	43.3	44.7	45.0	44.6	
Motor freight transportation and storage.....	844.4	857.8	867.1	862.7	848.7	840.8	840.5	814.8	809.5	801.6	795.2	790.3	800.0	801.8	
Pipeline transportation.....	17.5	17.7	17.9	18.2	18.5	18.6	18.5	18.2	18.2	18.1	18.1	18.1	18.8	19.3	
Communication:															
Telephone communication.....	557.2	558.2	559.1	563.5	569.3	568.7	563.3	560.2	559.5	557.8	557.3	557.4	568.7	581.9	
Telegraph communication.....	26.1	26.0	26.0	26.4	26.7	26.9	26.7	26.6	26.5	26.5	26.4	26.6	26.9	27.9	
Radio and television broadcasting.....	76.3	76.1	77.3	76.8	76.6	76.1	76.4	75.4	76.1	75.6	76.0	76.7	78.3	77.9	
Electric, gas, and sanitary services.....	529.1	530.1	531.7	538.7	545.8	544.8	539.3	529.3	527.4	526.8	527.4	528.6	538.7	543.6	
Electric companies and systems.....	212.3	212.6	213.2	216.1	218.5	218.0	215.7	211.8	211.6	211.6	212.3	212.4	216.8	220.2	
Gas companies and systems.....	134.0	134.5	134.5	136.0	137.9	137.9	136.6	134.1	133.6	133.5	133.8	134.0	136.4	137.3	
Combined utility systems.....	156.7	156.8	157.5	159.9	161.9	161.4	160.0	156.9	156.2	156.0	155.9	156.7	159.4	159.4	
Water, steam, and sanitary systems.....	26.1	26.2	26.5	26.7	27.5	27.5	27.0	26.5	26.0	25.7	25.4	25.5	26.1	26.7	

See footnotes at end of table.

TABLE A-3. Production workers in nonagricultural establishments, by industry ¹—Continued

[In thousands]

Industry	1963	1962										Annual average			
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Wholesale and retail trade ⁴		9,690	9,100	8,939	8,868	8,791	8,775	8,817	8,757	8,785	8,591	8,575	8,665	8,744	8,810
Wholesale trade		2,685	2,676	2,677	2,668	2,671	2,657	2,642	2,603	2,598	2,593	2,592	2,598	2,597	2,610
Motor vehicles and automotive equipment		191.4	190.7	191.4	191.6	191.5	191.5	189.6	186.6	186.0	184.9	184.9	184.1	182.0	181.5
Drugs, chemicals, and allied products		166.2	166.2	165.4	164.5	165.0	163.7	162.8	161.8	161.2	160.2	159.5	158.6	158.7	155.6
Dry goods and apparel		111.9	112.3	113.0	112.5	113.0	113.0	112.1	110.6	109.5	110.5	109.8	109.4	111.1	112.0
Groceries and related products		444.2	445.5	440.5	435.8	434.8	442.1	442.4	433.0	434.4	434.7	433.3	436.2	435.7	439.1
Electrical goods		189.2	188.8	188.1	187.4	188.9	188.7	187.2	183.9	184.1	183.3	181.9	180.7	179.5	183.6
Hardware, plumbing and heating goods		124.4	124.9	125.3	125.7	126.2	125.9	125.6	123.4	122.6	122.2	122.0	122.3	124.0	127.7
Machinery, equipment, and supplies		436.8	437.2	437.2	438.3	437.4	436.6	434.1	428.6	426.8	423.6	420.4	418.3	414.1	412.0
Retail trade ⁴		7,005	6,424	6,262	6,200	6,120	6,118	6,175	6,154	6,186	5,998	5,983	6,067	6,147	6,201
General merchandise stores		1,941.3	1,567.6	1,462.8	1,430.2	1,388.2	1,377.1	1,402.4	1,399.9	1,411.0	1,337.6	1,321.5	1,386.7	1,433.5	1,447.9
Department stores		1,179.9	935.2	859.3	834.7	810.2	802.5	823.0	822.4	827.2	784.4	777.7	820.7	837.6	843.6
Limited price variety stores		408.6	322.5	307.7	304.9	290.4	287.3	291.9	297.5	303.9	284.0	275.1	289.4	309.3	316.8
Food stores		1,325.3	1,301.1	1,290.4	1,275.2	1,272.6	1,283.9	1,283.1	1,279.5	1,284.5	1,274.7	1,277.9	1,273.3	1,273.4	1,273.1
Grocery, meat, and vegetable stores		1,153.5	1,139.9	1,131.8	1,119.1	1,118.5	1,127.6	1,126.0	1,119.7	1,118.6	1,116.6	1,114.4	1,115.0	1,109.7	1,106.5
Apparel and accessories stores		739.3	632.7	611.9	601.0	569.5	569.5	601.9	607.3	645.6	565.0	557.8	578.3	586.9	582.3
Men's and boy's apparel stores		136.3	106.3	100.5	98.6	96.2	98.0	103.1	98.9	101.2	93.0	95.3	101.4	97.9	95.6
Women's ready-to-wear stores		281.1	245.2	236.6	229.9	218.4	219.4	229.1	234.2	241.4	218.4	213.9	219.6	225.0	223.3
Family clothing stores		123.2	99.2	94.2	93.1	88.5	88.2	92.5	92.0	94.3	87.3	88.7	92.3	89.8	88.1
Shoe stores		118.4	105.9	106.4	108.3	101.5	101.6	107.5	110.6	127.4	97.7	95.2	97.7	102.9	106.3
Furniture and appliance stores		387.0	373.9	368.9	367.8	364.0	363.4	365.4	362.7	365.7	363.5	365.7	368.4	364.2	368.9
Other retail trade ⁴		2,611.6	2,548.4	2,527.7	2,525.7	2,526.1	2,524.2	2,522.2	2,504.9	2,479.6	2,456.9	2,460.1	2,459.9	2,489.7	2,528.3
Motor vehicle dealers		607.0	603.6	600.0	596.2	596.8	594.6	589.0	583.6	581.7	579.9	579.8	576.4	576.1	596.2
Other vehicle and accessory dealers		123.2	118.8	114.1	114.3	115.4	116.2	116.3	112.9	110.6	106.0	104.9	107.6	117.7	123.1
Drug stores		377.6	359.8	357.5	355.5	355.1	351.1	353.1	351.0	348.9	349.1	348.8	349.9	348.4	347.5
Finance, insurance, and real estate:															
Banking		613.1	611.5	610.8	610.7	619.9	616.8	607.5	598.2	598.3	596.5	595.4	593.0	592.0	575.9
Security dealers and exchanges		110.3	111.5	113.3	116.1	121.4	123.1	122.7	122.7	123.8	124.0	123.5	122.6	119.0	107.0
Insurance carriers		783.3	782.8	781.6	783.8	789.7	785.3	779.6	774.9	776.7	777.4	776.8	774.2	777.0	763.9
Life insurance		429.4	428.5	428.2	429.5	431.3	429.2	427.0	426.0	427.8	428.3	428.2	427.4	428.8	420.7
Accident and health insurance		46.9	47.2	47.2	47.3	47.8	47.8	47.5	46.9	47.0	46.8	46.6	46.1	46.4	46.0
Fire, marine, and casualty insurance		270.1	270.1	269.2	270.2	272.7	271.4	267.8	265.4	265.4	265.8	265.2	264.3	265.2	260.3
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels		530.2	529.7	538.3	565.4	606.3	605.0	579.9	521.9	507.4	493.2	491.9	482.0	503.8	485.0
Personal services:															
Laundries, cleaning and dyeing plants		361.1	364.6	368.0	369.4	369.9	378.1	380.3	376.1	369.8	361.1	360.7	364.6	377.9	389.2
Motion pictures:															
Motion picture filming and distributing		24.4	23.9	24.1	24.1	24.2	23.9	23.6	23.4	24.6	25.5	25.5	26.4	28.1	29.0

¹ For comparability of data with those published in issues prior to December 1961 and coverage of these series, see footnote 1, table A-2.

For mining, manufacturing, and laundries, cleaning and dyeing plants, data refer to production and related workers; for contract construction, to construction workers; and for all other industries, to nonsupervisory workers.

² Production and related workers include working foremen and all nonsupervisory workers (including leadman and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and watchmen services, product development, auxiliary production for plant's own use (e.g., power plant), and recordkeeping and other services closely associated with the above production operations.

Construction workers include working foremen, journeymen, mechanic apprentices, laborers, etc., engaged in new work, alterations, demolition, repair and maintenance, etc., at the site of construction or working in shop or yards at jobs (such as precutting and preassembling) ordinarily performed by members of the construction trades.

Nonsupervisory workers include employees (not above the working supervisory level) such as office and clerical workers, repairmen, salespersons, operators, drivers, attendants, service employees, linemen, laborers, janitors, watchmen, and similar occupational levels, and other employees whose services are closely associated with those of the employees listed.

³ Preliminary.

⁴ Data relate to nonsupervisory employees except messengers.

⁵ Excludes eating and drinking places.

The revised series on employment, hours and earnings, and labor turnover in non-agricultural establishments should not be compared with those published in issues prior to December 1961. (See footnote 1, table A-2, and "Technical Note, The 1961 Revision of the BLS Payroll Employment Statistics," *Monthly Labor Review*, January 1962, pp. 59-62.) Moreover, if future benchmark adjustments require further revisions, the figures presented in this issue should not be compared with those in later issues which reflect the adjustments.

Comparable data for earlier periods are published in *Employment and Earnings Statistics for the United States, 1909-60* (BLS Bulletin 1312), which is available at depository libraries or which may be purchased from the Superintendent of Documents for \$3. For an individual industry, earlier data may be obtained upon request to the Bureau.

TABLE A-4. Employees in nonagricultural establishments, by industry division and selected groups, seasonally adjusted¹

Industry division and group	[In thousands]												
	1963	1962											
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Total.....	55,551	55,617	55,597	55,647	55,583	55,536	55,617	55,535	55,403	55,260	54,901	54,773	54,434
Mining.....	623	623	636	638	641	646	648	652	659	656	654	653	653
Contract construction.....	2,648	2,655	2,696	2,716	2,715	2,731	2,738	2,671	2,716	2,734	2,648	2,694	2,594
Manufacturing.....	16,636	16,690	16,695	16,781	16,805	16,795	16,908	16,923	16,891	16,848	16,682	16,572	16,456
Durable goods.....	9,406	9,429	9,413	9,470	9,486	9,461	9,552	9,555	9,544	9,490	9,385	9,312	9,217
Ordinance and accessories.....	222	220	221	222	220	222	217	213	213	211	210	207	207
Lumber and wood products, except furniture.....	604	603	605	602	603	609	607	611	609	611	610	612	598
Furniture and fixtures.....	381	381	380	378	380	385	386	386	387	382	379	375	372
Stone, clay, and glass products.....	562	565	572	579	576	583	581	579	579	571	562	553	559
Primary metal industries.....	1,119	1,121	1,115	1,119	1,134	1,141	1,149	1,163	1,199	1,223	1,217	1,211	1,194
Fabricated metal products.....	1,107	1,113	1,110	1,117	1,129	1,122	1,132	1,131	1,135	1,124	1,109	1,097	1,092
Machinery.....	1,464	1,469	1,481	1,482	1,471	1,480	1,474	1,470	1,460	1,453	1,437	1,421	1,416
Electrical equipment and supplies.....	1,538	1,536	1,527	1,546	1,528	1,541	1,555	1,554	1,541	1,528	1,510	1,495	1,477
Transportation equipment.....	1,660	1,671	1,652	1,674	1,694	1,619	1,688	1,687	1,663	1,637	1,611	1,595	1,569
Instruments and related products.....	361	359	358	359	358	362	362	359	359	356	355	352	351
Miscellaneous manufacturing industries.....	388	391	392	392	393	397	401	400	399	394	385	384	382
Nondurable goods.....	7,230	7,261	7,282	7,311	7,319	7,334	7,356	7,368	7,347	7,358	7,297	7,260	7,239
Food and kindred products.....	1,765	1,773	1,763	1,769	1,770	1,763	1,777	1,774	1,776	1,788	1,777	1,776	1,778
Tobacco manufactures.....	87	88	90	93	96	93	89	87	88	88	90	89	89
Textile mill products.....	863	866	868	871	874	879	885	891	890	889	886	884	884
Apparel and related products.....	1,217	1,229	1,231	1,242	1,243	1,246	1,249	1,257	1,248	1,258	1,227	1,206	1,196
Paper and allied products.....	601	603	601	603	603	606	606	606	604	602	599	595	593
Printing, publishing, and allied industries.....	913	916	938	937	938	937	937	937	934	934	931	929	926
Chemicals and allied products.....	852	852	855	855	855	855	858	853	849	847	842	841	836
Petroleum refining and related industries.....	188	189	189	191	191	198	199	199	199	199	199	200	200
Rubber and miscellaneous plastic products.....	391	389	389	390	393	395	396	399	392	384	384	381	377
Leather and leather products.....	353	356	358	360	358	362	360	365	366	369	362	359	360
Transportation and public utilities.....	3,846	3,923	3,918	3,935	3,928	3,932	3,913	3,934	3,936	3,935	3,927	3,914	3,906
Wholesale and retail trade.....	11,649	11,595	11,600	11,594	11,612	11,627	11,652	11,621	11,596	11,546	11,460	11,447	11,384
Wholesale trade.....	3,083	3,071	3,076	3,085	3,090	3,082	3,100	3,096	3,077	3,062	3,049	3,036	3,018
Retail trade.....	8,566	8,524	8,524	8,509	8,522	8,545	8,552	8,525	8,519	8,484	8,411	8,411	8,366
Finance, insurance, and real estate.....	2,828	2,821	2,822	2,813	2,799	2,796	2,792	2,788	2,786	2,778	2,776	2,774	2,772
Service and miscellaneous.....	7,885	7,874	7,846	7,831	7,809	7,805	7,783	7,749	7,692	7,675	7,681	7,675	7,640
Government.....	9,436	9,436	9,384	9,339	9,274	9,204	9,183	9,197	9,127	9,088	9,073	9,044	9,029
Federal.....	2,389	2,391	2,381	2,371	2,369	2,374	2,375	2,366	2,343	2,325	2,322	2,312	2,332
State and local.....	7,047	7,045	7,003	6,968	6,905	6,830	6,808	6,831	6,784	6,763	6,751	6,732	6,697

¹ For coverage of the series, see footnote 1, table A-2.² Preliminary.NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Labor Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.TABLE A-5. Production workers in manufacturing industries, by major industry group, seasonally adjusted¹

Major industry group	[In thousands]												
	1963	1962											
	Jan. ²	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Manufacturing.....	12,265	12,324	12,324	12,416	12,446	12,432	12,551	12,581	12,566	12,541	12,387	12,300	12,197
Durable goods.....	6,860	6,888	6,875	6,933	6,953	6,925	7,024	7,035	7,037	7,000	6,903	6,846	6,760
Ordinance and accessories.....	100	101	101	102	101	103	100	97	98	98	96	96	96
Lumber and wood products, except furniture.....	545	541	543	539	541	545	543	546	544	547	546	547	535
Furniture and fixtures.....	316	317	317	315	315	320	320	321	321	318	314	311	308
Stone, clay, and glass products.....	447	451	459	465	462	468	467	467	467	460	450	451	448
Primary metal industries.....	895	898	885	892	906	910	920	934	972	995	989	983	966
Fabricated metal products.....	845	850	847	854	866	858	863	871	873	864	849	839	834
Machinery.....	1,014	1,022	1,031	1,035	1,026	1,034	1,029	1,027	1,018	1,012	998	984	977
Electrical equipment and supplies.....	1,037	1,035	1,029	1,047	1,032	1,045	1,057	1,058	1,051	1,040	1,025	1,013	998
Transportation equipment.....	1,121	1,132	1,119	1,139	1,160	1,090	1,164	1,161	1,142	1,122	1,100	1,089	1,067
Instruments and related products.....	228	227	228	228	228	231	231	231	230	227	227	225	224
Miscellaneous manufacturing industries.....	312	314	316	317	316	321	325	322	321	317	309	308	307
Nondurable goods.....	5,405	5,436	5,449	5,483	5,493	5,507	5,527	5,546	5,529	5,541	5,484	5,454	5,437
Food and kindred products.....	1,168	1,176	1,168	1,178	1,179	1,170	1,181	1,180	1,184	1,193	1,182	1,181	1,184
Tobacco manufactures.....	75	76	79	82	84	81	77	76	76	77	77	77	78
Textile mill products.....	774	778	780	783	787	791	798	803	803	802	799	798	799
Apparel and related products.....	1,080	1,090	1,093	1,105	1,105	1,109	1,110	1,120	1,111	1,121	1,092	1,072	1,062
Paper and allied products.....	475	478	476	478	477	481	481	482	479	479	476	473	472
Printing, publishing, and allied industries.....	583	585	597	598	599	598	599	600	599	598	597	596	594
Chemicals and allied products.....	520	518	520	519	521	524	528	523	521	518	515	515	512
Petroleum refining and related industries.....	119	120	120	121	121	127	128	128	129	129	129	129	129
Rubber and miscellaneous plastic products.....	301	301	300	301	304	306	307	312	304	297	297	295	290
Leather and leather products.....	310	314	316	318	316	320	318	322	323	327	320	318	317

¹ For definition of production workers, see footnote 1, table A-3.² Preliminary.NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Labor Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.

TABLE A-6. Unemployment insurance and employment service program operations ¹

[All items except average benefit amounts are in thousands]

Item	1962												1961
	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.
Employment service:²													
New applications for work.....	766	907	948	856	879	914	1,102	899	847	860	821	991	713
Nonfarm placements.....	434	533	643	652	642	580	605	656	577	511	425	465	448
State unemployment insurance programs:													
Initial claims ³	1,747	1,353	1,267	956	1,197	1,395	1,083	1,133	1,147	1,171	1,286	1,974	1,658
Insured unemployment ⁴ (average weekly volume).....	2,063	1,625	1,335	1,331	1,469	1,543	1,469	1,570	1,831	2,218	2,415	2,486	2,017
Rate of insured unemployment ⁵	5.1	4.0	3.4	3.3	3.6	3.8	3.6	3.9	4.5	5.5	6.0	6.2	5.0
Weeks of unemployment compensated.....	6,307	5,702	5,207	4,695	5,781	5,563	5,507	6,391	7,088	9,121	8,509	9,455	6,621
Average weekly benefit amount for total unemployment.....	\$35.11	\$34.95	\$34.69	\$34.42	\$34.29	\$34.01	\$34.20	\$34.04	\$34.52	\$34.98	\$34.73	\$34.44	\$34.10
Total benefits paid.....	\$214,203	\$193,551	\$176,608	\$160,559	\$197,414	\$186,965	\$183,871	\$215,015	\$239,562	\$310,246	\$287,245	\$314,884	\$218,477
Unemployment compensation for ex-servicemen:⁷													
Initial claims ³	31	29	31	27	39	30	25	22	25	26	21	24	20
Insured unemployment ⁴ (average weekly volume).....	65	57	52	52	52	46	40	40	45	49	49	52	49
Weeks of unemployment compensated.....	235	222	214	200	211	175	165	177	190	209	196	236	192
Total benefits paid.....	\$7,679	\$7,298	\$7,019	\$6,549	\$6,934	\$5,659	\$5,420	\$5,703	\$6,036	\$6,545	\$6,121	\$7,424	\$6,044
Unemployment compensation for Federal civilian employees:⁸													
Initial claims ³	12	12	14	10	12	15	10	11	11	11	12	19	13
Insured unemployment ⁴ (average weekly volume).....	31	29	27	25	26	26	24	26	29	34	36	36	31
Weeks of unemployment compensated.....	116	115	111	98	114	97	107	114	128	152	139	150	118
Total benefits paid.....	\$4,262	\$4,282	\$4,182	\$3,797	\$4,354	\$3,653	\$4,172	\$4,297	\$4,711	\$5,391	\$4,947	\$5,375	\$4,138
Railroad unemployment insurance:													
Applications ¹⁰	12	16	16	32	22	65	7	4	4	5	7	16	13
Insured unemployment (average weekly volume).....	61	61	60	65	50	52	44	52	64	74	80	86	77
Number of payments ¹¹	132	133	148	124	129	98	108	125	155	187	172	205	167
Average amount of benefit payment ¹²	\$79.56	\$78.73	\$74.47	\$83.26	\$78.53	\$75.84	\$71.91	\$73.03	\$76.76	\$79.55	\$80.05	\$79.65	\$80.13
Total benefits paid ¹³	\$10,358	\$10,373	\$11,081	\$10,134	\$10,081	\$7,256	\$7,825	\$9,052	\$11,807	\$14,791	\$13,696	\$16,232	\$13,363
All programs:¹⁴													
Insured unemployment ⁴	2,223	1,780	1,539	1,497	1,628	1,699	1,614	1,719	1,986	2,381	2,581	2,661	2,175

¹ Includes data for Puerto Rico, beginning January 1961 when the Commonwealth's program became part of the Federal-State UI system.

² Includes Guam and the Virgin Islands.

³ Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transitional claims.

⁴ Includes interstate claims for the Virgin Islands.

⁵ Number of workers reporting the completion of at least 1 week of unemployment.

⁶ The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.

⁷ Excludes data on claims and payments made jointly with other programs.

⁸ Includes the Virgin Islands.

⁹ Excludes data on claims and payments made jointly with State programs.

¹⁰ 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.

¹¹ Payments are for unemployment in 14-day registration periods.

¹² The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.

¹³ Adjusted for recovery of overpayments and settlement of underpayments.

¹⁴ Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs and the Railroad Unemployment Insurance Act.

SOURCE: U.S. Department of Labor, Bureau of Employment Security for all items except railroad unemployment insurance, which is prepared by the U.S. Railroad Retirement Board.

B.—Labor Turnover

TABLE B-1. Labor turnover rates, by major industry group ¹

[Per 100 employees]

Major industry group	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
	Accessions: Total ³														
Manufacturing:															
Actual.....	2.3	3.0	3.9	4.9	5.1	4.5	5.0	4.3	4.0	3.7	3.5	4.1	2.6	4.1	3.8
Seasonally adjusted.....	3.3	3.6	4.0	3.8	4.0	4.7	3.9	4.3	4.4	4.3	4.7	4.4	3.8	-----	-----
Durable goods.....	2.3	2.8	3.6	4.5	4.6	3.8	4.5	4.1	4.0	3.8	3.6	4.3	2.7	3.9	3.5
Ordnance and accessories.....	1.4	1.9	2.4	2.5	2.6	3.0	3.9	2.9	2.8	3.0	3.1	3.0	2.2	2.8	2.6
Lumber and wood products, except furniture.....	2.5	3.2	4.5	5.4	5.4	6.3	8.8	7.5	7.3	5.2	4.7	6.4	2.5	5.3	4.8
Furniture and fixtures.....	2.8	3.3	4.3	5.0	6.0	5.2	4.7	5.1	4.6	4.5	4.4	4.7	2.9	4.1	3.9
Stone, clay, and glass products.....	1.7	2.4	2.8	3.3	4.0	3.8	4.8	4.6	5.4	4.3	3.8	3.3	1.9	3.6	3.4
Primary metal industries.....	2.4	2.5	2.7	2.7	3.3	2.8	2.8	2.5	2.2	2.6	2.7	3.7	2.7	3.4	2.4
Fabricated metal products.....	2.3	3.0	3.9	4.5	5.5	4.0	4.6	4.5	4.3	4.0	3.8	4.1	2.8	4.4	3.9
Machinery.....	2.0	2.3	2.8	2.9	3.2	2.9	3.7	3.1	3.1	3.2	3.2	3.8	2.6	3.0	2.9
Electrical equipment and supplies.....	2.1	2.7	3.4	3.8	4.0	3.5	4.4	3.8	3.6	3.6	3.4	3.7	2.9	3.6	3.2
Transportation equipment.....	2.6	3.5	4.5	8.0	6.1	4.2	4.4	4.3	4.5	4.4	3.9	5.2	3.0	4.7	4.3
Instruments and related products.....	1.9	2.4	2.6	2.6	3.4	2.8	3.9	2.7	2.6	2.6	2.5	3.1	1.8	2.6	2.4
Miscellaneous manufacturing industries.....	2.5	3.6	5.8	6.8	6.9	6.0	6.2	6.4	6.4	5.8	5.6	6.4	2.6	5.6	5.3
Nondurable goods.....	2.3	3.1	4.2	5.3	5.8	5.4	5.7	4.5	4.0	3.6	3.5	3.8	2.6	4.2	4.1
Food and kindred products.....	2.9	3.9	6.4	9.2	10.0	9.1	9.0	6.6	5.6	4.2	3.9	4.1	3.1	5.9	6.0
Tobacco manufactures.....	4.6	5.5	4.4	16.0	19.8	8.9	3.2	3.0	2.7	1.8	2.1	3.5	4.7	6.1	5.6
Textile mill products.....	1.9	2.7	3.5	3.8	4.2	3.9	4.2	4.1	3.7	3.6	3.4	3.5	2.1	3.5	3.2
Apparel and related products.....	2.8	4.4	5.3	5.2	6.2	6.7	6.6	6.1	5.1	5.1	5.6	6.2	3.4	5.6	5.3
Paper and allied products.....	1.6	1.9	2.4	2.8	3.0	2.9	4.1	2.8	2.8	2.5	2.3	2.4	1.7	2.6	2.6
Printing, publishing, and allied industries.....	2.0	2.5	3.2	3.7	3.4	3.2	4.1	2.9	2.7	2.8	2.5	2.8	2.2	2.9	3.0
Chemicals and allied products.....	1.3	1.4	1.8	2.1	2.0	2.0	3.3	2.2	2.4	2.6	2.1	2.1	1.4	2.1	2.0
Petroleum refining and related industries.....	.6	.8	1.2	1.5	1.7	1.5	2.7	1.6	1.5	1.7	1.2	1.4	.7	1.3	1.2
Rubber and miscellaneous plastic products.....	2.1	3.0	3.7	4.5	4.3	4.1	4.4	4.1	3.6	3.4	2.9	3.9	2.3	3.8	3.1
Leather and leather products.....	3.6	4.4	4.8	4.7	5.5	6.1	6.1	5.3	4.2	4.3	4.3	5.8	3.8	5.0	4.8
Nonmanufacturing:															
Metal mining.....	1.5	2.9	2.7	2.9	2.4	2.4	3.8	3.4	4.1	2.4	2.6	2.9	2.0	2.7	3.4
Coal mining.....	1.1	1.5	1.7	2.5	2.5	1.4	1.2	1.8	1.6	1.6	1.4	1.8	1.0	2.1	1.6
	Accessions: New hires														
Manufacturing:															
Actual.....	1.2	1.8	2.5	3.1	3.2	2.9	3.4	2.8	2.4	2.2	2.0	2.2	1.4	2.2	2.2
Seasonally adjusted.....	2.2	2.3	2.3	2.3	2.4	2.5	2.5	2.9	2.7	2.7	2.4	2.6	2.5	-----	-----
Durable goods.....	1.1	1.6	2.2	2.6	2.6	2.4	3.1	2.6	2.3	2.2	2.0	2.2	1.4	1.9	1.9
Ordnance and accessories.....	.8	1.2	1.5	1.8	1.8	2.2	2.9	2.0	2.0	1.9	2.1	2.2	1.5	1.9	1.8
Lumber and wood products, except furniture.....	1.7	2.5	3.6	4.4	4.6	4.7	6.2	5.4	4.7	3.3	2.9	2.8	1.6	3.3	3.4
Furniture and fixtures.....	1.6	2.5	3.4	4.3	4.8	4.2	3.9	4.1	3.3	3.4	3.0	3.2	1.9	2.7	2.8
Stone, clay, and glass products.....	.8	1.3	1.8	2.1	2.5	2.5	3.3	3.1	2.8	2.2	1.6	1.4	.9	1.8	2.0
Primary metal industries.....	.5	.7	.9	1.0	1.0	.9	1.3	1.1	1.0	1.2	1.3	1.5	.8	.9	.8
Fabricated metal products.....	1.3	1.8	2.6	3.0	2.9	2.5	3.2	2.9	2.4	2.2	2.0	2.3	1.5	2.1	2.1
Machinery.....	1.1	1.4	1.7	1.9	1.9	1.9	2.7	2.2	2.1	2.1	2.0	2.1	1.3	1.6	1.7
Electrical equipment and supplies.....	1.2	1.7	2.2	2.7	2.6	2.2	3.2	2.6	2.3	2.3	2.4	2.5	1.8	2.0	2.0
Transportation equipment.....	1.0	1.8	2.4	2.9	2.1	2.0	2.5	2.2	2.1	1.9	1.7	1.9	1.4	1.6	1.7
Instruments and related products.....	1.2	1.7	2.0	2.0	2.2	2.2	3.3	2.1	2.0	2.0	1.8	2.2	1.2	1.7	1.7
Miscellaneous manufacturing industries.....	1.6	2.4	4.3	5.3	5.2	4.2	4.7	4.3	3.7	3.3	3.3	3.4	1.8	3.6	3.4
Nondurable goods.....	1.3	1.9	2.8	3.7	3.9	3.5	3.9	2.9	2.5	2.3	2.1	2.2	1.5	2.5	2.5
Food and kindred products.....	1.4	2.2	4.1	6.0	6.5	5.8	6.0	3.9	2.9	2.2	1.9	2.0	1.5	3.4	3.5
Tobacco manufactures.....	2.9	2.3	3.1	10.5	7.8	2.5	1.6	1.3	.8	.9	1.4	2.3	2.8	3.2	2.9
Textile mill products.....	1.2	1.8	2.5	2.8	3.2	2.7	3.1	3.0	2.6	2.3	2.2	2.3	1.4	2.2	2.0
Apparel and related products.....	1.4	2.7	3.6	3.8	4.5	4.2	4.0	3.9	3.4	3.3	3.3	3.5	1.8	3.1	3.2
Paper and allied products.....	.9	1.2	1.8	2.2	2.2	2.1	3.2	2.0	1.9	1.6	1.4	1.4	1.0	1.7	1.8
Printing, publishing, and allied industries.....	1.3	1.9	2.5	3.0	2.7	2.6	3.3	2.3	2.1	2.1	1.9	2.1	1.5	2.1	2.4
Chemicals and allied products.....	.7	1.0	1.2	1.5	1.4	1.5	2.6	1.6	1.7	1.8	1.4	1.4	.8	1.4	1.4
Petroleum refining and related industries.....	.4	.6	.9	1.1	1.3	1.2	2.2	1.2	.9	1.0	.7	.7	.5	.9	.8
Rubber and miscellaneous plastic products.....	1.1	1.7	2.5	3.3	3.0	2.3	3.1	2.6	2.1	2.0	1.8	2.1	1.2	1.9	1.7
Leather and leather products.....	2.1	2.8	3.1	3.2	3.9	3.7	4.1	3.2	2.5	2.7	2.7	3.5	2.4	2.9	2.9
Nonmanufacturing:															
Metal mining.....	1.1	1.2	1.4	1.4	1.3	1.3	2.8	2.0	1.8	1.3	1.0	1.2	.9	1.2	1.9
Coal mining.....	.5	.6	.8	.7	.7	.5	.4	.5	.4	.5	.5	.5	.4	.6	.4

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group¹—Continued

[Per 100 employees]

Major industry group	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
	Separations: Total ³														
Manufacturing:															
Actual.....	3.8	4.0	4.3	5.0	5.2	4.4	3.8	3.8	3.6	3.6	3.4	3.9	4.0	4.0	4.3
Seasonally adjusted.....	3.9	3.9	3.8	4.1	4.8	4.6	4.3	4.1	3.7	3.8	3.9	3.9	4.1	-----	-----
Durable goods.....	3.4	3.6	3.9	4.3	5.4	4.4	3.8	3.6	3.3	3.5	3.2	3.7	3.8	3.9	4.3
Ordnance and accessories.....	1.8	2.7	2.7	3.4	2.9	2.2	2.7	2.5	2.5	2.1	2.6	3.3	1.9	2.3	2.4
Lumber and wood products, except furniture.....	6.0	6.2	5.6	6.7	6.8	5.7	4.7	4.7	5.0	6.1	4.8	5.4	6.5	5.5	6.1
Furniture and fixtures.....	3.4	4.2	4.6	5.2	5.7	5.2	4.6	4.7	4.2	4.9	3.9	4.1	3.8	4.3	4.6
Stone, clay, and glass products.....	5.2	4.0	4.1	4.9	4.5	3.5	3.3	3.7	3.3	3.4	3.3	4.7	4.8	3.8	4.1
Primary metal industries.....	2.5	2.9	3.5	3.8	3.6	4.1	4.4	4.5	3.2	2.3	2.0	2.3	2.0	2.8	4.0
Fabricated metal products.....	3.2	3.9	4.7	4.9	4.7	5.4	4.1	3.6	3.4	3.9	4.0	4.8	4.4	4.5	4.8
Machinery.....	2.0	2.6	2.9	3.5	3.8	3.0	3.0	2.9	2.6	2.8	2.3	2.5	2.4	3.2	3.4
Electrical equipment and supplies.....	3.1	3.1	3.4	4.0	3.9	3.3	3.2	3.1	2.9	3.4	3.1	3.0	3.1	3.2	3.5
Transportation equipment.....	3.0	3.4	3.8	4.1	10.6	6.5	3.9	3.6	3.5	3.8	3.9	4.6	3.7	5.0	5.2
Instruments and related products.....	2.1	2.8	3.0	3.3	3.1	2.4	2.6	2.3	2.1	2.6	2.1	2.6	2.6	2.6	2.7
Miscellaneous manufacturing industries.....	12.3	8.2	5.6	5.6	6.1	5.4	5.2	4.8	4.6	5.1	4.0	6.0	12.1	5.8	5.9
Nondurable goods.....	4.1	4.5	5.0	5.8	4.8	4.3	3.8	4.1	4.0	3.6	3.6	4.2	4.4	4.2	4.4
Food and kindred products.....	5.9	6.8	8.2	9.3	6.7	5.9	5.0	5.1	4.5	5.1	5.7	7.1	5.9	6.0	6.0
Tobacco manufactures.....	7.9	16.9	10.8	5.4	2.9	2.3	2.4	2.7	5.4	9.5	5.8	5.9	6.5	5.9	5.9
Textile mill products.....	3.1	3.7	3.8	4.5	4.5	3.9	3.4	3.6	3.6	3.6	3.3	3.7	3.0	3.4	3.7
Apparel and related products.....	6.0	5.1	5.7	5.9	5.8	6.3	5.2	6.2	6.0	4.9	5.0	6.0	5.6	5.7	6.1
Paper and allied products.....	2.5	2.7	2.8	4.2	3.4	2.5	2.4	2.6	2.5	2.3	2.1	2.9	2.6	2.7	2.9
Printing, publishing, and allied industries.....	2.4	2.9	3.1	4.1	3.5	2.5	3.0	2.9	2.5	2.6	2.3	3.0	3.0	2.9	2.8
Chemicals and allied products.....	1.7	2.0	1.8	3.1	2.4	1.9	2.3	2.5	2.0	1.8	1.6	1.8	1.7	2.0	2.1
Petroleum refining and related industries.....	1.5	2.2	1.8	2.7	2.5	1.5	1.6	1.6	1.5	1.5	1.6	1.4	1.6	1.6	1.6
Rubber and miscellaneous plastic products.....	2.8	3.5	3.9	4.5	4.1	4.0	3.2	3.2	3.2	3.4	3.3	3.2	3.2	3.5	3.9
Leather and leather products.....	6.3	4.5	5.4	5.9	5.9	5.3	4.2	5.2	5.7	4.7	4.3	5.1	5.1	5.0	5.0
Nonmanufacturing:															
Metal mining.....	3.1	3.8	3.6	6.0	4.9	3.2	3.2	2.6	2.5	2.3	1.9	2.4	3.4	3.1	3.8
Coal mining.....	1.3	3.2	2.6	2.0	2.3	5.2	3.4	4.5	2.1	1.8	2.1	2.1	2.3	2.5	3.6
	Separations: Quits														
Manufacturing:															
Actual.....	0.8	1.1	1.5	2.4	2.1	1.4	1.5	1.5	1.3	1.2	1.1	1.1	0.9	1.2	1.3
Seasonally adjusted.....	1.2	1.3	1.4	1.4	1.5	1.3	1.5	1.5	1.3	1.5	1.5	1.4	1.4	-----	-----
Durable goods.....	.7	.9	1.2	2.0	1.8	1.2	1.3	1.3	1.2	1.1	.9	1.0	.8	1.0	1.1
Ordnance and accessories.....	.6	.8	1.0	1.7	1.5	1.1	1.3	1.0	1.2	1.0	1.0	1.0	.8	1.0	1.0
Lumber and wood products except furniture.....	1.3	1.9	2.6	4.2	3.7	2.6	2.5	2.6	2.6	1.8	1.4	1.4	1.1	1.9	2.3
Furniture and fixtures.....	1.1	1.6	2.1	3.0	3.1	2.2	2.1	2.5	2.2	2.0	1.7	1.5	1.2	1.5	1.7
Stone, clay, and glass products.....	.6	.8	1.2	2.0	1.9	1.2	1.2	1.3	1.1	1.0	.8	.8	.6	1.0	1.1
Primary metal industries.....	.3	.4	.5	.9	.9	.6	.6	.6	.6	.6	.5	.5	.4	.5	.6
Fabricated metal products.....	.7	.9	1.3	2.2	1.9	1.2	1.4	1.4	1.2	1.1	.9	1.0	.8	1.0	1.1
Machinery.....	.6	.8	.9	1.5	1.4	.9	1.1	1.1	1.0	1.0	.8	.8	.7	.8	.9
Electrical equipment and supplies.....	.8	1.1	1.3	2.2	1.9	1.3	1.5	1.4	1.2	1.3	1.1	1.2	1.0	1.1	1.2
Transportation equipment.....	.5	.7	1.0	1.6	1.4	.9	1.0	1.0	1.0	.8	.7	.8	.6	.8	.9
Instruments and related products.....	.8	1.1	1.4	1.9	1.6	1.2	1.3	1.2	1.1	1.2	.9	1.1	.8	1.0	1.1
Miscellaneous manufacturing industries.....	.9	1.6	2.2	3.0	3.0	1.9	2.2	1.9	1.8	1.7	1.5	1.6	1.3	1.8	1.9
Nondurable goods.....	.9	1.3	1.8	2.9	2.5	1.7	1.7	1.7	1.5	1.4	1.2	1.3	1.0	1.4	1.6
Food and kindred products.....	1.0	1.3	2.1	4.0	2.9	1.9	1.8	1.8	1.4	1.3	1.2	1.3	.9	1.6	1.7
Tobacco manufactures.....	.6	.8	.9	2.1	1.4	.8	.6	.6	.6	.8	.6	.7	.6	.9	1.0
Textile mill products.....	1.1	1.6	2.0	2.6	2.8	2.1	2.0	2.1	2.0	1.8	1.6	1.6	1.2	1.6	1.6
Apparel and related products.....	1.3	1.9	2.4	3.1	3.2	2.6	2.4	2.5	2.2	2.1	1.9	2.0	1.5	2.0	2.3
Paper and allied products.....	.6	.8	1.1	2.5	1.8	1.0	1.1	1.1	1.0	.9	.9	.9	.7	1.0	1.2
Printing, publishing, and allied industries.....	.9	1.3	1.5	2.5	2.1	1.4	1.7	1.5	1.3	1.3	1.2	1.3	1.1	1.4	1.5
Chemicals and allied products.....	.4	.5	.7	1.8	1.2	.6	.8	.8	.8	.7	.6	.6	.5	.7	.8
Petroleum refining and related industries.....	.3	.6	.7	1.4	1.2	.6	.7	.6	.5	.5	.4	.4	.3	.5	.5
Rubber and miscellaneous plastic products.....	.7	1.0	1.5	2.2	1.9	1.3	1.5	1.5	1.3	1.3	1.1	1.2	.8	1.1	1.1
Leather and leather products.....	1.3	1.9	2.5	3.1	3.3	2.4	2.4	2.4	2.3	2.2	1.9	2.0	1.5	2.1	2.2
Nonmanufacturing:															
Metal mining.....	.9	.9	1.1	2.2	1.8	1.3	1.1	1.2	1.4	.9	.9	.9	.6	1.0	1.5
Coal mining.....	.3	.3	.4	.5	.6	.4	.3	.3	.3	.3	.3	.3	.3	.4	.3

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group ¹—Continued

[Per 100 employees]

Major industry group	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
	Separations: Layoffs														
Manufacturing:															
Actual.....	2.5	2.3	2.2	1.9	2.3	2.2	1.6	1.6	1.6	1.6	1.7	2.1	2.6	2.2	2.4
Seasonally adjusted.....	2.0	1.9	1.8	2.0	2.6	2.4	2.0	1.8	1.6	1.6	1.9	1.9	2.1	2.2	2.4
Durable goods.....	2.3	2.0	1.8	1.6	2.8	2.4	1.7	1.6	1.4	1.6	1.6	2.0	2.4	2.2	2.6
Ordnance and accessories.....	.8	1.3	1.1	1.1	1.0	.5	.7	1.0	.8	.6	1.0	1.5	.6	.7	.9
Lumber and wood products, except furniture.....	4.1	3.5	2.1	1.6	2.2	2.2	1.3	1.3	1.7	3.6	2.7	3.3	4.7	2.8	3.1
Furniture and fixtures.....	1.7	2.0	1.6	1.4	1.7	2.2	1.8	1.3	1.3	2.2	1.6	2.0	2.1	2.1	2.1
Stone, clay, and glass products.....	4.1	2.7	2.2	2.1	1.9	1.7	1.4	1.7	1.5	1.8	1.9	3.3	3.6	2.2	2.4
Primary metal industries.....	1.8	2.0	2.4	2.3	2.1	2.8	3.1	3.2	1.9	1.0	.8	1.1	1.2	1.7	3.0
Fabricated metal products.....	2.1	2.4	2.7	2.0	2.0	3.4	1.9	1.5	1.6	2.0	2.3	3.0	3.0	2.9	3.1
Machinery.....	.9	1.2	1.3	1.3	1.5	1.4	1.3	1.1	.9	1.0	.8	.9	1.0	1.7	1.9
Electrical equipment and supplies.....	1.7	1.3	1.3	1.0	1.2	1.3	.9	.9	.9	1.3	1.1	1.0	1.3	1.4	1.6
Transportation equipment.....	1.8	1.9	1.9	1.8	8.3	4.4	2.0	1.7	1.7	2.0	2.3	2.8	2.4	3.5	3.6
Instruments and related products.....	.8	1.1	.9	.7	.8	.7	.7	.5	.5	.7	.7	.7	1.3	.9	1.0
Miscellaneous manufacturing industries.....	10.8	5.8	2.4	1.7	2.0	2.4	2.0	2.0	2.0	2.4	1.7	3.5	10.0	3.2	3.2
Non-durable goods.....	2.7	2.7	2.6	2.2	1.6	1.9	1.4	1.7	1.9	1.6	1.8	2.2	2.8	2.2	2.2
Food and kindred products.....	4.5	5.0	5.4	4.5	3.1	3.2	2.4	2.7	3.1	2.6	3.2	3.8	5.6	3.7	3.6
Tobacco manufactures.....	7.0	15.7	9.3	2.5	1.0	1.1	1.3	1.6	4.5	8.3	4.7	4.8	5.6	4.6	4.5
Textile mill products.....	1.6	1.6	1.2	1.2	1.0	1.2	.8	.9	1.0	1.2	1.2	1.5	1.4	1.3	1.5
Apparel and related products.....	4.2	2.6	2.5	2.2	1.7	2.9	2.1	2.9	3.2	2.1	2.4	3.2	3.6	3.1	3.2
Paper and allied products.....	1.3	1.3	1.2	1.2	.9	.9	.7	.8	.8	.8	.9	1.5	1.4	1.1	1.2
Printing, publishing and allied industries.....	1.1	1.2	1.1	1.1	.9	.7	.8	.9	.8	.9	.7	1.1	1.4	1.0	.9
Chemicals and allied products.....	.9	1.1	.8	.8	.7	.8	1.0	1.2	.7	.6	.7	.7	.8	.9	.9
Petroleum refining and related industries.....	.8	1.0	.6	.7	.6	.5	.3	.5	.5	.7	.8	.5	.8	.6	.6
Rubber and miscellaneous plastic products.....	1.6	1.9	1.6	1.5	1.4	1.9	1.0	.9	1.2	1.4	1.5	1.3	1.8	1.7	2.2
Leather and leather products.....	4.5	2.0	2.3	2.0	1.6	1.9	1.1	2.1	2.6	1.7	1.7	2.3	2.9	2.3	2.1
Nonmanufacturing:															
Metal mining.....	1.7	2.3	1.8	3.0	2.4	1.2	1.4	.7	.4	.6	.3	.7	2.3	1.4	1.5
Coal mining.....	.7	2.2	1.7	1.0	1.4	4.2	2.6	3.7	1.0	.9	1.4	1.4	1.7	1.7	2.9

¹ Beginning with the December 1961 issue, figures differ from those previously published. The industry structure has been converted to the 1957 Standard Industrial Classification, and the printing and publishing industry and some seasonal manufacturing industries previously excluded are now included.

Data include Alaska and Hawaii beginning in January 1959; this inclusion has not significantly affected the labor turnover rates.

Month-to-month changes in total employment in manufacturing and non-manufacturing 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 mid-month to midmonth; and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

² Preliminary.

³ Beginning with January 1959, transfers between establishments of the same firm are included in total accessions and total separations; therefore, rates for these items are not strictly comparable with prior data. Transfers comprise part of "other accessions" and "other separations," the rates for which are not shown separately.

C.—Earnings and Hours

TABLE C-1. Gross hours and earnings of production workers,¹ by industry

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
	Average weekly earnings														
Mining.....	\$112.07	\$110.43	\$111.78	\$112.88	\$111.90	\$110.02	\$111.10	\$109.61	\$110.70	\$110.84	\$110.30	\$108.93	\$109.89	\$107.18	\$105.44
Metal mining.....	117.71	116.44	116.16	118.12	116.00	116.88	118.86	119.28	118.01	118.29	117.59	116.88	118.30	113.44	111.19
Iron ores.....	118.42	119.56	117.87	122.61	119.87	124.43	127.51	126.28	125.86	122.28	122.80	119.25	121.27	115.80	114.73
Copper ores.....	121.54	120.13	119.14	120.98	117.99	117.46	121.24	120.40	119.84	124.52	122.24	123.88	126.00	119.03	116.77
Coal mining.....	120.51	111.24	114.39	113.62	113.15	102.30	115.69	108.15	116.12	117.69	116.94	117.38	117.62	111.34	110.76
Bituminous.....	121.66	111.65	115.13	114.39	114.25	103.60	117.06	109.47	117.50	118.76	118.63	118.44	118.69	112.73	112.77
Crude petroleum and natural gas.....	111.09	109.30	109.20	110.99	109.56	110.83	107.74	108.52	109.20	108.52	108.52	106.60	107.17	105.75	103.32
Crude petroleum and natural gas fields.....	118.28	114.37	113.00	115.69	113.98	118.14	112.72	112.31	114.37	112.84	113.24	116.03	112.31	113.15	108.54
Oil and gas field services.....	104.98	104.40	105.90	103.82	104.84	103.82	102.67	105.03	104.35	104.84	104.16	97.99	102.53	98.67	98.31
Quarrying and nonmetallic mining.....	98.25	107.21	110.86	113.24	113.01	110.66	107.62	107.38	102.93	99.64	96.33	92.83	97.86	100.09	96.58
Contract construction.....	118.31	120.88	126.82	128.21	127.26	125.57	121.45	123.44	120.01	118.05	113.37	111.22	114.82	117.71	112.67
General building contractors.....	109.54	113.34	117.12	117.81	116.92	115.92	111.91	114.14	112.10	109.55	106.30	102.08	106.13	108.83	103.72
Heavy construction.....	109.20	117.61	127.20	129.38	130.50	127.67	122.13	124.07	116.33	114.36	109.16	104.72	111.33	118.48	114.77
Highway and street construction.....	104.54	115.02	126.58	128.62	129.65	126.44	119.13	120.70	110.09	105.76	99.41	99.50	103.43	113.40	110.00
Other heavy construction.....	114.64	121.13	128.86	129.68	131.04	128.54	126.48	128.86	124.09	122.50	117.95	110.06	119.13	125.11	119.60
Special trade contractors.....	127.06	127.45	133.16	134.23	132.38	131.65	127.72	129.46	126.34	123.90	119.37	119.34	121.80	123.08	118.11
Manufacturing.....	98.42	97.36	96.72	97.68	95.75	96.80	97.27	96.80	96.56	95.91	95.20	94.88	96.63	92.34	89.72
Durable goods.....	107.27	106.19	105.37	105.88	103.89	104.45	105.47	105.22	105.22	104.45	103.53	103.17	105.32	100.10	97.44
Nondurable goods.....	86.94	86.72	85.72	86.80	86.18	86.80	87.02	86.37	85.54	85.32	84.28	84.24	85.57	82.92	80.36
Average weekly hours															
Mining.....	40.9	40.9	41.4	41.5	41.6	40.9	41.3	40.9	41.0	40.9	40.7	39.9	40.7	40.6	40.4
Metal mining.....	41.3	41.0	40.9	41.3	40.7	41.3	42.0	42.0	41.7	41.8	41.7	41.3	42.1	41.4	41.8
Iron ores.....	38.7	39.2	38.9	40.2	39.3	40.4	41.4	41.0	40.6	39.7	40.0	38.1	39.5	38.6	39.7
Copper ores.....	43.1	42.6	42.1	42.3	41.4	41.8	43.3	43.0	42.8	44.0	43.5	44.4	45.0	43.6	44.4
Coal mining.....	38.5	36.0	36.9	36.3	36.5	-----	37.2	35.0	37.1	37.6	37.6	37.5	37.7	35.8	35.5
Bituminous.....	38.5	35.9	36.9	36.2	36.5	-----	37.4	35.2	37.3	37.7	37.9	37.6	37.8	35.9	35.8
Crude petroleum and natural gas.....	42.4	42.2	42.0	42.2	42.3	42.3	41.6	41.9	42.0	41.9	41.9	41.0	41.7	41.8	42.0
Crude petroleum and natural gas fields.....	41.5	40.7	40.5	41.5	41.0	41.6	40.4	40.4	40.7	40.3	40.3	41.0	40.4	40.7	40.5
Oil and gas field services.....	43.2	43.5	43.4	42.9	43.5	42.9	42.6	43.4	43.3	43.5	43.4	41.0	42.9	42.9	43.5
Quarrying and nonmetallic mining.....	40.6	44.3	46.0	46.6	46.7	46.3	45.6	45.5	43.8	42.4	41.7	39.5	42.0	43.9	43.7
Contract construction.....	34.9	36.3	38.2	38.5	38.8	38.4	37.6	38.1	36.7	36.1	35.1	33.4	34.9	36.9	36.7
General building contractors.....	33.6	35.2	36.6	36.7	37.0	36.8	36.1	36.7	35.7	35.0	34.4	32.1	33.8	35.8	35.4
Heavy construction.....	36.4	39.6	42.4	42.7	43.5	42.7	41.4	42.2	39.3	39.3	38.3	34.0	36.5	40.3	40.7
Highway and street construction.....	35.8	39.8	43.2	43.6	44.4	43.6	41.8	42.8	38.9	38.6	37.8	33.5	35.3	40.5	41.2
Other heavy construction.....	37.1	39.2	41.3	41.3	42.0	41.2	40.8	41.3	39.9	40.0	38.8	34.5	37.7	40.1	40.0
Special trade contractors.....	35.1	35.6	37.3	37.6	37.5	37.4	36.7	37.2	36.2	35.5	34.4	34.0	34.9	36.2	35.9
Manufacturing.....	40.5	40.4	40.3	40.7	40.4	40.5	40.7	40.5	40.4	40.3	40.0	39.7	40.6	39.8	39.7
Durable goods.....	41.1	41.0	41.0	41.2	40.9	40.8	41.2	41.1	41.1	40.8	40.6	40.3	41.3	40.2	40.1
Nondurable goods.....	39.7	39.6	39.5	40.0	39.9	40.0	40.1	39.8	39.6	39.5	39.2	39.0	39.8	39.3	39.2
Average hourly earnings															
Mining.....	\$2.74	\$2.70	\$2.70	\$2.72	\$2.69	\$2.69	\$2.69	\$2.68	\$2.70	\$2.71	\$2.71	\$2.73	\$2.70	\$2.64	\$2.61
Metal mining.....	2.85	2.84	2.84	2.86	2.85	2.83	2.83	2.84	2.83	2.83	2.82	2.83	2.81	2.74	2.66
Iron ores.....	3.06	3.05	3.03	3.05	3.05	3.08	3.08	3.08	3.10	3.08	3.07	3.13	3.07	3.00	2.89
Copper ores.....	2.82	2.82	2.83	2.86	2.85	2.81	2.80	2.80	2.83	2.81	2.79	2.80	2.73	2.63	
Coal mining.....	3.13	3.09	3.10	3.13	3.10	-----	3.11	3.09	3.13	3.13	3.11	3.13	3.12	3.11	3.12
Bituminous.....	3.16	3.11	3.12	3.16	3.13	-----	3.13	3.11	3.15	3.15	3.13	3.15	3.14	3.14	3.15
Crude petroleum and natural gas.....	2.62	2.59	2.60	2.63	2.59	2.62	2.59	2.59	2.60	2.59	2.59	2.60	2.57	2.53	2.46
Crude petroleum and natural gas fields.....	2.85	2.81	2.79	2.86	2.78	2.84	2.79	2.78	2.81	2.80	2.81	2.83	2.78	2.78	2.68
Oil and gas field services.....	2.43	2.40	2.44	2.42	2.41	2.42	2.41	2.42	2.41	2.41	2.40	2.39	2.39	2.30	2.26
Quarrying and nonmetallic mining.....	2.42	2.42	2.41	2.43	2.42	2.39	2.36	2.36	2.35	2.35	2.31	2.35	2.33	2.28	2.21
Contract construction.....	3.39	3.33	3.32	3.33	3.28	3.27	3.23	3.24	3.27	3.27	3.23	3.33	3.29	3.19	3.07
General building contractors.....	3.26	3.22	3.20	3.21	3.16	3.15	3.10	3.11	3.14	3.13	3.09	3.18	3.14	3.04	2.93
Heavy construction.....	3.00	2.97	3.00	3.03	3.00	2.99	2.95	2.94	2.96	2.91	2.85	3.08	3.05	2.94	2.82
Highway and street construction.....	2.92	2.89	2.93	2.95	2.92	2.90	2.85	2.82	2.83	2.74	2.63	2.97	2.93	2.80	2.67
Other heavy construction.....	3.09	3.09	3.12	3.14	3.12	3.12	3.10	3.12	3.11	3.07	3.04	3.19	3.16	3.12	2.99
Special trade contractors.....	3.62	3.58	3.57	3.57	3.53	3.52	3.48	3.48	3.49	3.49	3.47	3.51	3.49	3.40	3.29
Manufacturing.....	2.43	2.41	2.40	2.40	2.37	2.39	2.39	2.39	2.39	2.38	2.38	2.39	2.38	2.32	2.26
Durable goods.....	2.61	2.59	2.57	2.57	2.54	2.56	2.56	2.56	2.56	2.56	2.55	2.56	2.55	2.49	2.43
Nondurable goods.....	2.19	2.19	2.17	2.17	2.16	2.17	2.17	2.17	2.16	2.16	2.15	2.16	2.15	2.11	2.05

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Ordnance and accessories.....	\$120.96	\$118.69	\$117.01	\$117.01	\$115.34	\$115.18	\$116.88	\$117.16	\$118.43	\$117.31	\$116.47	\$115.21	\$117.18	\$113.42	\$108.67
Ammunition except for small arms.....	119.77	118.37	116.69	117.38	116.00	114.97	116.00	116.72	117.26	116.28	116.16	114.45	118.56	115.49	110.29
Sighting and fire control equipment.....	132.14	128.87	125.58	125.40	122.78	122.36	126.48	126.60	129.60	129.33	124.09	121.95	121.72	117.27	113.16
Other ordnance and accessories.....	115.65	113.44	111.79	112.06	110.70	110.70	112.19	111.65	112.88	111.37	111.76	111.07	112.83	108.39	103.17
Lumber and wood products, except furniture.....	78.01	79.00	79.60	82.01	81.80	80.40	80.40	79.59	77.82	75.08	76.24	73.48	76.63	77.03	73.71
Sawmills and planing mills.....	70.84	72.31	72.98	75.30	74.48	73.75	73.60	73.12	70.59	68.92	64.79	64.79	68.02	68.99	67.20
Millwork, plywood, and related products.....	87.53	86.90	86.48	88.81	88.82	87.12	87.56	88.81	87.13	85.88	84.02	83.13	85.88	84.03	81.19
Wooden containers.....	64.85	65.76	67.06	68.21	68.30	68.71	67.89	67.73	66.90	65.44	64.94	60.89	65.44	63.12	62.17
Miscellaneous wood products.....	72.80	73.71	73.44	74.62	73.49	72.00	73.49	72.85	72.62	71.91	70.40	67.61	70.40	69.77	69.32
Furniture and fixtures.....	81.58	80.16	81.34	81.54	80.54	78.18	79.95	78.38	78.76	78.76	77.59	75.66	81.32	76.21	75.20
Household furniture.....	78.02	76.63	77.38	77.15	75.99	73.38	74.85	73.75	74.30	74.30	73.16	70.05	77.10	71.46	70.45
Office furniture.....	95.63	91.77	91.39	92.57	92.34	92.52	93.61	92.80	92.57	92.84	91.98	93.79	95.04	90.54	90.42
Partitions, office and store fixtures.....	100.95	100.65	107.01	107.87	108.38	105.16	106.01	104.17	100.85	101.75	101.34	99.94	103.58	100.53	96.72
Other furniture and fixtures.....	82.21	81.20	81.61	82.41	81.79	80.39	83.43	81.20	81.00	80.39	80.39	79.95	82.82	80.20	78.78
Average weekly hours															
Ordnance and accessories.....	42.0	41.5	41.2	41.2	40.9	40.7	41.3	41.4	41.7	41.6	41.3	41.0	41.7	40.8	40.7
Ammunition except for small arms.....	41.3	41.1	40.8	40.9	40.7	40.2	40.7	41.1	41.0	40.8	40.9	40.3	41.6	41.1	41.0
Sighting and fire control equipment.....	43.9	43.1	42.0	41.8	41.2	41.2	42.3	42.2	43.2	43.4	41.5	41.2	41.4	40.3	41.0
Other ordnance and accessories.....	41.6	41.1	41.1	41.2	41.0	41.0	41.4	41.2	41.5	41.4	41.7	41.6	42.1	40.9	40.3
Lumber and wood products except furniture.....	39.2	39.5	40.0	40.8	40.9	40.4	40.4	40.4	39.5	38.9	39.3	37.3	38.9	39.5	39.0
Sawmills and planing mills.....	38.5	39.3	40.1	40.7	40.7	40.3	40.0	40.4	39.0	38.5	38.8	35.6	38.0	39.2	39.3
Millwork, plywood, and related products.....	40.9	40.8	40.6	41.5	41.7	40.9	41.3	41.5	41.1	40.7	40.2	39.4	40.7	40.4	39.8
Wooden containers.....	39.3	40.1	40.4	40.6	40.9	40.9	40.9	40.8	40.3	39.9	39.6	36.9	39.9	39.7	39.6
Miscellaneous wood products.....	40.0	40.5	40.8	41.0	40.6	40.0	40.6	40.7	40.8	40.4	40.0	38.2	40.0	40.1	40.3
Furniture and fixtures.....	41.2	40.9	41.5	41.6	41.3	40.3	41.0	40.4	40.6	40.6	40.2	39.0	41.7	39.9	40.0
Household furniture.....	41.5	41.2	41.6	41.7	41.3	40.1	40.9	40.3	40.6	40.6	40.2	38.7	41.9	39.7	39.8
Office furniture.....	41.4	39.9	40.8	40.6	40.5	40.4	40.7	40.7	40.6	40.9	40.7	40.6	41.5	40.6	41.1
Partitions, office and store fixtures.....	39.9	40.1	41.8	42.3	42.5	41.4	41.9	41.5	40.5	40.7	40.7	40.3	41.6	40.7	40.3
Other furniture and fixtures.....	40.3	40.2	40.4	41.0	41.1	40.6	41.3	40.2	40.1	39.6	39.6	39.0	40.6	40.3	40.4
Average hourly earnings															
Ordnance and accessories.....	\$2.88	\$2.86	\$2.84	\$2.84	\$2.82	\$2.83	\$2.83	\$2.83	\$2.84	\$2.82	\$2.82	\$2.81	\$2.81	\$2.78	\$2.67
Ammunition except for small arms.....	2.90	2.88	2.86	2.87	2.85	2.86	2.85	2.84	2.86	2.85	2.84	2.84	2.85	2.81	2.69
Sighting and fire control equipment.....	3.01	2.99	2.99	3.00	2.98	2.97	2.99	3.00	3.00	2.98	2.99	2.96	2.94	2.91	2.76
Other ordnance and accessories.....	2.78	2.76	2.72	2.72	2.70	2.70	2.71	2.71	2.72	2.69	2.68	2.67	2.68	2.65	2.56
Lumber and wood products except furniture.....	1.99	2.00	1.99	2.01	2.00	1.99	1.99	1.97	1.97	1.93	1.94	1.97	1.97	1.95	1.89
Sawmills and planing mills.....	1.84	1.84	1.82	1.85	1.83	1.82	1.84	1.81	1.81	1.79	1.78	1.82	1.79	1.76	1.71
Millwork, plywood, and related products.....	2.14	2.13	2.13	2.14	2.13	2.13	2.12	2.14	2.12	2.11	2.09	2.11	2.11	2.08	2.04
Wooden containers.....	1.65	1.64	1.66	1.68	1.67	1.68	1.66	1.66	1.66	1.64	1.64	1.65	1.64	1.59	1.57
Miscellaneous wood products.....	1.82	1.82	1.80	1.82	1.81	1.80	1.81	1.79	1.78	1.78	1.76	1.77	1.76	1.74	1.72
Furniture and fixtures.....	1.98	1.96	1.96	1.96	1.95	1.94	1.95	1.94	1.94	1.94	1.93	1.94	1.95	1.91	1.88
Household furniture.....	1.88	1.86	1.86	1.85	1.84	1.83	1.83	1.83	1.83	1.82	1.82	1.81	1.84	1.80	1.77
Office furniture.....	2.31	2.30	2.24	2.28	2.28	2.29	2.30	2.28	2.28	2.27	2.26	2.31	2.29	2.23	2.20
Partitions, office and store fixtures.....	2.53	2.51	2.56	2.55	2.55	2.54	2.53	2.51	2.49	2.50	2.49	2.48	2.49	2.47	2.40
Other furniture and fixtures.....	2.04	2.02	2.02	2.01	1.99	1.98	2.02	2.02	2.02	2.03	2.03	2.05	2.04	1.99	1.95

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
A average weekly earnings															
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Stone, clay, and glass products.....	\$97.84	\$100.28	\$100.85	\$101.50	\$101.57	\$100.67	\$100.43	\$99.60	\$98.16	\$95.68	\$94.33	\$92.97	\$95.04	\$95.24	\$92.97
Flat glass.....	130.37	133.06	127.59	126.94	125.78	126.81	127.92	125.02	120.01	123.00	122.06	125.45	120.82	122.68	127.35
Glass and glassware, pressed or blown.....	98.89	99.14	98.49	97.76	98.09	98.00	100.37	99.06	98.98	97.93	97.53	96.56	97.36	95.44	91.94
Cement, hydraulic.....	111.50	115.21	114.26	116.62	115.93	117.60	114.12	113.85	110.02	107.46	105.60	106.40	105.87	106.52	102.87
Structural clay products.....	85.41	86.90	87.56	87.34	87.97	87.54	88.17	88.60	87.64	85.65	84.59	81.79	85.03	84.45	82.21
Pottery and related products.....	89.67	90.45	90.68	89.82	87.64	87.69	86.85	85.58	85.80	84.85	85.46	83.49	84.89	82.30	81.37
Concrete, gypsum, and plaster products.....	95.36	102.96	105.36	108.14	108.66	105.67	104.28	103.60	99.64	93.61	89.72	86.71	92.06	97.10	93.04
Other stone and mineral products.....	99.14	99.88	99.55	99.80	100.12	100.60	99.87	99.29	99.05	97.20	97.44	95.92	97.92	96.05	93.79
Primary metal industries.....	120.39	117.91	116.92	118.80	116.23	116.62	119.10	118.50	123.11	123.41	122.81	122.81	121.58	114.95	109.59
Blast furnace and basic steel products.....	126.68	123.39	122.42	125.00	122.68	121.77	123.71	124.68	132.84	133.90	133.90	133.50	130.00	122.92	116.13
Iron and steel foundries.....	110.29	107.73	106.52	107.45	103.34	106.90	109.41	106.90	106.37	105.85	104.40	102.97	107.30	98.81	96.61
Nonferrous smelting and refining.....	116.76	116.47	114.52	116.47	116.03	114.80	116.05	113.85	113.02	112.48	112.48	113.30	112.20	109.48	108.09
Nonferrous rolling, drawing, and extruding.....	118.00	116.62	115.09	116.05	113.98	115.35	118.80	115.90	117.85	116.18	114.11	114.93	117.82	111.76	105.01
Nonferrous foundries.....	105.73	103.79	103.94	103.12	101.30	101.25	104.42	103.73	104.33	103.82	104.08	104.65	106.43	100.35	97.51
Miscellaneous primary metal industries.....	128.52	125.14	123.60	126.12	123.49	121.88	124.38	123.19	123.79	125.82	123.60	122.48	125.28	116.98	112.92
Average weekly hours															
Stone, clay, and glass products.....	40.1	41.1	41.5	41.6	41.8	41.6	41.5	41.5	40.9	40.2	39.8	38.9	40.1	40.7	40.6
Flat glass.....	38.8	39.6	38.9	38.7	38.7	38.9	39.0	38.0	36.7	37.5	37.1	37.9	36.5	38.7	40.3
Glass and glassware, pressed or blown.....	40.2	40.3	40.2	39.9	40.2	40.0	40.8	40.6	40.4	40.3	40.3	39.9	40.4	40.1	39.8
Cement, hydraulic.....	40.4	41.0	41.1	41.5	41.7	42.0	41.2	41.4	40.9	40.4	39.7	39.7	39.8	40.5	40.5
Structural clay products.....	40.1	40.8	41.3	41.2	41.3	41.1	41.2	41.4	41.1	40.4	39.9	38.4	40.3	40.6	40.3
Pottery and related products.....	39.5	40.2	40.3	40.1	39.3	38.8	38.6	38.9	39.0	39.1	39.2	38.3	39.3	38.1	38.2
Concrete, gypsum, and plaster products.....	39.9	42.9	43.9	44.5	44.9	44.4	44.0	43.9	42.4	40.7	39.7	37.7	40.2	42.4	42.1
Other stone and mineral products.....	40.3	40.6	40.8	40.9	41.2	41.4	41.1	41.2	41.1	40.5	40.6	39.8	40.8	40.7	40.6
Primary metal industries.....	40.4	39.7	39.5	40.0	39.4	39.4	40.1	39.9	40.9	41.0	40.8	40.8	40.8	39.5	39.0
Blast furnace and basic steel products.....	39.1	38.2	37.9	38.7	38.1	37.7	38.3	38.6	40.5	40.7	40.7	40.7	40.0	38.9	38.2
Iron and steel foundries.....	41.0	40.5	40.5	40.7	39.9	40.8	41.6	40.8	40.6	40.4	40.0	39.3	40.8	38.9	38.8
Nonferrous smelting and refining.....	41.7	41.3	40.9	41.3	41.0	41.0	41.3	41.1	40.8	40.9	40.9	41.2	41.1	40.7	41.1
Nonferrous rolling, drawing, and extruding.....	42.6	42.1	41.7	42.2	41.6	42.1	43.2	42.3	42.7	42.4	41.8	42.1	43.0	41.7	40.7
Nonferrous foundries.....	41.3	40.7	40.6	40.6	40.2	40.5	41.6	41.0	41.4	41.2	41.3	41.2	41.9	40.3	39.8
Miscellaneous primary metal industries.....	42.0	41.3	41.2	41.9	41.3	40.9	41.6	41.2	41.4	41.8	41.2	41.1	41.9	40.2	39.9
Average hourly earnings															
Stone, clay, and glass products.....	\$2.44	\$2.44	\$2.43	\$2.44	\$2.43	\$2.42	\$2.42	\$2.40	\$2.40	\$2.38	\$2.37	\$2.39	\$2.37	\$2.34	\$2.29
Flat glass.....	3.36	3.36	3.28	3.28	3.25	3.26	3.28	3.29	3.27	3.28	3.29	3.31	3.31	3.17	3.16
Glass and glassware, pressed or blown.....	2.46	2.46	2.45	2.45	2.44	2.45	2.46	2.44	2.45	2.43	2.42	2.42	2.41	2.38	2.31
Cement, hydraulic.....	2.76	2.81	2.78	2.81	2.78	2.80	2.77	2.75	2.69	2.66	2.66	2.68	2.66	2.63	2.54
Structural clay products.....	2.13	2.13	2.12	2.12	2.13	2.13	2.14	2.14	2.13	2.12	2.12	2.13	2.11	2.08	2.04
Pottery and related products.....	2.27	2.25	2.25	2.24	2.23	2.26	2.25	2.20	2.20	2.17	2.18	2.18	2.16	2.16	2.13
Concrete, gypsum, and plaster products.....	2.39	2.40	2.40	2.43	2.42	2.38	2.37	2.36	2.35	2.30	2.26	2.30	2.29	2.29	2.21
Other stone and mineral products.....	2.46	2.46	2.44	2.44	2.43	2.43	2.43	2.41	2.41	2.40	2.40	2.41	2.40	2.36	2.31
Primary metal industries.....	2.98	2.97	2.96	2.97	2.95	2.96	2.97	2.97	3.01	3.01	3.01	3.01	2.98	2.91	2.81
Blast furnace and basic steel products.....	3.24	2.23	3.23	3.23	3.22	3.23	3.23	3.23	3.28	3.29	3.29	3.28	3.25	3.16	3.04
Iron and steel foundries.....	2.69	2.66	2.63	2.64	2.59	2.62	2.63	2.62	2.62	2.61	2.62	2.63	2.54	2.49	2.49
Nonferrous smelting and refining.....	2.80	2.82	2.80	2.82	2.83	2.80	2.81	2.77	2.77	2.75	2.75	2.75	2.73	2.69	2.63
Nonferrous rolling, drawing, and extruding.....	2.77	2.77	2.76	2.75	2.74	2.74	2.75	2.74	2.76	2.74	2.73	2.73	2.74	2.68	2.58
Nonferrous foundries.....	2.56	2.55	2.56	2.54	2.52	2.50	2.51	2.53	2.52	2.52	2.52	2.54	2.54	2.49	2.45
Miscellaneous primary metal industries.....	3.06	3.03	3.00	3.01	2.99	2.98	2.99	2.99	2.99	3.01	3.00	2.98	2.99	2.91	2.83

See footnotes at end of table

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Fabricated metal products.....	\$106.04	\$105.63	\$105.73	\$106.66	\$105.32	\$104.30	\$106.75	\$105.73	\$104.39	\$103.48	\$102.72	\$102.36	\$105.16	\$100.85	\$98.82
Metal cans.....	121.58	119.99	123.26	133.11	131.50	133.15	131.67	127.02	125.28	122.54	121.95	120.36	124.74	121.80	114.68
Cutlery, handtools, and general hardware.....	103.25	103.34	101.27	100.37	96.88	97.53	101.43	100.70	98.09	96.08	95.76	97.77	102.90	93.93	93.03
Heating equipment and plumbing fixtures.....	98.60	98.80	100.94	101.34	100.69	98.65	100.78	97.27	96.14	96.62	95.26	93.80	96.47	94.56	91.26
Fabricated structural metal products.....	104.78	104.75	106.19	107.38	107.49	105.37	106.40	105.37	105.01	103.31	102.66	100.74	104.60	102.47	99.47
Screw machine products, bolts, etc.	108.63	106.09	104.75	107.60	105.00	104.75	105.58	105.33	105.65	106.32	106.25	105.83	106.14	98.90	95.58
Metal stampings.....	114.09	113.13	112.56	112.56	111.45	109.21	111.72	113.25	110.92	110.24	108.36	108.24	111.30	105.01	107.74
Coating, engraving, and allied services.....	93.60	92.70	93.79	92.55	90.94	91.62	95.57	94.02	95.49	93.94	92.57	92.97	93.60	90.32	86.43
Miscellaneous fabricated wire products.....	98.12	96.17	96.64	97.29	96.64	95.94	98.65	97.53	97.11	97.53	96.82	96.59	98.05	94.48	90.50
Miscellaneous fabricated metal products.....	105.41	104.75	105.41	105.67	102.51	100.15	104.30	102.72	102.82	101.50	101.40	100.90	103.57	100.19	96.96
Machinery.....	114.26	112.75	112.61	112.74	112.32	112.59	114.09	114.09	113.67	112.71	111.49	110.27	111.87	107.16	104.55
Engines and turbines.....	122.29	120.80	120.80	120.80	119.69	115.34	120.77	121.06	120.54	118.61	117.74	113.94	119.02	114.11	109.69
Farm machinery and equipment.....	111.11	108.94	108.81	107.87	107.33	106.67	107.46	107.45	109.03	109.15	107.53	104.40	105.04	103.46	99.85
Construction and related machinery.....	112.75	111.66	112.75	112.61	112.88	113.42	113.42	113.42	111.78	111.90	110.56	108.81	110.68	106.62	102.66
Metalworking machinery and equipment.....	126.44	123.25	122.26	123.12	123.12	125.86	128.04	128.48	128.62	127.02	124.42	122.41	122.55	116.90	117.27
Special industrial machinery.....	109.06	106.43	106.43	108.38	106.01	106.43	108.46	108.03	108.42	106.85	104.75	104.50	106.50	101.43	99.72
General industrial machinery.....	112.06	111.52	111.79	111.38	111.24	111.37	112.86	112.17	111.49	109.21	109.61	109.06	110.92	105.04	101.71
Office, computing, and accounting machines.....	114.09	112.84	112.31	113.68	111.78	114.96	112.06	111.78	111.78	112.75	111.93	112.61	113.30	111.24	106.23
Service industry machines.....	100.75	100.75	99.94	100.04	99.55	102.01	103.57	99.87	100.04	98.58	96.96	97.36	98.82	95.84	93.43
Miscellaneous machinery.....	112.14	109.72	109.82	109.39	108.29	108.45	108.29	108.63	108.54	107.44	107.44	106.85	108.46	104.00	101.28
Average weekly hours															
Fabricated metal products.....															
Metal cans.....	41.1	41.1	41.3	41.5	41.3	40.9	41.7	41.3	41.1	40.9	40.6	40.3	41.4	40.5	40.5
Cutlery, hand tools, and general hardware.....	40.8	40.4	41.5	43.5	43.4	43.8	43.6	42.2	41.9	41.4	41.2	40.8	42.0	42.0	41.4
Heating equipment and plumbing fixtures.....	41.3	41.5	41.0	40.8	40.2	40.3	41.4	41.1	40.7	40.2	39.9	40.4	42.0	39.8	40.1
Fabricated structural metal products.....	39.6	40.0	40.7	40.7	40.6	40.1	40.8	39.7	39.4	39.6	39.2	38.6	39.7	39.4	39.0
Screw machine products, bolts, etc.	40.3	40.6	41.0	41.3	41.5	41.0	41.4	41.0	40.7	40.2	40.1	39.2	40.7	40.5	40.6
Metal stampings.....	42.6	42.1	41.9	42.7	42.0	41.9	42.4	42.3	42.6	42.7	42.5	42.5	42.8	40.7	40.5
Coating, engraving, and allied services.....	42.1	41.9	42.0	42.0	41.9	40.6	42.0	42.1	41.7	41.6	41.2	41.0	42.0	40.7	41.6
Miscellaneous fabricated wire products.....	41.6	41.2	41.5	41.5	40.6	40.9	42.1	41.6	41.7	41.2	40.6	40.6	41.6	40.5	40.2
Miscellaneous fabricated metal products.....	41.4	41.1	41.3	41.4	41.3	41.0	41.8	41.5	41.5	41.2	41.1	41.1	41.9	40.9	40.4
Machinery.....	40.7	40.6	40.7	40.8	40.2	39.9	40.9	40.6	40.8	40.6	40.4	40.2	41.1	40.4	39.9
Engines and turbines.....	41.7	41.3	41.4	41.6	41.6	41.7	42.1	42.1	42.1	41.9	41.6	41.3	41.9	40.9	41.0
Farm machinery and equipment.....	40.9	40.4	40.4	40.4	40.3	39.5	40.8	40.9	41.0	40.9	40.6	39.7	40.9	39.9	39.6
Construction and related machinery.....	40.7	40.2	40.3	40.4	40.5	40.1	40.4	40.7	41.3	41.5	41.2	40.0	40.4	40.1	40.1
Metalworking machinery and equipment.....	41.0	40.9	41.3	41.4	41.5	41.7	41.7	41.7	41.4	41.6	41.1	40.6	41.3	40.5	40.1
Special industrial machinery.....	43.3	42.5	42.6	42.9	42.9	43.4	44.0	44.0	44.2	43.8	43.2	42.8	43.0	41.9	42.8
General industrial machinery.....	42.6	41.9	41.9	42.5	41.9	41.9	42.7	42.7	42.4	42.4	41.9	41.8	42.6	41.4	41.9
Office, computing, and accounting machines.....	41.2	41.0	41.1	41.1	41.2	41.4	41.8	41.7	41.6	40.6	40.9	41.0	41.7	40.4	40.2
Service industry machines.....	40.6	40.3	40.4	40.6	40.5	41.5	40.6	40.5	40.5	41.0	40.7	41.1	41.5	41.2	40.7
Miscellaneous machinery.....	40.3	40.3	40.3	40.5	40.8	41.3	42.1	41.1	41.0	40.4	39.9	39.9	40.5	40.1	40.1
Miscellaneous machinery.....	42.8	42.2	42.4	42.4	42.3	42.2	42.3	42.6	42.4	42.3	42.3	41.9	42.7	41.6	41.5
Average hourly earnings															
Fabricated metal products.....															
Metal cans.....	\$2.58	\$2.57	\$2.56	\$2.57	\$2.55	\$2.55	\$2.56	\$2.56	\$2.54	\$2.53	\$2.53	\$2.54	\$2.54	\$2.49	\$2.44
Cutlery, hand tools, and general hardware.....	2.98	2.97	2.97	3.06	3.03	3.04	3.02	3.01	2.99	2.96	2.96	2.95	2.97	2.90	2.77
Heating equipment and plumbing fixtures.....	2.50	2.49	2.47	2.46	2.41	2.42	2.45	2.45	2.41	2.39	2.40	2.42	2.45	2.36	2.32
Fabricated structural metal products.....	2.49	2.47	2.48	2.49	2.48	2.46	2.47	2.45	2.44	2.44	2.43	2.43	2.43	2.40	2.34
Screw machine products, bolts, etc.	2.60	2.58	2.59	2.60	2.59	2.57	2.57	2.57	2.58	2.57	2.56	2.57	2.57	2.53	2.45
Metal stampings.....	2.55	2.52	2.50	2.52	2.50	2.50	2.49	2.49	2.48	2.49	2.50	2.49	2.48	2.43	2.36
Coating, engraving, and allied services.....	2.71	2.70	2.68	2.68	2.66	2.69	2.66	2.69	2.66	2.65	2.63	2.64	2.65	2.58	2.59
Miscellaneous fabricated wire products.....	2.25	2.25	2.26	2.23	2.24	2.24	2.27	2.26	2.29	2.28	2.28	2.29	2.25	2.23	2.15
Miscellaneous fabricated metal products.....	2.37	2.34	2.34	2.35	2.34	2.34	2.36	2.35	2.34	2.35	2.35	2.35	2.34	2.31	2.24
Machinery.....	2.59	2.58	2.59	2.59	2.55	2.51	2.55	2.53	2.52	2.50	2.51	2.51	2.52	2.48	2.43
Engines and turbines.....	2.74	2.73	2.72	2.71	2.70	2.70	2.71	2.70	2.70	2.69	2.68	2.67	2.67	2.62	2.55
Farm machinery and equipment.....	2.99	2.99	2.99	2.99	2.97	2.92	2.96	2.96	2.94	2.90	2.87	2.91	2.86	2.77	2.77
Construction and related machinery.....	2.73	2.71	2.70	2.67	2.65	2.66	2.66	2.64	2.64	2.63	2.61	2.61	2.60	2.58	2.49
Metalworking machinery and equipment.....	2.75	2.73	2.73	2.72	2.72	2.72	2.72	2.72	2.70	2.69	2.69	2.68	2.68	2.63	2.56
Special industrial machinery.....	2.92	2.90	2.87	2.87	2.87	2.90	2.91	2.92	2.91	2.90	2.88	2.86	2.85	2.79	2.74
General industrial machinery.....	2.56	2.54	2.54	2.55	2.53	2.54	2.54	2.53	2.51	2.52	2.50	2.50	2.50	2.45	2.38
Office, computing, and accounting machines.....	2.72	2.72	2.72	2.71	2.70	2.69	2.70	2.69	2.68	2.69	2.68	2.66	2.66	2.60	2.53
Service industry machines.....	2.81	2.80	2.78	2.80	2.76	2.77	2.76	2.76	2.76	2.75	2.74	2.73	2.73	2.70	2.61
Miscellaneous machinery.....	2.50	2.50	2.48	2.47	2.44	2.47	2.46	2.43	2.44	2.44	2.43	2.44	2.44	2.39	2.33
Miscellaneous machinery.....	2.62	2.60	2.59	2.58	2.56	2.57	2.56	2.55	2.56	2.54	2.54	2.55	2.54	2.50	2.44

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Electrical equipment and supplies.....	\$100.21	\$98.66	\$98.49	\$99.22	\$97.20	\$96.72	\$98.16	\$97.68	\$97.44	\$96.39	\$95.91	\$95.91	\$97.82	\$94.47	\$90.74
Electric distribution equipment.....	106.86	104.75	104.60	105.22	102.97	103.94	104.81	102.72	100.50	99.70	99.10	98.85	102.66	101.00	97.77
Electrical industrial apparatus.....	102.97	103.63	103.07	103.98	102.41	102.16	104.33	103.57	103.32	101.59	100.69	99.94	102.34	99.38	95.44
Household appliances.....	108.62	105.41	105.67	105.67	106.08	105.04	105.15	103.72	104.38	102.66	102.66	100.86	104.30	101.30	96.23
Electric lighting and wiring equipment.....	92.11	92.52	91.66	93.25	90.68	89.95	91.30	90.45	90.68	89.02	88.75	88.31	90.50	87.91	84.71
Radio and TV receiving sets.....	87.34	85.67	87.64	89.76	87.67	85.75	87.89	84.32	85.72	83.46	83.46	83.92	85.41	82.50	80.11
Communication equipment.....	108.05	106.86	107.12	107.90	105.26	103.94	105.47	106.66	106.40	105.98	105.73	105.98	107.26	102.31	98.82
Electronic components and accessories.....	83.41	82.80	82.40	83.02	81.39	80.58	83.03	82.82	82.21	81.61	81.00	81.61	82.82	80.40	76.24
Miscellaneous electrical equipment and supplies.....	111.09	107.33	108.26	105.98	100.35	105.41	105.92	105.41	104.08	102.09	103.16	105.25	106.60	96.32	93.93
Transportation equipment.....	129.73	128.27	126.10	124.49	119.19	121.93	121.09	121.96	119.97	118.69	117.26	118.66	125.13	113.81	111.52
Motor vehicles and equipment.....	137.77	137.33	132.24	131.02	121.47	127.25	125.38	128.01	124.66	121.06	119.31	122.60	133.50	115.09	115.21
Aircraft and parts.....	123.94	123.09	122.80	120.38	119.11	118.40	118.56	118.14	118.71	118.58	118.29	118.43	120.13	115.09	110.43
Ship and boat building and repairing.....	119.02	115.49	116.06	116.35	118.49	116.28	114.74	113.68	111.72	112.16	110.32	107.82	113.60	110.92	103.75
Railroad equipment.....	115.15	114.07	115.63	118.89	119.99	118.60	121.99	122.70	120.99	119.29	116.42	111.74	114.26	108.39	107.86
Other transportation equipment.....	86.94	83.85	88.07	88.78	89.01	86.24	89.24	87.33	87.91	82.18	82.47	77.49	82.60	83.71	80.13
Average weekly hours															
Electrical equipment and supplies.....	40.9	40.6	40.7	41.0	40.5	40.3	40.9	40.7	40.6	40.5	40.3	40.3	41.1	40.2	39.8
Electric distribution equipment.....	41.1	40.6	40.7	41.1	40.7	40.6	41.1	40.6	40.2	40.2	39.8	39.7	40.9	40.4	40.4
Electrical industrial apparatus.....	40.7	40.8	40.9	41.1	40.8	40.7	41.4	41.1	41.0	40.8	40.6	40.3	41.1	40.4	40.1
Household appliances.....	41.3	40.7	40.8	40.8	40.8	40.4	40.6	40.2	40.3	40.1	40.1	39.4	40.9	40.2	39.6
Electric lighting and wiring equipment.....	40.4	40.4	40.2	40.9	40.3	39.8	40.4	40.2	40.3	40.1	39.8	39.6	40.4	39.6	39.4
Radio and TV receiving sets.....	39.7	39.3	40.2	40.8	40.4	39.7	40.5	39.4	39.5	39.0	39.0	39.4	40.1	39.1	38.7
Communication equipment.....	41.4	41.1	41.2	41.5	40.8	40.6	41.2	41.5	41.5	41.4	41.3	41.4	41.9	40.6	40.5
Electronic components and accessories.....	40.1	40.0	40.0	40.3	39.7	39.5	40.5	40.4	40.3	40.2	39.9	40.2	40.8	40.2	39.5
Miscellaneous electrical equipment and supplies.....	42.4	41.6	41.8	41.4	40.3	41.5	41.7	41.5	41.3	41.0	41.1	41.6	42.3	39.8	39.8
Transportation equipment.....	43.1	42.9	42.6	42.2	41.1	41.9	41.9	42.2	41.8	41.5	41.0	41.2	43.0	40.5	40.7
Motor vehicles and equipment.....	44.3	44.3	43.5	43.1	40.9	42.7	42.5	43.1	42.4	41.6	41.0	41.7	44.5	40.1	41.0
Aircraft and parts.....	42.3	42.3	42.2	41.8	41.5	41.4	41.6	41.6	41.8	41.9	41.8	41.7	42.3	41.4	40.9
Ship and boat building and repairing.....	40.9	40.1	40.3	40.4	41.0	40.8	40.4	40.6	39.9	40.2	39.4	38.1	40.0	39.9	39.3
Railroad equipment.....	39.3	39.2	39.6	40.3	40.4	39.8	40.8	40.9	40.6	40.3	39.6	38.4	39.4	38.3	38.8
Other transportation equipment.....	39.7	39.0	40.4	41.1	41.4	40.3	41.7	41.0	40.7	38.4	38.9	36.9	38.6	39.3	38.9
Average hourly earnings															
Electrical equipment and supplies.....	\$2.45	\$2.43	\$2.42	\$2.42	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.38	\$2.38	\$2.38	\$2.38	\$2.35	\$2.28
Electric distribution equipment.....	2.60	2.58	2.57	2.56	2.53	2.56	2.55	2.53	2.50	2.48	2.49	2.49	2.51	2.50	2.42
Electrical industrial apparatus.....	2.53	2.54	2.52	2.53	2.51	2.51	2.52	2.52	2.52	2.49	2.48	2.48	2.49	2.46	2.38
Household appliances.....	2.63	2.59	2.59	2.59	2.60	2.60	2.59	2.58	2.59	2.56	2.56	2.56	2.55	2.52	2.43
Electric lighting and wiring equipment.....	2.28	2.29	2.28	2.28	2.25	2.26	2.26	2.25	2.25	2.22	2.23	2.23	2.24	2.22	2.15
Radio and TV receiving sets.....	2.20	2.18	2.18	2.20	2.17	2.16	2.17	2.14	2.17	2.14	2.14	2.13	2.13	2.11	2.07
Communication equipment.....	2.61	2.60	2.60	2.60	2.58	2.56	2.56	2.57	2.57	2.56	2.56	2.56	2.56	2.52	2.44
Electronic components and accessories.....	2.08	2.07	2.06	2.06	2.05	2.04	2.05	2.05	2.04	2.03	2.03	2.03	2.03	2.00	1.93
Miscellaneous electrical equipment and supplies.....	2.62	2.58	2.59	2.56	2.49	2.54	2.54	2.54	2.52	2.49	2.51	2.53	2.52	2.42	2.36
Transportation equipment.....	3.01	2.99	2.96	2.95	2.90	2.91	2.89	2.89	2.87	2.86	2.86	2.88	2.91	2.81	2.74
Motor vehicles and equipment.....	3.11	3.10	3.04	3.04	2.97	2.98	2.95	2.97	2.94	2.91	2.91	2.94	3.00	2.87	2.81
Aircraft and parts.....	2.93	2.91	2.91	2.88	2.87	2.86	2.85	2.84	2.84	2.83	2.83	2.84	2.84	2.78	2.70
Ship and boat building and repairing.....	2.91	2.88	2.88	2.88	2.89	2.85	2.84	2.80	2.80	2.79	2.80	2.83	2.84	2.78	2.64
Railroad equipment.....	2.93	2.91	2.92	2.95	2.97	2.98	2.99	3.00	2.98	2.96	2.94	2.91	2.90	2.83	2.78
Other transportation equipment.....	2.19	2.15	2.18	2.16	2.15	2.14	2.14	2.13	2.16	2.14	2.12	2.10	2.14	2.13	2.06

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Instruments and related products.....	\$102.18	\$101.76	\$100.61	\$100.61	\$100.04	\$99.55	\$100.94	\$99.80	\$100.04	\$98.42	\$98.82	\$99.14	\$99.95	\$97.27	\$93.73
Engineering and scientific instruments.....	118.43	119.28	119.00	118.43	118.44	117.03	118.02	115.79	114.39	107.20	115.34	115.23	115.51	112.48	110.95
Mechanical measuring and control devices.....	101.68	100.85	99.79	98.80	98.98	99.23	98.98	98.74	98.82	98.58	98.09	98.66	99.22	95.91	92.00
Optical and ophthalmic goods.....	92.60	90.64	91.30	89.84	88.78	87.29	90.27	89.01	89.87	89.01	87.51	87.33	90.27	87.33	81.80
Surgical, medical, and dental equipment.....	84.42	85.47	84.42	85.89	85.69	85.27	86.31	85.47	85.27	84.24	83.82	84.44	84.66	82.21	80.40
Photographic equipment and supplies.....	118.02	119.14	115.09	115.37	114.13	115.09	116.06	116.06	116.62	117.74	115.79	115.50	116.72	111.61	106.14
Watches and clocks.....	83.98	83.82	83.79	84.00	83.41	82.95	84.00	83.16	84.00	83.39	81.90	82.08	81.77	80.58	76.83
Miscellaneous manufacturing industries.....															
Jewelry, silverware, and plated ware.....	79.40	78.01	78.60	78.60	77.42	77.03	78.60	78.60	78.80	79.00	77.42	77.03	78.40	75.84	74.28
Toys, amusement and sporting goods.....	93.91	90.20	88.51	86.88	84.77	82.68	86.27	86.67	86.24	85.24	80.81	83.20	90.31	82.62	80.40
Pens, pencils, and office and art materials.....	69.92	70.77	72.07	71.28	70.35	69.89	70.98	71.74	72.10	71.74	70.84	69.00	70.25	70.17	67.73
Costume jewelry, buttons, and notions.....	76.17	75.98	75.55	75.52	74.61	74.07	74.82	74.58	74.99	75.39	71.25	73.32	76.36	72.86	71.92
Other manufacturing industries.....	72.47	69.30	70.98	71.64	71.06	72.25	74.07	72.72	73.02	72.98	70.25	71.50	70.56	68.60	66.13
	85.60	84.80	85.01	85.46	84.40	83.79	85.03	84.02	84.23	84.65	84.02	82.97	84.02	81.78	79.99
Average weekly hours															
Instruments and related products.....															
Engineering and scientific instruments.....	41.2	41.2	40.9	40.9	41.0	40.8	41.2	40.9	41.0	40.5	40.5	40.8	41.3	40.7	40.4
Mechanical measuring and control devices.....	41.7	42.0	41.9	41.7	42.0	41.5	42.0	41.5	41.0	38.7	40.9	41.3	41.7	40.9	41.4
Optical and ophthalmic goods.....	41.0	40.5	40.4	40.0	40.4	40.5	40.4	40.3	40.5	40.4	40.2	40.6	40.0	40.3	40.0
Surgical, medical, and dental equipment.....	41.9	41.2	41.5	41.4	41.1	40.6	41.6	41.4	41.8	41.4	40.7	41.0	41.6	41.0	40.1
Photographic equipment and supplies.....	40.2	40.7	40.2	40.9	41.0	40.8	41.1	40.7	40.8	40.5	40.3	40.4	40.7	40.3	40.0
Watches and clocks.....	42.0	42.4	41.4	41.5	41.5	41.7	41.9	41.6	41.8	42.2	41.8	42.0	42.6	41.8	41.3
	39.8	40.3	39.9	40.0	40.1	39.5	40.0	39.6	40.0	39.9	39.0	38.9	39.5	39.5	39.0
Miscellaneous manufacturing industries.....															
Jewelry, silverware, and plated ware.....	39.7	39.6	39.9	40.1	39.7	39.3	39.9	39.9	40.0	40.1	39.1	39.1	40.0	39.5	39.3
Toys, amusement, and sporting goods.....	42.3	41.0	40.6	40.6	39.8	39.0	40.5	40.5	40.3	40.4	38.3	40.0	42.8	40.3	40.2
Pens, pencils, and office and art materials.....	38.0	39.1	39.6	39.6	39.3	38.4	39.0	39.2	39.4	39.2	38.5	37.5	38.6	39.2	38.7
Costume jewelry, buttons, and notions.....	40.3	40.2	40.4	40.3	39.9	39.4	39.8	39.8	40.1	40.1	37.7	39.0	41.5	39.6	39.3
Other manufacturing industries.....	39.6	38.5	39.0	39.8	39.7	39.7	40.7	40.4	39.9	40.1	38.6	39.5	39.2	39.2	38.9
	40.0	40.0	40.1	40.5	40.0	39.9	40.3	40.2	40.3	40.5	40.2	39.7	40.2	39.7	39.6
Average hourly earnings															
Instruments and related products.....															
Engineering and scientific instruments.....	\$2.48	\$2.47	\$2.46	\$2.46	\$2.44	\$2.44	\$2.45	\$2.44	\$2.44	\$2.43	\$2.44	\$2.43	\$2.42	\$2.39	\$2.32
Mechanical measuring and control devices.....	2.84	2.84	2.84	2.84	2.82	2.82	2.81	2.79	2.79	2.77	2.82	2.79	2.77	2.75	2.68
Optical and ophthalmic goods.....	2.48	2.49	2.47	2.47	2.45	2.45	2.45	2.45	2.44	2.44	2.44	2.43	2.42	2.38	2.30
Surgical, medical, and dental equipment.....	2.21	2.20	2.20	2.17	2.16	2.15	2.17	2.15	2.15	2.15	2.15	2.13	2.17	2.13	2.04
Photographic equipment and supplies.....	2.10	2.10	2.10	2.10	2.09	2.09	2.10	2.10	2.09	2.08	2.08	2.09	2.08	2.04	2.01
Watches and clocks.....	2.81	2.81	2.78	2.78	2.75	2.76	2.77	2.79	2.79	2.79	2.77	2.75	2.74	2.67	2.57
	2.11	2.08	2.10	2.10	2.08	2.10	2.10	2.10	2.10	2.09	2.10	2.11	2.07	2.04	1.97
Miscellaneous manufacturing industries.....															
Jewelry, silverware, and plated ware.....	2.00	1.97	1.97	1.96	1.95	1.96	1.97	1.97	1.97	1.97	1.98	1.97	1.96	1.92	1.89
Toys, amusement, and sporting goods.....	2.22	2.20	2.18	2.14	2.13	2.12	2.13	2.14	2.14	2.11	2.11	2.08	2.11	2.05	2.00
Pens, pencils, and office and art materials.....	1.84	1.81	1.82	1.80	1.79	1.82	1.82	1.83	1.83	1.83	1.84	1.84	1.82	1.79	1.75
Costume jewelry, buttons, and notions.....	1.89	1.89	1.87	1.87	1.87	1.88	1.88	1.88	1.87	1.88	1.89	1.88	1.84	1.84	1.83
Other manufacturing industries.....	1.83	1.80	1.82	1.80	1.79	1.82	1.82	1.80	1.83	1.82	1.82	1.81	1.80	1.75	1.70
	2.14	2.12	2.12	2.11	2.11	2.10	2.11	2.09	2.09	2.09	2.09	2.09	2.09	2.06	2.02

See footnotes at end of table

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec.†	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
	Average weekly earnings														
Manufacturing—Continued															
<i>Nondurable goods</i>															
Food and kindred products.....	\$94.12	\$93.52	\$91.21	\$92.80	\$91.46	\$93.66	\$92.70	\$92.48	\$91.13	\$90.45	\$90.00	\$90.45	\$90.80	\$89.16	\$86.30
Meat products.....	103.50	103.58	100.86	100.04	98.42	101.68	101.26	100.60	98.09	96.43	96.08	98.46	99.96	97.58	94.83
Dairy products.....	97.33	96.64	95.79	98.01	95.63	98.08	96.54	95.63	94.53	94.53	93.66	93.66	93.04	92.65	89.68
Canned and preserved food, except meats.....	71.97	70.88	72.96	79.07	76.00	75.81	71.06	74.69	75.04	72.56	71.42	71.43	69.75	71.04	68.71
Grain mill products.....	106.18	106.65	104.41	105.33	103.51	104.20	101.47	99.01	99.39	98.95	100.30	100.97	101.89	99.46	94.15
Bakery products.....	91.88	93.20	91.71	93.48	92.21	92.89	92.66	91.35	89.65	89.20	88.58	87.69	89.47	87.64	83.81
Sugar.....	100.56	101.23	91.76	108.36	108.88	111.02	112.40	104.08	102.01	98.60	97.04	100.22	98.28	97.65	93.70
Confectionery and related products.....	77.39	77.18	78.14	79.71	77.78	75.85	76.82	76.63	74.68	75.83	74.86	73.88	74.00	73.23	69.34
Beverages.....	104.01	103.88	103.46	105.30	104.30	107.94	104.81	103.02	101.75	100.98	98.53	96.89	100.84	99.85	96.72
Miscellaneous food and kindred products.....	92.66	92.00	90.50	91.37	91.38	91.59	90.10	89.68	88.41	89.45	89.45	88.82	88.58	87.13	83.95
Tobacco manufactures.....	74.66	72.35	68.17	70.72	68.04	73.28	76.03	75.65	74.10	72.01	68.82	66.25	72.98	69.03	64.04
Cigarettes.....	95.53	95.94	86.56	93.03	89.38	88.01	91.31	91.77	90.00	87.17	84.67	79.92	91.43	85.72	80.29
Cigars.....	58.67	61.23	60.60	59.82	59.28	55.18	57.56	56.06	55.85	56.76	55.57	55.63	58.29	56.02	53.86
Textile mill products.....	68.45	68.45	68.45	67.54	68.21	68.21	69.46	69.12	68.38	68.54	66.83	66.17	67.82	65.04	63.60
Cotton broad woven fabrics.....	67.49	67.16	67.16	65.27	66.99	66.99	67.65	67.49	67.24	67.57	65.44	64.55	65.99	63.20	62.56
Silk and synthetic broad woven fabrics.....	74.99	74.47	74.47	73.35	74.04	73.53	75.17	73.70	72.76	72.16	70.81	71.31	72.91	68.72	68.31
Weaving and finishing broad woollens.....	74.80	73.67	74.44	76.80	77.96	79.06	80.89	80.41	78.62	77.11	75.90	74.76	73.99	72.28	69.83
Narrow fabrics and smallwares.....	70.69	70.07	70.07	71.45	70.76	71.10	72.98	70.93	71.28	71.21	69.49	70.86	70.79	68.11	66.07
Knitting.....	60.48	61.82	61.99	62.15	62.08	62.24	62.56	62.24	61.76	61.60	60.42	58.99	61.53	59.21	56.93
Finishing textiles, except wool and knit.....	80.22	80.04	77.98	76.59	75.26	76.04	80.97	79.55	79.79	79.00	76.99	75.48	77.47	74.70	71.73
Floor covering.....	76.86	77.33	76.72	75.58	74.45	71.10	73.69	72.16	70.75	71.81	72.51	70.62	76.01	72.04	70.62
Yarn and thread.....	61.14	61.69	62.00	61.85	62.52	62.22	63.55	63.24	62.99	63.29	61.61	61.00	62.51	59.55	58.05
Miscellaneous textile goods.....	80.93	81.12	79.73	79.32	78.72	80.10	80.67	79.52	77.74	78.31	76.33	76.55	78.66	75.36	73.60
Average weekly hours															
Food and kindred products.....	41.1	41.2	40.9	41.8	41.2	42.0	41.2	41.1	40.5	40.2	40.0	40.2	40.9	40.9	40.9
Meat products.....	41.4	41.6	41.0	41.0	40.5	41.5	41.5	41.4	40.2	39.2	38.9	39.7	40.8	41.0	40.7
Dairy products.....	42.5	42.2	42.2	42.8	42.5	43.4	43.1	42.5	42.2	42.2	42.0	42.0	42.1	42.5	42.3
Canned and preserved food, except meats.....	37.1	37.5	38.4	41.4	40.0	41.2	37.4	38.5	37.9	37.4	37.2	37.4	37.3	38.4	38.6
Grain mill products.....	44.8	45.0	45.2	45.4	45.4	45.7	45.3	44.2	43.4	43.4	43.8	43.9	44.3	44.8	44.2
Bakery products.....	40.3	40.7	40.4	41.0	40.8	41.1	41.0	40.6	40.2	40.0	39.9	39.9	40.3	40.2	40.1
Sugar.....	45.5	45.6	40.6	42.0	42.2	42.7	42.9	41.3	41.3	39.6	40.1	43.2	46.8	43.4	44.2
Confectionery and related products.....	40.1	40.2	40.7	41.3	40.3	38.9	39.6	39.5	39.1	39.7	39.4	39.3	40.0	39.8	39.4
Beverages.....	39.7	39.8	40.1	40.5	40.9	42.0	41.1	40.4	39.9	39.6	39.1	38.6	39.7	40.1	40.3
Miscellaneous food and kindred products.....	43.3	43.6	43.3	43.1	42.7	42.8	42.3	42.3	42.3	42.8	42.8	42.7	43.0	42.5	42.4
Tobacco manufactures.....	39.5	38.9	40.1	41.6	37.8	37.2	38.4	38.4	38.0	37.7	37.4	36.6	40.1	39.0	38.2
Cigarettes.....	41.0	41.0	37.8	40.1	39.2	38.6	39.7	39.9	39.3	38.4	37.8	36.0	41.0	39.5	38.6
Cigars.....	38.1	39.0	38.6	38.1	38.0	35.6	36.9	36.4	36.3	37.1	36.8	36.6	38.1	37.6	37.4
Textile mill products.....	40.5	40.5	40.5	40.2	40.6	40.6	41.1	40.9	40.7	40.8	40.5	40.1	41.1	39.9	39.5
Cotton broad woven fabrics.....	40.9	40.7	40.7	39.8	40.6	40.6	41.0	40.9	41.0	41.2	40.9	40.6	41.5	40.0	40.1
Silk and synthetic broad woven fabrics.....	43.1	42.8	42.8	42.4	42.8	42.5	43.2	42.6	42.3	42.2	42.4	42.7	43.4	41.4	41.4
Weaving and finishing broad woollens.....	41.1	40.7	40.9	42.2	42.6	43.2	44.2	43.7	43.2	42.6	42.4	42.0	41.8	41.3	40.6
Narrow fabrics and smallwares.....	41.1	40.5	40.5	41.3	40.9	41.1	41.7	41.0	41.2	41.4	40.4	41.2	41.4	40.3	39.8
Knitting.....	37.8	38.4	38.5	38.6	38.8	38.9	39.1	38.9	38.6	38.5	38.0	37.1	38.7	38.2	37.7
Finishing textiles, except wool and knit.....	42.9	42.8	41.7	41.4	40.9	41.1	43.3	43.0	42.9	42.7	42.3	41.7	42.8	41.5	40.3
Floor covering.....	42.7	43.2	43.1	42.7	42.3	40.4	41.4	41.0	40.2	40.8	41.2	39.9	42.7	40.7	39.9
Yarn and thread.....	39.7	39.8	40.0	39.9	40.6	40.4	41.0	40.8	40.9	41.1	40.8	40.4	41.4	39.7	38.7
Miscellaneous textile goods.....	41.5	41.6	41.1	41.1	41.0	41.5	41.8	41.2	40.7	41.0	40.6	40.5	41.4	40.3	40.0
Average hourly earnings															
Food and kindred products.....	\$2.29	\$2.27	\$2.23	\$2.22	\$2.22	\$2.23	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25	\$2.22	\$2.18	\$2.11
Meat products.....	2.50	2.49	2.46	2.44	2.43	2.45	2.44	2.43	2.44	2.46	2.47	2.48	2.45	2.38	2.33
Dairy products.....	2.29	2.29	2.27	2.29	2.25	2.26	2.24	2.25	2.24	2.24	2.23	2.23	2.21	2.18	2.12
Canned and preserved food, except meats.....	1.94	1.89	1.90	1.91	1.90	1.84	1.90	1.94	1.98	1.94	1.92	1.91	1.87	1.85	1.78
Grain mill products.....	2.37	2.37	2.31	2.32	2.28	2.28	2.24	2.24	2.29	2.28	2.29	2.30	2.30	2.22	2.13
Bakery products.....	2.28	2.29	2.27	2.28	2.26	2.26	2.26	2.25	2.23	2.23	2.22	2.22	2.22	2.18	2.09
Sugar.....	2.21	2.22	2.26	2.58	2.98	2.60	2.62	2.52	2.47	2.49	2.42	2.32	2.10	2.25	2.12
Confectionery and related products.....	1.93	1.92	1.92	1.93	1.93	1.95	1.94	1.94	1.91	1.91	1.90	1.88	1.85	1.84	1.76
Beverages.....	2.62	2.61	2.58	2.60	2.55	2.57	2.55	2.55	2.55	2.55	2.52	2.51	2.54	2.49	2.40
Miscellaneous food and kindred products.....	2.14	2.11	2.09	2.12	2.14	2.14	2.13	2.12	2.09	2.09	2.09	2.08	2.06	2.05	1.98
Tobacco manufactures.....	1.89	1.86	1.70	1.70	1.80	1.97	1.98	1.97	1.95	1.91	1.84	1.81	1.82	1.77	1.70
Cigarettes.....	2.33	2.34	2.29	2.32	2.28	2.28	2.30	2.30	2.29	2.27	2.24	2.22	2.23	2.17	2.08
Cigars.....	1.54	1.57	1.57	1.57	1.56	1.55	1.56	1.54	1.53	1.53	1.51	1.52	1.53	1.49	1.44
Textile mill products.....	1.69	1.69	1.69	1.68	1.68	1.68	1.69	1.69	1.68	1.68	1.65	1.65	1.65	1.63	1.61
Cotton broad woven fabrics.....	1.65	1.65	1.65	1.64	1.65	1.65	1.65	1.65	1.64	1.64	1.60	1.59	1.59	1.58	1.56
Silk and synthetic broad woven fabrics.....	1.74	1.74	1.74	1.73	1.73	1.73	1.74	1.73	1.72	1.71	1.67	1.67	1.68	1.66	1.65
Weaving and finishing broad woollens.....	1.82	1.81	1.82	1.82	1.83	1.83	1.83	1.84	1.82	1.81	1.79	1.78	1.77	1.75	1.72
Narrow fabrics and smallwares.....	1.72	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.72	1.72	1.72	1.71	1.69	1.66
Knitting.....	1.60	1.61	1.61	1.61	1.60	1.60	1.60	1.60	1.60	1.60	1.59	1.59	1.59	1.55	1.51
Finishing textiles, except wool and knit.....	1.87	1.87	1.87	1.85	1.84	1.85	1.87	1.85	1.86	1.85	1.82	1.81	1.81	1.80	1.78
Floor covering.....	1.80	1.79	1.78	1.77	1.76	1.76	1.78	1.76	1.76	1.76	1.76	1.77	1.78	1.77	1.77
Yarn and thread.....	1.54	1.55	1.55	1.55	1.54	1.54	1.55	1.55	1.54	1.54	1.51	1.51	1.51	1.50	1.50
Miscellaneous textile goods.....	1.95	1.95	1.94	1.93	1.92	1.93	1.93	1.93	1.91	1.91	1.88				

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Manufacturing—Continued	Average weekly earnings														
<i>Nondurable goods—Continued</i>															
Apparel and related products.....	\$59.95	\$60.62	\$59.95	\$61.32	\$62.16	\$60.76	\$61.09	\$60.59	\$60.96	\$61.49	\$59.95	\$57.62	\$59.95	\$57.70	\$56.45
Men's and boys' suits and coats.....	72.93	72.54	71.57	74.09	73.89	73.53	74.09	73.50	72.17	71.39	69.67	68.68	71.78	67.78	68.27
Men's and boys' furnishings.....	52.91	53.77	53.77	54.48	54.81	53.58	54.95	53.58	53.30	53.82	53.39	49.70	53.25	49.87	48.55
Women's, misses', and juniors' outerwear.....	62.79	63.17	62.32	65.23	67.16	65.74	63.64	64.73	66.72	66.85	64.41	61.48	63.08	61.61	58.76
Women's and children's undergarments.....	55.33	57.22	56.92	57.07	56.47	55.12	55.02	54.77	55.39	55.69	54.11	52.74	55.63	53.87	51.91
Hats, caps, and millinery.....	65.14	62.46	63.68	66.79	69.00	68.26	65.70	61.60	66.07	68.63	66.80	63.55	64.08	63.19	60.54
Girls' and children's outerwear.....	52.65	53.61	53.35	54.72	55.69	56.63	56.30	54.51	54.36	55.94	55.18	53.96	52.85	52.75	51.64
Fur goods and miscellaneous apparel.....	64.26	64.79	63.89	64.05	62.59	62.29	63.70	61.23	62.47	62.78	61.06	61.08	65.16	60.86	58.74
Miscellaneous fabricated textile products.....	64.73	64.90	64.68	63.96	63.03	61.38	63.96	63.71	61.92	62.04	61.09	60.82	63.34	61.45	60.48
Paper and allied products.....	104.68	103.28	103.28	104.49	103.82	103.58	102.96	101.34	101.10	101.15	100.20	100.20	101.91	99.45	95.37
Paper and pulp.....	115.46	114.23	113.45	114.06	113.36	114.58	112.75	111.10	110.85	110.93	110.93	110.85	111.69	109.69	105.46
Paperboard.....	118.82	115.01	113.45	116.77	117.64	116.59	115.58	112.46	112.46	112.01	110.56	111.51	113.48	109.44	105.16
Converted paper and paperboard products.....	92.57	90.20	90.42	91.52	91.10	89.60	90.69	89.60	89.40	88.97	88.32	88.32	91.79	87.13	83.23
Paperboard containers and boxes.....	94.24	94.05	95.15	97.13	94.73	94.05	94.08	92.74	91.88	92.77	90.17	89.95	92.18	90.47	86.10
Printing, publishing, and allied industries.....	109.62	108.49	107.82	109.62	108.29	107.34	107.62	107.90	107.90	107.42	106.68	105.36	107.97	105.05	102.80
Newspaper publishing and printing.....	114.95	113.04	111.08	111.38	109.99	109.87	110.23	110.90	110.23	107.28	107.40	106.68	112.04	107.38	105.33
Periodical publishing and printing.....	114.40	111.83	114.11	118.55	115.83	111.95	114.62	108.58	110.15	111.44	109.09	110.09	109.20	110.09	109.18
Books.....	100.04	97.64	98.11	102.16	101.18	98.64	100.00	101.75	99.54	101.68	99.94	99.60	99.54	99.06	95.82
Commercial printing.....	110.83	110.37	109.70	111.11	110.54	109.87	109.87	109.87	110.04	110.21	108.70	106.81	109.30	106.20	103.88
Bookbinding and related industries.....	86.63	85.19	85.63	88.53	87.30	84.75	85.31	86.36	85.58	84.92	83.82	83.82	84.42	82.13	78.87
Other publishing and printing industries.....	111.46	110.01	108.77	110.21	109.35	110.11	110.11	109.16	110.88	111.84	111.94	110.59	111.15	108.19	106.37
	Average weekly hours														
Apparel and related products.....	35.9	36.3	35.9	36.5	37.0	36.6	36.8	36.5	36.5	36.6	35.9	34.5	35.9	35.4	35.5
Men's and boys' suits and coats.....	37.4	37.2	36.7	37.8	37.7	38.1	37.8	37.5	37.2	36.8	36.1	35.4	37.0	35.3	36.9
Men's and boys' furnishings.....	37.0	37.6	37.6	38.1	38.6	38.0	38.7	38.0	37.8	37.9	37.6	35.0	37.5	36.4	36.5
Women's, misses', and juniors' outerwear.....	33.4	33.6	32.8	33.8	34.8	34.6	34.4	34.8	35.3	35.0	33.9	32.7	33.2	33.3	33.2
Women's and children's undergarments.....	36.4	37.4	37.2	37.3	37.4	36.5	36.2	35.8	36.2	36.4	35.6	34.7	36.6	36.4	35.8
Hats, caps, and millinery.....	36.8	34.7	34.8	36.3	37.5	36.5	36.5	35.0	36.3	37.3	36.5	35.5	36.0	35.7	35.2
Girls' and children's outerwear.....	35.1	35.5	35.1	36.0	36.4	36.6	36.8	36.1	36.0	36.8	36.3	35.5	35.0	35.4	35.3
Fur goods and miscellaneous apparel.....	36.1	36.4	36.3	36.6	36.6	35.8	36.4	35.6	35.9	36.5	35.5	34.9	36.4	35.8	35.6
Miscellaneous fabricated textile products.....	38.3	38.4	38.5	38.3	38.2	37.2	38.3	37.7	37.3	37.6	36.8	36.2	37.7	37.7	37.8
Paper and allied products.....	42.9	42.5	42.5	43.0	42.9	42.8	42.9	42.4	42.3	42.5	42.2	42.1	43.0	42.5	42.2
Paper and pulp.....	43.9	43.6	43.3	43.7	43.6	43.9	43.7	43.4	43.3	43.5	43.5	43.3	43.8	43.7	43.4
Paperboard.....	44.5	43.4	43.3	44.4	44.9	44.5	44.8	44.1	44.1	44.1	43.7	43.9	44.5	43.6	43.1
Converted paper and paperboard products.....	41.7	41.0	41.1	41.6	41.6	41.1	41.6	41.1	41.2	41.0	40.7	40.7	42.3	41.1	40.8
Paperboard containers and boxes.....	41.7	41.8	42.1	42.6	42.1	41.8	42.0	41.4	41.2	41.6	40.8	40.7	41.9	41.5	41.0
Printing, publishing, and allied industries.....	38.6	38.2	38.1	38.6	38.4	38.2	38.3	38.4	38.4	38.5	38.1	37.9	38.7	38.2	38.5
Newspaper publishing and printing.....	37.2	36.7	36.3	36.4	36.3	36.5	36.5	36.6	36.5	36.0	35.8	35.8	37.1	36.4	36.7
Periodical publishing and printing.....	40.0	39.1	39.9	40.6	40.5	39.7	40.5	39.2	39.2	39.8	39.1	39.6	39.0	39.6	39.7
Books.....	39.7	38.9	39.4	40.7	40.8	39.3	40.0	40.7	40.3	41.0	40.3	40.0	40.3	40.6	40.6
Commercial printing.....	39.3	39.0	38.9	39.4	39.2	39.1	39.1	39.1	39.3	39.5	39.1	38.7	39.6	38.9	39.2
Bookbinding and related industries.....	38.5	38.2	38.4	39.7	39.5	38.7	38.6	38.9	38.9	38.6	38.1	38.1	38.2	38.2	38.1
Other publishing and printing industries.....	38.7	38.6	38.3	38.4	38.1	38.1	38.5	38.3	38.5	38.7	38.6	38.4	39.0	38.5	38.4
	Average hourly earnings														
Apparel and related products.....	\$1.67	\$1.67	\$1.67	\$1.68	\$1.68	\$1.66	\$1.66	\$1.66	\$1.67	\$1.68	\$1.67	\$1.67	\$1.67	\$1.63	\$1.59
Men's and boys' suits and coats.....	1.95	1.95	1.95	1.96	1.96	1.93	1.96	1.96	1.94	1.94	1.93	1.94	1.94	1.92	1.85
Men's and boys' furnishings.....	1.43	1.43	1.43	1.43	1.42	1.41	1.42	1.41	1.41	1.42	1.42	1.42	1.42	1.37	1.33
Women's, misses', and juniors' outerwear.....	1.88	1.88	1.90	1.93	1.93	1.90	1.85	1.86	1.89	1.90	1.90	1.88	1.90	1.85	1.77
Women's and children's undergarments.....	1.52	1.53	1.53	1.53	1.51	1.51	1.52	1.53	1.53	1.53	1.52	1.52	1.52	1.48	1.45
Hats, caps, and millinery.....	1.77	1.80	1.83	1.84	1.84	1.87	1.80	1.76	1.82	1.84	1.83	1.79	1.78	1.77	1.72
Girls' and children's outerwear.....	1.50	1.51	1.52	1.52	1.53	1.52	1.53	1.51	1.51	1.52	1.52	1.52	1.51	1.49	1.46
Fur goods and miscellaneous apparel.....	1.78	1.78	1.76	1.75	1.71	1.74	1.75	1.72	1.74	1.72	1.72	1.75	1.79	1.70	1.65
Miscellaneous fabricated textile products.....	1.69	1.69	1.68	1.67	1.65	1.65	1.67	1.69	1.66	1.65	1.66	1.68	1.68	1.63	1.60
Paper and allied products.....	2.44	2.43	2.43	2.43	2.42	2.42	2.40	2.39	2.39	2.38	2.37	2.38	2.37	2.34	2.26
Paper and pulp.....	2.63	2.62	2.62	2.61	2.60	2.61	2.58	2.56	2.56	2.55	2.55	2.56	2.55	2.51	2.43
Paperboard.....	2.67	2.65	2.62	2.63	2.62	2.62	2.58	2.55	2.55	2.54	2.53	2.54	2.55	2.51	2.44
Converted paper and paperboard products.....	2.22	2.20	2.20	2.20	2.19	2.18	2.18	2.18	2.17	2.17	2.17	2.17	2.17	2.12	2.04
Paperboard containers and boxes.....	2.26	2.25	2.26	2.28	2.25	2.25	2.24	2.24	2.23	2.23	2.21	2.21	2.20	2.18	2.10
Printing, publishing, and allied industries.....	2.84	2.84	2.83	2.84	2.82	2.81	2.81	2.81	2.81	2.79	2.80	2.78	2.79	2.75	2.67
Newspaper publishing and printing.....	3.09	3.08	3.06	3.06	3.03	3.03	3.02	3.03	3.02	2.98	3.00	2.98	3.02	2.95	2.87
Periodical publishing and printing.....	2.86	2.86	2.86	2.92	2.86	2.82	2.83	2.77	2.81	2.80	2.79	2.78	2.80	2.78	2.75
Books.....	2.52	2.51	2.49	2.51	2.48	2.51	2.50	2.50	2.47	2.48	2.48	2.49	2.47	2.44	2.36
Commercial printing.....	2.82	2.83	2.82	2.82	2.82	2.81	2.81	2.81	2.80	2.79	2.78	2.76	2.76	2.73	2.65
Bookbinding and related industries.....	2.25	2.23	2.23	2.23	2.21	2.19	2.21	2.22	2.20	2.20	2.20	2.20	2.21	2.15	2.07
Other publishing and printing industries.....	2.88	2.85	2.84	2.87	2.87	2.89	2.86	2.85	2.88	2.89	2.90	2.88	2.85	2.81	2.77

See footnotes at end of table

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Manufacturing—Continued															
<i>Nondurable goods—Continued</i>															
Chemicals and allied products.....	\$112.17	\$111.37	\$110.95	\$110.81	\$110.12	\$110.81	\$111.19	\$109.52	\$108.84	\$108.05	\$108.47	\$109.56	\$108.99	\$106.81	\$103.25
Industrial chemicals.....	127.26	126.65	126.05	125.52	124.09	124.80	125.16	123.73	123.43	122.43	122.72	124.62	123.19	120.93	117.31
Plastics and synthetics, except glass.....	111.61	109.86	109.59	110.24	110.24	111.41	112.52	109.62	109.62	108.94	110.04	110.46	110.56	107.74	104.17
Drugs.....	101.02	100.12	100.19	98.16	98.23	97.92	98.88	98.57	97.10	96.87	97.58	97.82	96.52	93.96	90.68
Soap, cleaners, and toilet goods.....	103.98	103.98	103.48	105.32	103.98	103.79	103.73	101.50	101.69	100.53	100.78	101.34	101.27	98.98	94.77
Paints, varnishes, and allied products.....	102.06	101.66	100.75	101.75	102.34	102.09	104.25	105.00	102.42	100.04	98.65	98.65	99.47	98.25	95.65
Agricultural chemicals.....	90.73	89.46	89.68	90.31	86.72	88.20	87.77	92.57	87.12	85.80	86.25	84.46	87.14	84.15	82.37
Other chemical products.....	107.36	105.66	105.57	106.17	105.08	104.42	104.75	103.09	102.67	102.09	101.43	102.75	102.84	101.19	97.06
Petroleum refining and related industries.....	126.38	127.71	127.19	131.09	126.35	129.44	127.68	126.05	125.55	123.32	123.02	128.44	123.62	124.42	118.78
Petroleum refining.....	132.16	132.57	130.88	135.24	129.34	133.54	131.65	130.60	129.97	127.58	128.61	135.14	129.34	129.42	123.22
Other petroleum and coal products.....	104.17	108.03	113.48	115.57	113.40	113.70	111.95	106.27	104.73	103.49	97.77	98.15	97.44	102.10	99.26
Rubber and miscellaneous plastic products.....	103.00	101.84	101.02	101.76	101.02	101.84	104.58	101.19	99.63	98.25	97.28	99.31	102.83	96.72	92.97
Tires and inner tubes.....	134.55	132.75	132.11	131.78	131.70	136.83	138.13	130.19	125.83	122.45	121.52	127.26	137.06	121.88	116.33
Other rubber products.....	97.47	96.59	95.30	96.46	94.42	93.90	98.05	96.05	95.17	94.07	92.69	94.48	95.87	91.53	87.82
Miscellaneous plastic products.....	86.10	85.26	85.48	86.53	85.28	85.89	87.36	85.90	85.08	85.08	84.05	83.84	84.05	82.82	79.40
Leather and leather products.....	64.84	64.03	62.63	64.36	65.53	65.84	65.88	63.98	63.81	65.36	64.98	66.18	66.18	62.83	60.52
Leather tanning and finishing.....	88.40	87.78	88.44	88.26	87.82	85.89	88.70	88.29	86.80	85.57	86.40	86.55	88.10	84.35	81.74
Footwear, except rubber.....	62.46	60.67	59.30	61.69	63.67	64.46	64.01	61.65	61.32	63.17	63.29	64.41	63.91	60.15	58.04
Other leather products.....	62.58	64.05	61.79	62.75	62.37	62.21	63.08	61.55	62.37	63.20	62.04	62.37	63.53	61.07	58.62
Average weekly hours															
Chemicals and allied products.....	41.7	41.4	41.4	41.5	41.4	41.5	41.8	41.8	41.7	41.4	41.4	41.5	41.6	41.4	41.3
Industrial chemicals.....	42.0	41.8	41.6	41.7	41.5	41.6	42.0	41.8	41.7	41.5	41.6	42.1	41.9	41.7	41.6
Plastics and synthetics, except glass.....	41.8	41.3	41.2	41.6	41.6	42.2	42.3	42.0	42.0	41.9	42.0	42.0	42.2	41.6	41.5
Drugs.....	41.4	41.2	41.4	40.9	41.1	40.8	41.2	40.9	40.8	40.7	41.0	41.1	40.9	40.5	40.3
Soap, cleaners, and toilet goods.....	41.1	41.1	40.9	41.3	41.1	40.7	41.0	40.6	40.8	40.7	40.8	40.7	41.0	40.9	40.5
Paints, varnishes, and allied products.....	40.5	40.5	40.3	40.7	41.1	41.0	41.7	42.0	41.3	40.5	40.1	40.1	40.6	40.6	40.7
Agricultural chemicals.....	42.2	42.0	42.5	42.6	41.1	42.2	42.4	45.6	44.0	42.9	42.7	40.8	42.3	42.5	42.9
Other chemical products.....	42.1	41.6	41.4	41.8	41.7	41.6	41.9	41.4	41.4	41.0	40.9	41.1	41.3	41.3	41.3
Petroleum refining and related industries.....	41.3	41.6	41.7	42.7	41.7	42.3	42.0	41.6	41.3	40.7	40.6	41.7	40.8	41.2	41.1
Petroleum refining.....	41.3	41.3	40.9	42.0	40.8	41.6	41.4	41.2	41.0	40.5	40.7	42.1	40.8	40.9	40.8
Other petroleum and coal products.....	41.5	42.7	44.5	45.5	45.0	45.3	44.6	43.2	42.4	41.9	40.4	39.9	40.6	42.9	42.6
Rubber and miscellaneous plastic products.....	41.2	40.9	40.9	41.2	40.9	40.9	42.0	41.3	41.0	40.6	40.2	40.7	41.8	40.3	39.9
Tires and inner tubes.....	41.4	41.1	40.9	40.8	40.9	42.1	42.5	41.2	40.2	39.5	39.2	40.4	43.1	39.7	39.3
Other rubber products.....	41.3	41.1	40.9	41.4	40.7	40.3	41.9	41.4	41.2	40.9	40.3	40.9	41.5	40.5	40.1
Miscellaneous plastic products.....	41.0	40.6	40.9	41.4	41.0	40.9	41.8	41.3	41.3	41.1	40.8	40.7	41.0	40.6	40.1
Leather and leather products.....	37.7	36.8	36.2	37.2	38.1	38.5	38.3	37.2	37.1	38.0	38.0	38.7	38.7	37.4	36.9
Leather tanning and finishing.....	40.0	39.9	40.2	40.3	40.1	39.4	40.5	40.5	40.0	39.8	40.0	39.7	40.6	39.6	39.3
Footwear, except rubber.....	37.4	35.9	35.3	36.5	37.9	38.6	38.1	36.7	36.5	37.6	37.9	38.8	38.5	36.9	36.5
Other leather products.....	37.7	37.9	37.0	37.8	37.8	37.7	38.0	37.3	37.8	38.3	37.6	37.8	38.5	37.7	37.1
Average hourly earnings															
Chemicals and allied products.....	\$2.69	\$2.69	\$2.68	\$2.67	\$2.66	\$2.67	\$2.66	\$2.62	\$2.61	\$2.61	\$2.62	\$2.64	\$2.62	\$2.58	\$2.50
Industrial chemicals.....	3.03	3.03	3.03	3.01	2.99	3.00	2.98	2.96	2.96	2.95	2.95	2.96	2.94	2.90	2.82
Plastics and synthetics, except glass.....	2.67	2.66	2.66	2.65	2.65	2.64	2.66	2.61	2.61	2.60	2.62	2.63	2.62	2.59	2.51
Drugs.....	2.44	2.43	2.42	2.40	2.39	2.40	2.40	2.41	2.38	2.38	2.38	2.38	2.36	2.32	2.25
Soap, cleaners, and toilet goods.....	2.53	2.53	2.53	2.55	2.53	2.55	2.53	2.50	2.49	2.47	2.47	2.49	2.47	2.42	2.34
Paints, varnishes, and allied products.....	2.52	2.51	2.50	2.50	2.49	2.49	2.50	2.50	2.48	2.47	2.46	2.46	2.45	2.42	2.35
Agricultural chemicals.....	2.15	2.13	2.11	2.12	2.11	2.09	2.07	2.03	1.98	2.00	2.02	2.07	2.06	1.98	1.92
Other chemical products.....	2.55	2.54	2.55	2.54	2.52	2.51	2.50	2.49	2.48	2.49	2.48	2.50	2.49	2.45	2.35
Petroleum refining and related industries.....	3.06	3.07	3.05	3.07	3.03	3.06	3.04	3.03	3.04	3.03	3.03	3.08	3.03	3.02	2.89
Petroleum refining.....	3.20	3.21	3.20	3.22	3.17	3.21	3.18	3.17	3.17	3.15	3.16	3.21	3.18	3.16	3.02
Other petroleum and coal products.....	2.51	2.53	2.55	2.54	2.52	2.51	2.51	2.46	2.47	2.47	2.42	2.46	2.40	2.38	2.33
Rubber and miscellaneous plastic products.....	2.50	2.49	2.47	2.47	2.47	2.49	2.49	2.45	2.43	2.42	2.42	2.44	2.46	2.40	2.33
Tires and inner tubes.....	3.25	3.23	3.23	3.23	3.22	3.25	3.25	3.16	3.13	3.10	3.10	3.15	3.18	3.07	2.96
Other rubber products.....	2.36	2.35	2.33	2.33	2.32	2.33	2.34	2.32	2.31	2.30	2.30	2.31	2.31	2.26	2.19
Miscellaneous plastic products.....	2.10	2.10	2.09	2.09	2.08	2.10	2.09	2.08	2.06	2.07	2.06	2.06	2.05	2.04	1.98
Leather and leather products.....	1.72	1.74	1.73	1.73	1.72	1.71	1.72	1.72	1.72	1.72	1.71	1.71	1.71	1.68	1.64
Leather tanning and finishing.....	2.21	2.20	2.20	2.19	2.19	2.18	2.19	2.18	2.17	2.15	2.16	2.18	2.17	2.13	2.08
Footwear, except rubber.....	1.67	1.69	1.68	1.69	1.68	1.67	1.68	1.68	1.68	1.68	1.67	1.66	1.66	1.63	1.59
Other leather products.....	1.66	1.69	1.67	1.66	1.65	1.65	1.66	1.65	1.65	1.65	1.65	1.65	1.65	1.62	1.58

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ³				\$114.26	\$118.21	\$116.45	\$115.33	\$114.65	\$112.02	\$113.48	\$117.12	\$114.54	\$112.44	\$112.41	\$108.84
Local and interurban passenger transit:															
Local and suburban transportation.....	\$100.14	\$100.62	\$100.38	100.20	101.01	100.49	101.48	100.58	100.11	99.30	99.22	100.11	99.93	98.24	94.82
Intercity and rural buslines.....	116.33	117.73	119.14	125.65	129.44	126.62	121.80	117.85	115.37	112.61	117.23	117.15	113.63	112.14	105.22
Motor freight transportation and storage.....	115.23	113.30	113.30	115.78	115.35	114.81	114.39	112.61	112.06	110.70	109.47	108.79	111.72	108.16	104.17
Pipeline transportation.....	136.94	131.78	130.07	135.05	130.09	137.37	133.50	130.17	129.85	130.40	131.13	135.38	133.50	131.78	124.53
Communication:															
Telephone communication.....	101.35	103.07	102.06	102.31	99.29	99.54	97.66	96.14	95.65	95.89	96.14	95.88	96.38	93.38	89.50
Telegraph communication ⁴	106.97	105.78	107.74	109.98	110.08	111.11	111.28	108.61	105.42	105.00	105.00	104.50	103.58	104.08	100.01
Radio and television broadcasting.....	131.60	132.78	131.14	130.81	126.10	127.53	124.68	126.16	126.81	124.68	124.23	123.65	124.41	119.74	121.13
Electric, gas, and sanitary services:															
Electric companies and systems.....	121.47	119.48	118.78	118.94	116.85	117.14	115.87	115.46	115.46	115.34	114.65	115.77	114.80	112.48	108.65
Gas companies and systems.....	121.60	119.80	120.30	120.06	118.82	119.11	117.14	116.31	116.03	117.58	114.65	115.62	114.80	112.75	109.45
Combined utility systems.....	115.09	111.11	110.70	111.51	106.92	107.73	106.80	107.06	107.20	105.18	106.11	109.30	107.01	104.19	100.69
Water, steam, and sanitary systems.....	130.94	129.27	128.23	127.82	125.97	125.87	125.26	125.66	125.46	125.46	125.05	125.25	124.94	121.77	117.26
	96.70	97.34	95.47	97.29	95.06	96.59	94.37	93.96	94.37	93.09	94.02	95.26	92.75	93.02	89.84
Average weekly hours															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ³				41.1	43.3	42.5	42.4	43.1	41.8	42.5	42.9	42.9	41.8	42.1	41.7
Local and interurban passenger transit:															
Local and suburban transportation.....	41.9	42.1	42.0	42.1	42.8	42.4	43.0	42.8	42.6	42.8	42.4	42.6	43.0	42.9	43.1
Intercity and rural buslines.....	41.4	41.6	42.4	44.4	45.9	44.9	43.5	42.7	41.8	41.1	43.1	42.6	42.4	42.8	42.6
Motor freight transportation and storage.....	41.6	41.2	41.5	42.1	42.1	41.9	41.9	41.4	41.2	41.0	41.0	40.9	42.0	41.6	41.5
Pipeline transportation.....	41.0	40.3	39.9	40.8	40.4	41.5	40.7	40.3	40.2	40.0	40.1	41.4	40.7	40.3	40.3
Communication:															
Telephone communication.....	39.9	40.9	40.5	40.6	40.2	40.3	39.7	39.4	39.2	39.3	39.4	39.3	39.5	39.4	39.6
Telegraph communication ⁴	41.3	41.0	41.6	42.3	42.5	42.9	42.8	43.1	42.0	42.0	41.8	41.6	41.8	41.8	42.2
Radio and television broadcasting.....	39.4	39.4	39.5	39.4	38.8	39.0	38.6	38.7	38.9	38.6	38.7	38.4	39.0	38.5	38.7
Electric, gas, and sanitary services:															
Electric companies and systems.....	41.6	41.2	41.1	41.3	41.0	41.1	40.8	40.8	40.8	40.9	40.8	41.2	41.0	40.9	41.0
Gas companies and systems.....	41.5	41.2	41.2	41.4	41.4	41.5	41.1	41.1	41.0	41.4	40.8	41.0	41.0	41.0	41.3
Combined utility systems.....	41.7	41.0	41.0	41.3	40.5	40.5	40.3	40.4	40.3	40.3	40.5	41.4	41.0	40.7	40.6
Water, steam, and sanitary systems.....	41.7	41.3	41.1	41.1	40.9	41.0	40.8	40.8	41.0	41.0	41.0	41.2	41.1	41.0	41.0
	40.8	40.9	40.8	41.4	40.8	41.1	40.5	40.5	40.5	40.3	40.7	41.6	40.5	40.8	41.4
Average hourly earnings															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ³				\$2.78	\$2.73	\$2.74	\$2.72	\$2.66	\$2.68	\$2.67	\$2.73	\$2.67	\$2.69	\$2.67	\$2.61
Local and interurban passenger transit:															
Local and suburban transportation.....	\$2.39	\$2.39	\$2.39	2.38	2.36	2.37	2.36	2.35	2.35	2.32	2.34	2.35	2.31	2.29	2.20
Intercity and rural buslines.....	2.81	2.83	2.81	2.83	2.82	2.82	2.80	2.76	2.76	2.74	2.72	2.75	2.68	2.62	2.47
Motor freight transportation and storage.....	2.77	2.75	2.73	2.75	2.74	2.74	2.73	2.72	2.72	2.70	2.67	2.66	2.66	2.60	2.51
Pipeline transportation.....	3.34	3.27	3.26	3.31	3.22	3.31	3.28	3.23	3.23	3.26	3.27	3.27	3.28	3.27	3.09
Communication:															
Telephone communication.....	2.54	2.52	2.52	2.52	2.47	2.47	2.46	2.44	2.44	2.44	2.44	2.44	2.44	2.37	2.26
Telegraph communication ⁴	2.59	2.58	2.59	2.60	2.59	2.59	2.60	2.52	2.51	2.50	2.50	2.50	2.49	2.49	2.37
Radio and television broadcasting.....	3.34	3.37	3.32	3.32	3.25	3.27	3.23	3.26	3.26	3.23	3.21	3.22	3.19	3.11	3.13
Electric, gas, and sanitary services:															
Electric companies and systems.....	2.92	2.90	2.89	2.88	2.85	2.85	2.84	2.83	2.83	2.82	2.81	2.81	2.80	2.75	2.65
Gas companies and systems.....	2.93	2.91	2.92	2.90	2.87	2.87	2.85	2.83	2.83	2.84	2.81	2.82	2.80	2.75	2.65
Combined utility systems.....	2.76	2.71	2.70	2.70	2.64	2.66	2.65	2.65	2.66	2.61	2.62	2.64	2.61	2.56	2.48
Water, steam, and sanitary systems.....	3.14	3.13	3.12	3.11	3.08	3.07	3.07	3.08	3.06	3.06	3.05	3.04	3.04	2.97	2.86
	2.37	2.38	2.34	2.35	2.33	2.35	2.33	2.32	2.33	2.31	2.31	2.29	2.29	2.28	2.17

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. 2	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Wholesale and retail trade ²	\$75.47	\$75.65	\$75.46	\$76.05	\$76.44	\$76.44	\$75.86	\$74.88	\$74.31	\$74.50	\$73.92	\$73.92	\$73.32	\$72.94	\$70.98
Wholesale trade.....	98.33	97.44	97.03	98.09	96.87	97.10	96.87	96.22	95.82	95.18	94.30	94.13	95.47	93.56	91.13
Motor vehicles and automotive equipment.....	93.83	93.41	93.86	93.86	93.26	93.04	92.84	93.46	92.84	91.98	92.20	91.56	91.79	89.46	86.53
Drugs, chemicals, and allied products.....	99.45	99.70	98.80	99.94	97.84	98.09	96.96	96.47	97.04	96.24	96.32	95.84	96.00	94.24	91.20
Dry goods and apparel.....	93.21	92.12	92.74	93.25	92.74	91.99	91.37	91.85	94.96	94.35	92.10	91.96	93.70	92.86	90.68
Groceries and related products.....	92.20	91.96	91.30	92.35	91.96	91.76	90.49	89.66	88.60	87.76	86.69	87.33	88.20	87.14	84.67
Electrical goods.....	103.07	102.97	102.97	102.91	100.04	101.84	100.12	100.37	100.37	100.12	100.37	100.37	100.45	97.53	95.11
Hardware, plumbing, and heating goods.....	95.30	94.54	94.60	94.83	92.92	93.79	92.57	92.80	92.03	90.50	90.72	90.76	91.98	89.91	86.86
Machinery, equipment, and supplies.....	106.34	106.19	105.37	107.38	103.98	103.66	106.04	104.14	102.75	101.84	100.94	100.37	103.48	101.59	99.80
Retail trade ²	66.47	66.38	66.55	66.88	67.55	67.38	66.85	65.98	65.42	65.39	65.22	64.84	64.73	64.01	62.37
General merchandise stores.....	53.85	51.68	52.67	53.48	53.35	53.65	53.09	52.48	52.29	51.75	51.64	51.45	52.06	50.52	48.58
Department stores.....	57.87	55.61	57.80	58.82	58.12	58.12	58.13	57.28	56.77	56.07	55.42	56.10	56.25	55.04	53.09
Limited price variety stores.....	39.56	38.32	38.20	39.15	40.00	39.96	39.12	38.16	38.44	38.96	38.16	38.68	38.65	37.28	35.53
Food stores.....	64.95	65.66	64.94	65.50	66.25	66.43	65.16	63.88	63.35	63.00	63.00	63.53	63.55	63.01	60.98
Grocery, meat, and vegetable stores.....	66.20	67.45	66.53	66.95	67.71	68.26	67.15	66.66	64.77	64.77	64.77	64.95	65.16	64.44	62.95
Apparel and accessories stores.....	56.21	53.54	53.35	54.13	54.82	54.87	54.13	53.35	52.88	52.63	53.32	53.82	55.13	52.40	51.30
Men's and boys' apparel stores.....	67.03	64.06	64.59	65.45	66.70	67.44	64.93	65.65	64.75	63.44	65.65	66.55	66.05	64.67	63.29
Women's ready-to-wear stores.....	50.40	48.10	48.05	48.33	48.23	48.85	48.08	47.57	47.24	46.84	46.43	47.24	49.28	46.24	44.41
Family clothing stores.....	54.75	52.55	52.00	53.04	53.58	53.64	53.04	51.60	51.83	50.69	51.10	51.10	54.02	51.98	51.01
Shoe stores.....	57.61	54.28	53.77	56.95	56.83	57.93	55.28	55.23	53.80	54.94	56.95	56.61	56.94	52.81	52.33
Average weekly hours															
Wholesale and retail trade ²	38.9	38.4	38.5	38.8	39.2	39.2	38.9	38.6	38.5	38.6	38.5	39.0	38.8	39.0	
Wholesale trade.....	40.8	40.6	40.6	40.7	40.7	40.8	40.7	40.6	40.6	40.5	40.3	40.4	40.8	40.5	
Motor vehicles and automotive equipment.....	41.7	41.7	41.9	41.9	42.2	42.1	42.2	42.1	42.2	42.0	42.1	42.0	42.3	42.0	
Drugs, chemicals, and allied products.....	40.1	40.2	40.0	40.3	40.1	40.2	39.9	39.7	40.1	40.1	39.8	40.1	40.0	40.1	
Dry goods and apparel.....	38.2	37.6	37.7	37.3	37.7	37.7	37.6	37.8	38.6	38.2	37.9	38.0	38.4	37.9	
Groceries and related products.....	42.1	41.8	41.5	41.6	41.8	41.9	41.7	41.7	41.4	41.2	40.7	41.0	41.8	41.3	
Electrical goods.....	40.9	40.7	40.7	41.0	40.5	40.9	40.7	40.7	40.8	40.7	40.8	40.8	41.0	40.3	
Hardware, plumbing, and heating goods.....	40.9	40.4	40.6	40.7	40.4	40.6	40.6	40.7	40.9	40.4	40.5	40.7	40.7	40.4	
Machinery, equipment, and supplies.....	40.9	41.0	41.0	41.3	41.1	41.3	41.1	41.0	41.1	40.9	40.7	40.8	40.9	40.8	
Retail trade ²	38.2	37.5	37.6	38.0	38.6	38.5	38.2	37.7	37.6	37.8	37.7	37.7	38.3	38.1	
General merchandise stores.....	35.9	34.0	34.2	34.5	35.1	35.0	34.7	34.3	34.4	34.5	34.2	34.3	35.9	34.6	
Department stores.....	35.5	33.5	34.0	34.4	34.8	34.8	34.6	34.3	34.2	34.4	34.0	34.0	35.6	34.4	
Limited price variety stores.....	34.1	32.2	32.1	32.9	33.9	33.3	32.6	31.8	32.3	32.2	31.8	32.5	34.2	32.7	
Food stores.....	35.3	35.3	35.1	35.6	36.4	36.5	35.8	35.1	35.0	35.0	35.0	35.1	35.7	35.8	
Grocery, meat, and vegetable stores.....	35.4	35.5	35.2	35.8	36.6	36.7	36.1	35.3	35.2	35.2	35.2	35.3	35.8	36.0	
Apparel and accessories stores.....	35.8	34.1	34.2	34.7	35.6	35.4	34.7	34.2	33.9	34.4	34.4	34.5	35.8	34.7	
Men's and boys' apparel stores.....	38.3	36.4	36.7	37.4	37.9	38.1	37.1	37.3	37.0	37.1	37.3	37.6	38.4	37.6	
Women's ready-to-wear stores.....	35.0	33.4	33.6	33.8	34.7	34.4	34.1	33.5	33.5	33.7	33.4	33.5	35.2	34.0	
Family clothing stores.....	36.5	34.8	34.9	35.6	36.2	36.0	35.6	35.1	35.5	35.2	35.0	36.0	36.5	36.1	
Shoe stores.....	33.3	32.5	32.2	33.5	35.3	34.9	33.3	32.3	31.1	33.5	34.1	33.9	34.3	32.8	
Average hourly earnings															
Wholesale and retail trade ²	\$1.94	\$1.97	\$1.96	\$1.96	\$1.95	\$1.95	\$1.95	\$1.94	\$1.93	\$1.93	\$1.92	\$1.92	\$1.88	\$1.88	\$1.82
Wholesale trade.....	2.41	2.40	2.39	2.41	2.38	2.38	2.38	2.37	2.36	2.35	2.34	2.33	2.34	2.31	
Motor vehicles and automotive equipment.....	2.25	2.24	2.24	2.24	2.21	2.21	2.20	2.22	2.20	2.19	2.19	2.18	2.17	2.13	
Drugs, chemicals, and allied products.....	2.48	2.48	2.47	2.48	2.44	2.44	2.43	2.42	2.42	2.40	2.42	2.39	2.40	2.35	
Dry goods and apparel.....	2.44	2.45	2.46	2.46	2.46	2.44	2.43	2.43	2.46	2.47	2.43	2.42	2.44	2.39	
Groceries and related products.....	2.19	2.20	2.20	2.22	2.20	2.19	2.17	2.15	2.14	2.13	2.13	2.13	2.11	2.11	
Electrical goods.....	2.52	2.53	2.53	2.51	2.47	2.49	2.46	2.46	2.46	2.46	2.46	2.46	2.45	2.42	
Hardware, plumbing, and heating goods.....	2.33	2.34	2.33	2.33	2.30	2.31	2.28	2.28	2.25	2.24	2.24	2.23	2.26	2.22	
Machinery, equipment, and supplies.....	2.60	2.59	2.57	2.60	2.53	2.51	2.58	2.54	2.50	2.49	2.48	2.46	2.53	2.49	
Retail trade ²	1.74	1.77	1.77	1.76	1.75	1.75	1.75	1.74	1.73	1.73	1.72	1.72	1.69	1.62	
General merchandise stores.....	1.50	1.52	1.54	1.55	1.62	1.53	1.53	1.53	1.52	1.50	1.51	1.50	1.45	1.40	
Department stores.....	1.63	1.66	1.70	1.71	1.67	1.67	1.68	1.67	1.66	1.63	1.63	1.65	1.58	1.53	
Limited price variety stores.....	1.16	1.19	1.19	1.19	1.18	1.20	1.20	1.20	1.19	1.21	1.20	1.19	1.13	1.14	
Food stores.....	1.84	1.86	1.85	1.84	1.82	1.82	1.82	1.82	1.81	1.80	1.80	1.81	1.78	1.76	
Grocery, meat, and vegetable stores.....	1.87	1.90	1.89	1.87	1.85	1.86	1.86	1.86	1.84	1.84	1.84	1.84	1.82	1.79	
Apparel and accessories stores.....	1.57	1.57	1.56	1.56	1.54	1.55	1.56	1.56	1.56	1.53	1.55	1.56	1.54	1.51	
Men's and boys' apparel stores.....	1.75	1.76	1.76	1.75	1.76	1.77	1.75	1.75	1.75	1.71	1.76	1.77	1.72	1.67	
Women's ready-to-wear stores.....	1.44	1.44	1.43	1.43	1.39	1.42	1.41	1.42	1.41	1.39	1.39	1.41	1.40	1.36	
Family clothing stores.....	1.50	1.51	1.49	1.49	1.48	1.49	1.49	1.47	1.46	1.44	1.46	1.46	1.48	1.44	
Shoe stores.....	1.73	1.67	1.67	1.70	1.61	1.66	1.69	1.71	1.73	1.64	1.67	1.67	1.66	1.61	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Average weekly earnings															
Wholesale and retail trade ⁴ —Continued															
Retail trade ⁴ —Continued															
Furniture and appliance stores.....	\$83.83	\$81.39	\$80.38	\$81.38	\$81.56	\$82.17	\$80.54	\$79.90	\$79.93	\$79.71	\$79.10	\$79.54	\$81.90	\$77.64	\$74.98
Other retail trade.....	77.19	76.63	76.22	75.76	76.68	76.49	76.54	75.76	75.17	74.57	73.98	74.34	74.64	73.57	71.57
Motor vehicle dealers.....	93.96	95.05	93.08	90.48	93.07	93.73	94.60	93.73	92.64	91.33	89.18	88.94	90.02	88.44	87.91
Other vehicle and accessory dealers.....	82.28	78.58	79.64	80.70	81.77	81.51	80.70	80.15	79.82	79.02	77.25	78.92	78.32	78.59	77.26
Drug stores.....	57.93	57.31	57.31	57.72	58.75	58.06	57.13	56.58	56.06	56.06	56.21	56.52	57.29	55.80	53.34
Finance, insurance, and real estate:															
Banking.....	72.74	72.72	72.54	71.97	71.80	72.56	71.80	71.42	71.62	71.62	71.23	71.24	70.87	69.19	67.15
Security dealers and exchanges.....	114.78	112.66	109.10	111.25	110.68	116.29	123.73	117.09	120.03	119.37	121.50	125.63	134.63	133.35	117.12
Insurance carriers.....	94.55	94.26	94.07	93.76	94.35	94.89	93.21	93.25	93.20	92.62	92.60	92.19	91.72	89.83	87.41
Life insurance.....	99.80	99.57	99.44	98.92	100.61	100.82	98.65	98.70	98.55	98.00	97.99	97.57	97.32	95.11	93.32
Accident and health insurance.....	79.83	79.14	78.20	78.45	78.30	77.97	78.00	78.42	78.34	78.34	77.44	76.70	76.21	74.41	71.33
Fire, marine, and casualty insurance.....	89.83	89.58	89.44	89.27	88.50	89.71	88.32	88.09	88.23	87.72	87.98	87.31	86.75	85.14	81.96
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels ⁴	47.86	47.99	47.72	46.05	45.89	45.94	47.64	46.77	46.29	46.53	46.41	46.29	46.80	45.54	43.89
Personal services:															
Laundries, cleaning and dyeing plants.....	50.57	50.70	50.83	50.83	50.83	50.70	51.35	51.87	50.83	49.41	48.64	48.89	49.54	49.28	48.11
Motion pictures:															
Motion picture filming and distributing.....	121.89	116.99	120.82	120.01	117.50	115.37	114.19	111.97	115.92	114.57	114.88	114.02	111.91	116.45	113.69
Average weekly hours															
Wholesale and retail trade ⁴ —Continued															
Retail trade ⁴ —Continued															
Furniture and appliance stores.....	41.5	40.9	40.8	41.1	41.4	41.5	41.3	41.4	41.2	41.3	41.2	41.0	42.0	41.3	41.2
Other retail trade.....	41.5	41.2	41.2	41.4	41.9	41.8	41.6	41.4	41.3	41.2	41.1	41.3	41.7	41.8	42.1
Motor vehicle dealers.....	43.7	43.6	43.7	43.5	43.9	43.8	44.0	43.8	43.7	43.7	43.5	43.6	43.7	44.0	44.4
Other vehicle and accessory dealers.....	44.0	43.9	44.0	44.1	44.2	44.3	44.1	43.8	44.1	43.9	43.4	43.6	44.0	44.4	44.4
Drug stores.....	36.9	36.5	36.5	37.0	37.9	37.7	37.1	36.5	36.4	36.4	36.5	36.7	37.2	37.2	37.3
Finance, insurance, and real estate:															
Banking.....	37.3	37.1	37.2	37.1	37.2	37.4	37.2	37.2	37.3	37.3	37.1	37.3	37.3	37.0	37.1
Security dealers and exchanges.....															
Insurance carriers.....															
Life insurance.....															
Accident and health insurance.....															
Fire, marine, and casualty insurance.....															
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels ⁴	38.6	38.7	38.8	38.7	39.9	39.6	39.7	39.3	38.9	39.1	39.0	38.9	39.0	39.6	39.9
Personal services:															
Laundries, cleaning and dyeing plants.....	38.6	38.7	39.1	39.1	39.1	39.3	39.5	39.9	39.4	38.6	38.0	37.9	38.7	38.8	38.8
Motion pictures:															
Motion picture filming and distributing.....															
Average hourly earnings															
Wholesale and retail trade ⁴ —Continued															
Retail trade ⁴ —Continued															
Furniture and appliance stores.....	\$2.02	\$1.99	\$1.97	\$1.98	\$1.97	\$1.98	\$1.95	\$1.93	\$1.94	\$1.93	\$1.92	\$1.94	\$1.95	\$1.88	\$1.82
Other retail trade.....	1.86	1.86	1.85	1.83	1.83	1.83	1.84	1.83	1.82	1.81	1.80	1.80	1.79	1.76	1.70
Motor vehicle dealers.....	2.15	2.18	2.13	2.08	2.12	2.14	2.15	2.14	2.12	2.09	2.05	2.04	2.06	2.01	1.98
Other vehicle and accessory dealers.....	1.87	1.79	1.81	1.83	1.85	1.84	1.83	1.83	1.81	1.80	1.78	1.81	1.78	1.77	1.74
Drug stores.....	1.57	1.57	1.57	1.56	1.55	1.54	1.54	1.55	1.54	1.54	1.54	1.54	1.54	1.50	1.43
Finance, insurance, and real estate:															
Banking.....	1.95	1.96	1.95	1.94	1.93	1.94	1.93	1.92	1.92	1.92	1.92	1.91	1.90	1.87	1.81
Security dealers and exchanges.....															
Insurance carriers.....															
Life insurance.....															
Accident and health insurance.....															
Fire, marine, and casualty insurance.....															
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels ⁴	1.24	1.24	1.23	1.19	1.15	1.16	1.20	1.19	1.19	1.19	1.19	1.19	1.20	1.15	1.10
Personal services:															
Laundries, cleaning and dyeing plants.....	1.31	1.31	1.30	1.30	1.30	1.29	1.30	1.30	1.29	1.28	1.28	1.29	1.28	1.27	1.24
Motion pictures:															
Motion picture filming and distributing.....															

¹ For comparability of data with those published in issues prior to December 1961, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3.

² Preliminary.

³ Based upon monthly data summarized in the M-300 report by the Interstate Commerce Commission, which relate to all employees who received pay during the month, except executives, officials, and staff assistants (ICG Group D).

⁴ Data relate to nonsupervisory employees except messengers.

⁵ Excludes eating and drinking places.

⁶ Money payments only, additional value of board, room, uniforms, and tips not included.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except that for Class I railroads. (See footnote 3.)

TABLE C-2. Average weekly hours, seasonally adjusted, of production workers in selected industries¹

Industry division and group	1962												1961
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.
Mining.....	40.6	41.1	41.1	41.3	41.2	40.9	40.6	41.0	41.5	41.3	41.4	40.2	40.4
Contract construction.....	35.5	37.3	37.2	37.7	37.3	37.4	36.7	37.5	36.6	37.3	37.0	34.4	35.5
Manufacturing.....	40.3	40.4	40.1	40.5	40.2	40.5	40.5	40.6	40.8	40.5	40.3	39.8	40.4
Durable goods.....	41.0	41.1	40.7	41.0	40.9	41.0	41.0	41.1	41.3	41.0	40.9	40.3	41.2
Ordnance and accessories.....	41.6	41.4	41.1	41.2	41.4	40.9	41.5	41.3	41.8	41.5	41.3	40.6	41.3
Lumber and wood products except furniture.....	39.7	39.7	39.4	40.2	40.3	40.4	39.6	40.2	39.7	39.3	40.1	38.1	39.4
Furniture and fixtures.....	40.4	40.6	40.5	40.8	40.5	40.6	41.3	41.3	41.5	40.9	40.6	39.4	40.8
Stone, clay and glass products.....	40.5	40.9	41.0	41.3	41.2	41.4	41.0	41.2	41.1	40.9	40.6	39.5	40.5
Primary metal industries.....	40.2	40.1	39.7	39.9	39.7	39.6	39.6	39.9	40.9	40.9	40.9	40.6	40.6
Fabricated metal products.....	40.7	41.3	41.1	41.0	41.0	41.1	41.4	41.3	41.5	41.3	41.1	40.5	40.9
Machinery.....	41.6	41.7	41.5	41.7	41.9	41.8	41.8	41.9	42.0	41.7	41.7	41.3	41.8
Electrical equipment and supplies.....	40.4	40.5	40.5	40.6	40.5	40.7	40.7	40.7	41.1	40.7	40.5	40.3	40.6
Transportation equipment.....	42.3	42.9	42.2	42.4	41.5	42.1	41.9	42.2	42.1	41.5	41.2	40.8	42.2
Instruments and related products.....	41.2	40.9	40.7	40.8	41.0	40.8	41.1	41.1	41.2	40.6	40.7	40.8	41.3
Miscellaneous manufacturing industries.....	39.5	39.3	39.4	40.0	39.7	39.8	39.9	40.1	40.3	40.1	39.3	39.3	39.8
Nondurable goods.....	39.6	39.4	39.3	39.7	39.4	39.8	40.0	40.1	40.2	39.9	39.5	39.2	39.7
Food and kindred products.....	40.9	41.0	40.7	41.1	40.7	41.6	41.1	41.3	41.2	40.9	40.7	40.4	40.7
Tobacco manufactures.....	38.5	39.4	38.7	39.5	37.4	37.1	37.9	38.6	39.6	39.6	38.7	36.6	39.0
Textile mill products.....	40.2	39.9	40.0	40.3	40.3	40.7	41.0	41.3	41.5	40.9	40.6	40.3	40.8
Apparel and related products.....	36.3	36.1	35.8	36.4	36.1	36.4	36.8	36.6	37.1	36.7	35.8	34.7	36.3
Paper and allied products.....	42.8	42.5	42.2	42.6	42.5	42.7	42.8	42.6	42.7	42.7	42.6	42.3	42.9
Printing, publishing and allied industries.....	38.3	38.1	37.9	38.3	38.3	38.3	38.4	38.4	38.6	38.5	38.3	38.1	38.4
Chemicals and allied products.....	41.4	41.4	41.5	41.5	41.5	41.5	41.6	41.7	41.7	41.5	41.6	41.5	41.3
Petroleum refining and related industries.....	41.7	41.6	41.8	42.1	41.7	41.7	41.7	41.6	41.3	40.9	41.1	41.9	41.2
Rubber and miscellaneous plastic products.....	41.0	40.9	40.6	41.0	40.5	40.5	41.5	41.5	41.8	41.0	40.6	40.9	41.6
Leather and leather products.....	37.5	36.9	36.9	37.8	37.5	37.6	38.0	38.0	38.6	37.9	37.4	37.8	38.5
Wholesale and retail trade ³	38.7	38.7	38.6	38.7	38.7	38.7	38.7	38.8	38.7	38.8	38.8	38.7	38.8
Wholesale trade.....	40.6	40.6	40.5	40.6	40.6	40.6	40.7	40.7	40.8	40.7	40.5	40.4	40.6
Retail trade.....	38.0	37.9	37.8	38.0	37.9	37.9	37.9	38.0	37.8	38.0	38.0	37.9	38.1

¹ For employees covered, see footnote 1, table A-3.
² Preliminary.
³ Excludes eating and drinking places.

NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Lat or Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.

TABLE C-3. Average hourly earnings excluding overtime of production workers in manufacturing, by major industry group¹

Major industry group	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Manufacturing.....	\$2.35	\$2.33	\$2.32	\$2.31	\$2.29	\$2.31	\$2.31	\$2.31	\$2.31	\$2.31	\$2.31	\$2.31	\$2.30	\$2.25	\$2.20
Durable goods.....	2.51	2.50	2.48	2.48	2.46	2.47	2.47	2.47	2.48	2.48	2.47	2.48	2.46	2.42	2.36
Ordnance and accessories.....	2.79	2.78	2.76	2.77	2.75	2.75	2.76	2.76	2.76	2.75	2.74	2.73	2.73	2.71	2.60
Lumber and wood products except furniture.....	1.91	1.93	1.91	1.93	1.91	1.91	1.91	1.89	1.90	1.87	1.87	1.91	1.90	1.88	1.82
Furniture and fixtures.....	1.90	1.89	1.89	1.88	1.88	1.88	1.88	1.89	1.88	1.88	1.87	1.88	1.87	1.86	1.82
Stone, clay, and glass products.....	2.36	2.35	2.33	2.33	2.32	2.32	2.32	2.30	2.31	2.30	2.29	2.31	2.28	2.25	2.20
Primary metal industries.....	2.90	2.89	2.89	2.89	2.88	2.88	2.88	2.89	2.92	2.92	2.92	2.91	2.90	2.84	2.75
Fabricated metal products.....	2.49	2.48	2.47	2.48	2.46	2.47	2.46	2.46	2.45	2.45	2.45	2.46	2.45	2.42	2.36
Machinery.....	2.65	2.64	2.63	2.62	2.60	2.60	2.60	2.60	2.59	2.59	2.58	2.57	2.54	2.47	2.47
Electrical equipment and supplies.....	2.37	2.36	2.35	2.35	2.33	2.34	2.34	2.34	2.32	2.32	2.31	2.31	2.30	2.23	2.23
Transportation equipment.....	2.86	2.84	2.83	2.83	2.80	2.80	2.78	2.78	2.77	2.77	2.78	2.78	2.78	2.72	2.65
Instruments and related products.....	2.40	2.40	2.39	2.38	2.37	2.37	2.37	2.38	2.37	2.36	2.37	2.36	2.35	2.32	2.26
Miscellaneous manufacturing industries.....	1.95	1.92	1.91	1.90	1.90	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.90	1.87	1.84
Nondurable goods.....	2.12	2.11	2.10	2.10	2.09	2.10	2.10	2.09	2.09	2.09	2.08	2.09	2.08	2.05	1.99
Food and kindred products.....	2.20	2.17	2.15	2.13	2.13	2.13	2.16	2.16	2.17	2.17	2.17	2.16	2.13	2.09	2.02
Tobacco manufactures.....	1.87	1.83	1.68	1.67	1.78	1.95	1.96	1.95	1.93	1.88	1.83	1.80	1.79	1.74	1.67
Textile mill products.....	1.63	1.63	1.63	1.62	1.62	1.62	1.62	1.62	1.61	1.61	1.59	1.59	1.58	1.57	1.56
Apparel and related products.....	1.64	1.64	1.64	1.65	1.64	1.63	1.62	1.63	1.64	1.65	1.64	1.65	1.65	1.61	1.56
Paper and allied products.....	2.32	2.31	2.31	2.30	2.30	2.29	2.28	2.27	2.27	2.27	2.26	2.26	2.25	2.23	2.15
Printing, publishing, and allied industries.....	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
Chemicals and allied products.....	2.62	2.61	2.60	2.59	2.59	2.58	2.57	2.54	2.53	2.53	2.54	2.56	2.55	2.51	2.43
Petroleum refining and related industries.....	2.99	2.98	2.96	2.96	2.95	2.97	2.95	2.95	2.97	2.97	2.97	2.99	2.97	2.94	2.82
Rubber and miscellaneous plastic products.....	2.41	2.39	2.38	2.38	2.38	2.40	2.38	2.36	2.35	2.34	2.34	2.35	2.36	2.32	2.26
Leather and leather products.....	1.69	1.71	1.70	1.70	1.69	1.68	1.69	1.69	1.69	1.68	1.68	1.67	1.67	1.65	1.61

¹ For comparability of data with those published in issues prior to December 1961, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3. Average hourly earnings excluding overtime are derived by assuming that overtime hours are paid for at the rate of time and one-half.

² Preliminary.
³ Not available because average overtime rates are significantly above time and one-half. Inclusion of data for the group in the nondurable good total has little effect.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry¹

Industry	1962												1961	Annual average	
	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Manufacturing.....	2.9	2.9	2.8	3.0	2.8	2.8	2.9	2.8	2.7	2.6	2.5	2.6	2.9	2.4	2.4
Durable goods.....	3.1	3.0	2.9	3.1	2.8	2.8	3.0	2.8	2.7	2.7	2.5	2.6	3.0	2.3	2.4
Nondurable goods.....	2.7	2.8	2.7	2.9	2.7	2.8	2.9	2.8	2.6	2.6	2.5	2.5	2.7	2.5	2.5
<i>Durable goods</i>															
Ordnance and accessories.....	2.8	2.6	2.4	2.2	2.2	2.3	2.1	2.1	2.5	2.4	2.2	2.2	2.3	1.9	2.0
Ammunition except for small arms.....	2.1	2.0	2.1	1.7	1.9	2.0	1.8	1.9	2.0	1.6	1.6	1.7	1.7	1.6	1.7
Sighting and fire control equipment.....	4.2	3.4	2.8	2.7	2.8	3.0	2.4	2.4	3.1	3.2	2.9	2.8	3.0	2.2	2.7
Other ordnance and accessories.....	2.7	2.7	2.5	2.5	2.1	2.2	2.4	2.2	2.6	2.7	2.4	2.3	2.6	2.1	1.8
Lumber and wood products except furniture.....	3.1	2.9	3.2	3.8	3.7	3.5	3.5	3.3	3.0	2.8	2.9	2.5	2.8	2.9	2.9
Sawmills and planing mills.....	2.9	2.9	3.2	3.6	3.6	3.4	3.4	3.5	3.0	2.7	2.8	2.3	2.7	2.9	3.0
Millwork, plywood, and related products.....	3.4	3.2	3.2	3.8	3.7	3.5	3.5	3.4	3.3	3.0	2.8	2.5	2.9	2.8	2.6
Wooden containers.....	2.5	2.5	2.8	3.2	3.3	4.0	3.4	3.3	2.9	2.8	2.6	1.8	2.5	2.5	2.6
Miscellaneous wood products.....	2.6	2.7	3.0	3.1	3.1	2.8	3.2	3.0	3.1	3.1	2.9	2.6	2.7	2.6	2.7
Furniture and fixtures.....	3.3	3.0	3.3	3.4	3.2	2.7	3.1	2.5	2.7	2.7	2.5	2.3	3.5	2.4	2.5
Household furniture.....	3.7	3.2	3.4	3.4	3.2	2.6	3.1	2.6	2.9	2.9	2.6	2.4	3.7	2.4	2.5
Office furniture.....	2.2	1.6	2.0	2.4	2.0	2.4	2.4	1.7	1.8	2.1	2.0	2.3	2.9	2.0	2.3
Partitions; office and store fixtures.....	2.0	2.5	3.7	4.6	4.0	3.6	3.6	2.8	2.2	2.2	2.6	2.3	2.8	2.4	2.3
Other furniture and fixtures.....	2.9	2.9	2.8	3.2	3.4	2.6	3.0	2.4	2.4	2.2	2.0	1.8	3.0	2.5	2.7
Stone, clay, and glass products.....	2.9	3.4	3.7	3.9	3.9	3.8	3.7	3.6	3.2	2.8	2.7	2.6	2.9	3.1	3.1
Flat glass.....	1.7	2.2	1.5	2.0	1.6	1.8	1.6	1.3	1.0	1.4	1.7	2.2	2.6	2.1	2.4
Glass and glassware, pressed or blown.....	3.5	3.6	3.5	3.4	3.4	3.8	3.7	3.5	3.3	3.4	3.4	3.3	3.7	3.6	3.6
Cement hydraulic.....	1.4	1.7	1.8	2.3	2.1	2.1	1.8	1.9	1.6	1.4	1.4	1.5	1.3	1.5	1.6
Structural clay products.....	2.5	2.9	3.0	3.1	3.2	3.2	2.9	3.2	2.8	2.6	2.3	2.1	2.4	2.7	2.7
Pottery and related products.....	2.1	2.1	2.3	2.0	2.1	1.7	1.6	1.2	1.3	1.6	1.7	1.8	1.8	1.5	1.5
Concrete, gypsum, and plaster products.....	3.6	5.0	6.0	6.4	6.7	6.3	6.3	6.2	5.2	4.1	3.7	3.3	3.9	5.0	4.8
Other stone and mineral products.....	2.5	2.7	2.7	2.9	2.8	2.7	2.9	2.8	2.6	2.4	2.3	2.3	2.4	2.3	2.4
Primary metal industries.....	2.3	2.1	2.0	2.2	1.9	2.0	2.3	2.0	2.3	2.5	2.5	2.7	2.4	1.9	1.8
Blast furnace and basic steel products.....	1.1	1.0	.9	1.3	.9	1.1	1.1	1.0	1.7	2.0	2.1	2.4	1.5	1.3	1.3
Iron and steel foundries.....	3.3	3.0	2.9	2.7	2.5	2.8	3.4	3.2	2.8	3.0	2.6	2.6	3.1	2.1	2.1
Nonferrous smelting and refining.....	3.1	2.8	2.3	3.0	3.1	2.6	2.9	2.3	2.2	2.3	2.5	2.7	2.3	2.5	3.0
Nonferrous rolling, drawing, and extruding.....	3.8	3.8	3.4	3.7	3.2	3.3	4.1	3.4	3.8	3.6	3.3	3.5	3.9	3.1	2.4
Nonferrous foundries.....	3.2	2.9	2.9	3.0	2.6	2.8	3.2	2.9	2.9	3.0	3.0	3.0	3.3	2.3	2.3
Miscellaneous primary metal industries.....	3.7	3.2	3.2	3.5	2.9	2.7	3.4	2.8	2.9	3.3	3.0	3.0	3.3	2.3	2.3
Fabricated metal products.....	2.9	3.0	3.0	3.3	3.1	2.9	3.1	2.9	2.8	2.6	2.6	2.6	3.0	2.4	2.6
Metal cans.....	2.0	2.5	2.8	4.9	4.3	4.7	4.0	3.5	3.4	3.0	2.9	2.5	3.0	3.2	2.8
Cutlery, hand tools, and general hardware.....	3.1	3.1	2.4	2.5	2.1	2.3	2.9	2.8	2.3	2.0	2.0	2.3	3.5	2.0	2.1
Heating equipment and plumbing fixtures.....	1.9	1.9	2.5	2.5	2.2	1.9	2.2	1.6	1.4	1.4	1.4	1.3	1.5	1.5	1.4
Fabricated structural metal products.....	2.3	2.5	2.6	3.0	3.0	2.8	2.8	2.6	2.3	2.0	2.0	2.0	2.2	2.3	2.4
Screw machine products, bolts, etc.....	4.2	3.7	3.6	4.2	3.6	3.6	4.0	3.8	4.0	4.1	4.4	4.3	4.2	2.6	2.5
Metal stampings.....	3.6	3.5	3.8	4.1	3.7	3.2	3.4	3.6	3.3	3.4	3.2	3.1	3.7	2.9	3.7
Coating, engraving, and allied services.....	3.5	3.3	3.6	3.6	3.1	2.8	3.7	3.3	3.6	3.0	3.1	3.1	3.5	2.8	2.7
Miscellaneous fabricated wire products.....	2.9	2.9	3.1	3.2	3.0	2.7	3.1	2.9	3.0	2.9	2.9	3.0	3.2	2.7	2.6
Miscellaneous fabricated metal products.....	2.6	2.6	2.7	2.7	2.5	2.2	2.7	2.6	2.6	2.4	2.5	2.5	2.5	2.3	1.9
Machinery.....	3.1	2.8	2.9	3.0	3.0	3.2	3.4	3.3	3.3	3.2	3.1	2.9	3.1	2.5	2.7
Engines and turbines.....	2.5	1.9	1.9	2.3	2.3	2.1	2.3	2.5	2.7	2.4	2.3	1.6	2.2	1.7	1.8
Farm machinery and equipment.....	2.0	1.6	1.8	2.1	1.9	1.7	2.1	2.2	2.5	2.7	2.5	2.1	1.7	1.6	1.9
Construction and related machinery.....	2.4	2.2	2.5	2.7	2.8	3.0	2.9	2.8	2.8	2.7	2.5	2.3	2.4	1.9	1.8
Metalworking machinery and equipment.....	4.7	4.3	4.1	4.2	4.5	4.9	5.2	5.3	5.4	5.0	4.7	4.2	4.3	3.4	4.3
Special industry machinery.....	3.7	3.3	3.3	3.6	3.3	3.4	3.8	3.5	3.6	3.6	3.5	3.2	3.8	2.8	3.3
General industrial machinery.....	2.6	2.5	2.6	2.6	2.7	3.0	3.2	2.9	2.9	2.8	2.8	2.7	3.0	2.0	2.1
Office, computing and accounting machines.....	1.5	1.3	1.4	1.4	1.3	1.6	1.5	1.5	1.4	1.5	1.8	2.1	2.4	2.2	1.9
Service industry machines.....	1.7	1.6	1.8	2.0	2.1	2.5	3.0	2.2	2.2	1.9	1.6	1.6	1.8	1.6	1.9
Miscellaneous machinery.....	4.3	4.2	4.3	4.4	4.1	4.2	4.0	4.0	4.0	4.0	4.0	3.9	4.1	3.5	3.4
Electrical equipment and supplies.....	2.4	2.3	2.3	2.5	2.1	2.0	2.3	2.1	2.1	2.1	2.1	2.2	2.5	1.9	1.9
Electric distribution equipment.....	2.4	2.2	2.3	2.4	2.0	2.2	2.2	1.9	1.6	1.6	1.6	1.5	2.2	1.8	1.9
Electrical industrial apparatus.....	2.2	2.3	2.3	2.3	2.1	2.1	2.6	2.4	2.3	2.3	2.0	2.0	2.3	1.9	1.8
Household appliances.....	2.5	1.9	1.8	2.1	2.2	2.0	2.0	1.6	1.6	1.5	1.7	1.6	2.1	1.9	1.6
Electric lighting and wiring equipment.....	2.0	2.1	2.1	2.4	1.8	1.6	1.9	1.7	1.8	1.8	1.7	1.6	2.1	1.6	1.7
Radio and TV receiving sets.....	2.2	1.7	2.2	2.6	2.4	2.0	2.5	1.6	1.4	1.3	1.6	1.8	2.2	1.6	1.4
Communication equipment.....	2.5	2.4	2.5	3.0	2.3	1.8	2.2	2.5	2.5	2.7	2.7	2.9	3.1	2.1	2.5
Electronic components and accessories.....	2.1	2.1	1.9	2.1	1.9	1.8	2.2	2.1	2.0	2.2	2.1	2.2	2.3	1.9	1.6
Miscellaneous electrical equipment and supplies.....	3.8	3.7	3.5	2.9	2.3	3.1	3.3	3.2	3.0	2.8	3.0	3.6	3.8	2.1	1.9
Transportation equipment.....	4.7	4.5	3.9	3.6	3.1	3.3	3.3	3.4	3.0	2.8	2.4	3.1	4.2	2.5	2.7
Motor vehicles and equipment.....	6.0	5.9	4.9	4.5	3.6	4.0	3.9	4.0	3.4	2.9	2.4	3.5	5.4	2.6	3.2
Aircraft and parts.....	3.4	3.2	3.2	3.0	2.7	2.5	2.6	2.7	2.6	2.8	2.4	2.9	3.2	2.4	2.2
Ship and boat building and repairing.....	3.4	3.0	2.9	2.5	3.0	2.8	2.7	2.9	2.6	2.5	2.4	2.6	3.0	2.5	2.4
Railroad equipment.....	1.5	1.2	1.7	1.7	2.1	1.8	2.5	2.8	2.7	2.4	1.7	1.8	1.6	.9	1.2
Other transportation equipment.....	2.4	1.9	2.7	3.0	3.3	2.5	3.6	3.5	2.8	1.5	1.5	.7	1.2	1.8	1.7
Instruments and related products.....	2.6	2.5	2.5	2.5	2.4	2.4	2.5	2.2	2.3	2.3	2.5	2.5	2.7	2.1	2.1
Engineering and scientific instruments.....	3.1	2.7	2.8	2.9	2.7	2.7	2.6	2.2	2.0	2.1	2.5	2.5	2.8	2.2	2.8
Mechanical measuring and control devices.....	2.6	2.5	2.3	2.3	2.3	2.5	2.3	1.9	1.9	2.0	2.1	2.2	2.5	1.9	1.9
Optical and ophthalmic goods.....	2.1	1.7	2.5	2.5	2.0	2.1	2.5	2.2	2.3	2.2	2.1	1.9	2.4	2.0	1.8
Surgical, medical, and dental equipment.....	2.0	2.2	2.4	2.5	2.5	2.4	2.3	2.1	2.5	2.2	2.3	2.5	2.6	2.1	2.2
Photographic equipment and supplies.....	3.4	3.4	2.7	2.7	2.5	2.6	2.8	2.9	3.2	3.5	2.9	3.5	3.9	2.9	2.5
Watches and clocks.....	1.7	2.0	2.1	2.1	2.0	1.6	2.3	1.7	2.1	1.8	1.8	2.1	1.5	1.5	1.0

See footnotes at end of table.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry¹—Continued

Industry	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Miscellaneous manufacturing industries.....	2.3	2.3	2.5	2.6	2.3	1.9	2.3	2.4	2.2	2.3	2.2	2.1	2.7	2.1	2.1
Jewelry, silverware, and plated ware.....	4.1	3.4	3.4	3.2	2.7	2.2	2.9	3.1	2.9	3.0	2.1	2.5	5.2	3.0	2.8
Toys, amusement, and sporting goods.....	1.7	2.1	2.3	2.4	1.9	1.6	2.0	2.2	1.8	2.0	1.9	1.4	1.8	1.9	1.9
Pens, pencils, office and art materials.....	2.1	1.8	3.1	2.2	2.2	1.6	1.6	1.9	1.9	1.9	1.7	1.6	2.9	1.8	1.5
Costume jewelry, buttons, and notions.....	2.2	1.9	2.0	2.1	2.4	2.0	3.0	2.5	2.5	2.2	2.0	2.2	1.8	1.9	1.7
Other manufacturing industries.....	2.3	2.5	2.6	2.9	2.5	2.1	2.4	2.3	2.3	2.6	2.6	2.4	2.8	2.2	2.3
<i>Nondurable goods</i>															
Food and kindred products.....	3.5	3.6	3.4	3.9	3.4	3.9	3.6	3.5	3.1	3.0	2.9	3.1	3.3	3.3	3.3
Meat products.....	4.0	4.5	3.8	3.8	3.1	3.9	3.8	3.9	3.3	2.9	2.7	3.4	4.0	3.7	3.7
Dairy products.....	3.4	3.2	3.2	3.7	3.4	4.0	3.8	3.6	3.3	3.0	2.9	2.9	3.0	3.1	2.9
Canned and preserved food, except meats.....	2.2	2.1	2.3	3.4	2.6	3.5	2.5	2.5	2.3	2.1	2.3	2.0	2.0	2.4	2.3
Grain mill products.....	6.4	6.4	6.9	7.0	6.9	6.9	6.5	6.2	5.4	5.1	5.6	6.0	5.9	6.2	6.0
Bakery products.....	2.8	3.3	3.1	3.7	3.3	3.4	3.4	3.1	2.8	2.9	2.7	2.5	2.8	2.9	2.9
Sugar.....	3.9	4.5	2.9	4.9	4.4	4.6	4.7	3.9	3.6	2.6	3.2	5.8	5.0	4.5	4.2
Confectionery and related products.....	2.9	3.1	3.3	3.4	2.6	1.7	2.0	1.9	1.7	2.1	2.1	2.1	2.6	2.5	2.4
Beverages.....	2.4	2.5	2.5	3.2	3.1	4.0	3.3	3.2	2.6	2.6	2.3	2.1	2.4	2.8	2.8
Miscellaneous food and kindred products.....	4.3	4.3	4.1	4.1	4.0	4.0	3.9	3.9	3.7	3.9	4.0	3.8	3.9	3.9	3.9
Tobacco manufactures.....	1.1	1.2	1.2	1.6	1.0	.6	.9	.7	.7	1.0	.6	.5	1.4	1.1	1.0
Cigarettes.....	1.2	1.5	1.0	1.4	.8	.7	.9	.9	.5	1.2	.5	.5	1.8	1.2	1.1
Cigars.....	1.0	1.6	1.4	1.3	1.2	.4	.9	.5	.9	.9	.5	.4	1.0	1.0	1.0
Textile mill products.....	3.0	3.3	3.2	3.0	3.1	3.1	3.5	3.3	3.3	3.3	3.3	3.2	3.4	2.7	2.6
Cotton broad woven fabrics.....	2.9	3.2	3.1	2.8	3.0	2.9	3.1	3.3	3.4	3.5	3.4	3.4	3.4	2.7	2.8
Silk and synthetic broad woven fabrics.....	4.3	4.5	4.4	4.2	4.4	4.2	4.6	4.3	4.3	3.8	4.2	4.2	4.6	3.2	3.3
Weaving and finishing broad woolsens.....	3.1	3.2	3.4	3.7	4.1	4.4	5.2	4.9	4.6	4.6	4.6	4.0	3.5	3.3	3.1
Narrow fabrics and smallwares.....	3.2	3.3	3.4	3.2	3.3	3.3	3.4	3.3	3.3	3.4	3.2	3.3	3.2	2.9	2.4
Knitting.....	1.6	2.2	2.3	2.3	2.3	2.4	2.5	2.3	2.2	2.1	2.0	1.8	2.3	2.0	1.9
Finishing textiles, except wool and knit.....	4.5	4.7	4.2	3.7	3.3	3.2	4.7	4.3	4.4	4.5	4.3	4.1	4.4	3.7	3.2
Floor covering.....	4.7	5.1	5.0	4.7	4.9	3.4	3.8	3.4	3.2	3.8	3.7	3.4	4.9	3.3	2.8
Yarn and thread.....	2.6	2.8	3.1	2.8	3.3	3.2	3.5	3.4	3.4	3.5	3.4	3.2	3.5	2.8	2.4
Miscellaneous textile goods.....	3.7	3.8	3.5	3.4	3.2	3.7	4.2	3.4	3.0	3.3	3.3	3.4	3.4	2.9	2.8
Apparel and related products.....	1.2	1.4	1.4	1.4	1.5	1.3	1.4	1.3	1.4	1.4	1.2	1.0	1.2	1.1	1.2
Men's and boys' suits and coats.....	1.3	1.1	1.3	1.3	1.2	1.0	1.3	1.2	1.4	1.2	1.0	.8	1.0	.8	1.4
Men's and boys' furnishings.....	1.0	1.3	1.3	1.4	1.6	1.3	1.4	1.2	1.1	1.2	1.1	.8	1.1	.9	1.0
Women's, misses', and juniors' outerwear.....	1.2	1.3	1.2	1.4	1.6	1.5	1.5	1.5	1.6	1.6	1.3	1.1	1.1	1.1	1.1
Women's and children's undergarments.....	1.2	1.7	1.7	1.6	1.5	1.2	1.1	1.0	1.3	1.4	1.0	.9	1.4	1.4	1.1
Hats, caps, and millinery.....	1.1	1.2	1.5	1.2	1.6	1.3	1.2	1.1	1.8	2.2	1.8	1.4	1.3	1.5	1.3
Girls' and children's outerwear.....	.7	.9	1.1	1.2	1.6	1.5	1.5	1.2	1.4	1.4	1.2	.9	.8	1.3	1.3
Fur goods and miscellaneous apparel.....	1.0	1.3	1.4	1.2	1.1	1.1	1.1	.9	1.1	1.2	1.1	.8	1.4	1.1	1.1
Miscellaneous fabricated textile products.....	1.8	2.0	2.2	2.1	1.8	1.5	1.8	1.7	1.4	1.5	1.3	1.1	1.7	1.6	1.7
Paper and allied products.....	4.5	4.5	4.5	4.8	4.6	4.7	4.5	4.4	4.3	4.3	4.2	4.2	4.5	4.3	4.1
Paper and pulp.....	5.2	5.2	5.1	5.3	5.2	5.5	5.2	5.4	5.2	5.2	5.2	5.3	5.1	5.0	5.1
Paperboard.....	6.3	6.0	5.5	6.4	5.9	6.8	6.1	5.4	5.7	5.7	5.4	5.6	5.5	5.6	5.1
Converted paper and paperboard products.....	3.2	2.8	3.0	3.3	3.4	3.0	3.3	2.8	2.8	2.9	2.9	2.9	3.8	3.0	2.8
Paperboard containers and boxes.....	3.8	4.0	4.3	4.6	4.1	4.2	4.0	3.7	3.5	3.7	3.2	3.3	3.8	3.6	3.3
Printing, publishing, and allied industries.....	3.0	2.8	2.8	3.1	2.9	2.7	2.6	2.8	2.7	2.8	2.6	2.5	3.1	2.7	2.9
Newspaper publishing and printing.....	3.0	2.9	2.7	2.8	2.5	2.4	2.6	2.8	2.4	2.0	1.8	1.8	3.0	2.4	2.7
Periodical publishing and printing.....	3.6	3.6	3.8	4.4	3.4	2.6	2.6	2.3	2.5	3.3	3.0	3.4	3.1	3.1	3.6
Books.....	2.9	2.8	3.0	3.6	3.6	3.4	3.3	3.9	3.6	3.8	3.7	3.2	3.5	3.7	3.7
Commercial printing.....	3.2	2.9	3.0	3.2	3.0	2.8	2.7	2.9	3.0	3.2	3.0	2.7	3.3	2.9	3.1
Bookbinding and related industries.....	2.1	2.3	2.4	3.2	2.7	2.4	2.1	2.5	2.4	2.4	2.2	2.0	2.1	2.1	2.1
Other publishing and printing industries.....	2.5	2.4	2.7	2.7	2.8	2.6	2.4	2.2	2.5	2.5	2.7	2.6	3.0	2.5	2.6
Chemicals and allied products.....	2.4	2.3	2.5	2.7	2.4	2.6	2.6	2.7	2.6	2.4	2.5	2.6	2.4	2.3	2.3
Industrial chemicals.....	2.4	2.4	2.4	2.6	2.4	2.6	2.4	2.3	2.3	2.3	2.4	2.9	2.4	2.3	2.5
Plastics and synthetics, except glass.....	2.1	1.9	2.0	2.3	2.3	2.6	2.6	2.3	2.3	2.3	2.4	2.6	2.3	2.0	2.0
Drugs.....	2.6	2.5	2.7	2.5	2.3	2.3	2.4	2.1	2.1	2.2	2.6	2.5	2.1	1.9	1.9
Soap, cleaners, and toilet goods.....	2.4	2.5	2.8	3.2	2.7	2.5	2.8	2.3	2.4	2.6	2.9	2.8	2.8	2.6	2.3
Paints, varnishes and allied products.....	1.5	1.5	1.8	2.3	2.3	2.4	2.8	3.1	2.3	1.7	1.5	1.5	1.5	1.9	1.9
Agricultural chemicals.....	3.7	3.1	3.6	3.9	2.6	3.2	3.3	7.2	6.0	4.4	3.8	2.9	3.1	3.8	4.3
Other chemical products.....	2.8	2.6	2.6	2.8	2.8	2.6	3.0	2.8	2.4	2.5	2.2	2.4	2.5	2.5	2.5
Petroleum refining and related industries.....	1.9	2.5	2.5	3.0	2.2	2.6	2.5	2.2	2.0	1.6	1.5	2.6	1.6	2.0	2.0
Petroleum refining.....	1.5	1.9	1.6	2.0	1.3	1.7	1.6	1.6	1.6	1.2	1.3	2.4	1.3	1.5	1.4
Other petroleum and coal products.....	2.7	4.8	5.9	6.6	5.9	6.2	6.1	4.7	3.8	3.7	2.6	3.5	3.0	4.5	4.5
Rubber and miscellaneous plastic products.....	3.3	3.1	3.0	3.3	3.1	3.0	3.7	3.2	2.9	2.7	2.8	3.1	3.6	2.6	2.4
Tires and inner tubes.....	3.8	3.3	3.3	3.6	3.5	3.6	4.4	3.3	2.5	2.3	2.7	3.5	4.6	2.7	2.3
Other rubber products.....	3.1	3.0	2.8	3.2	2.9	2.6	3.5	3.1	2.8	2.6	2.7	3.0	3.2	2.4	2.2
Miscellaneous plastic products.....	3.0	3.2	3.1	3.3	3.0	3.0	3.5	3.3	3.3	3.0	2.9	2.8	3.2	2.9	2.5
Leather and leather products.....	1.3	1.4	1.3	1.4	1.5	1.4	1.5	1.2	1.4	1.6	1.6	1.5	1.6	1.4	1.2
Leather tanning and finishing.....	2.4	2.5	2.7	2.8	2.8	2.3	3.0	2.8	2.6	2.4	2.6	2.6	2.9	2.3	2.1
Footwear, except rubber.....	1.1	1.0	.9	1.0	1.2	1.3	1.2	1.0	1.1	1.3	1.3	1.3	1.2	1.1	1.1
Other leather products.....	1.5	2.1	1.8	1.8	1.8	1.5	1.8	1.3	1.7	2.0	1.9	1.8	2.0	1.7	1.4

¹ For comparability of data with those published in issues prior to December 1961, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3.

These series cover premium overtime hours of production and related workers during the pay period ending nearest the 15th of the month. Overtime hours are those paid for at premium rates because (1) they exceeded

either the straight-time workday or workweek or (2) they occurred on week-ends or holidays or outside regularly scheduled hours. Hours for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded.

² Preliminary.

TABLE C-5. Indexes of aggregate weekly man-hours and payrolls in industrial and construction activities¹
[1957-59=100]

Activity	1963	1962												Annual average	
	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Man-hours															
Total.....	93.5	96.4	99.2	101.7	103.4	102.0	100.6	100.8	99.1	97.1	94.4	92.9	91.4	95.1	99.0
Mining.....	77.7	79.4	81.3	83.3	84.3	85.4	82.4	85.4	84.0	82.7	81.5	81.5	80.3	84.9	91.1
Contract construction.....	75.7	80.9	94.9	105.3	107.7	110.6	107.7	99.5	97.3	87.3	75.7	72.0	68.8	94.3	98.3
Manufacturing.....	97.6	100.1	100.9	102.0	103.6	101.3	100.2	101.8	100.1	99.6	98.4	97.3	96.1	95.8	99.6
Durable goods.....															
Ordnance and accessories.....	98.7	100.8	101.2	101.8	102.4	99.0	99.8	102.2	101.2	100.5	98.8	97.7	96.1	93.9	99.4
Lumber and wood products, except furniture.....	129.4	130.7	129.5	127.4	128.0	127.4	123.1	122.4	123.8	124.6	123.0	122.2	121.6	118.1	111.7
Furniture and fixtures.....	90.6	92.4	96.2	99.6	103.1	105.0	102.3	102.7	98.2	92.9	88.2	89.9	84.2	94.0	99.2
Stone, clay, and glass products.....	102.1	105.8	106.0	107.9	108.0	107.3	101.6	104.5	102.1	101.5	100.2	96.6	97.7	102.6	
Primary metal industries.....	88.0	91.8	98.0	100.8	102.1	103.0	101.6	101.3	99.2	95.1	89.5	88.2	86.0	94.8	100.4
Fabricated metal products.....	92.3	92.1	90.0	89.8	92.5	90.5	90.3	95.2	97.5	102.8	103.0	101.8	100.1	91.6	98.0
Machinery.....	98.9	100.3	100.7	101.9	102.7	99.6	98.8	102.6	100.8	99.2	97.6	96.2	96.0	94.1	99.9
Electrical equipment and supplies.....	99.7	100.3	99.1	99.6	100.2	99.6	100.4	102.8	101.9	101.7	100.1	97.9	95.7	93.2	99.7
Transportation equipment.....	114.0	116.0	115.8	116.4	116.9	113.4	111.8	114.5	112.2	111.4	110.4	109.9	109.3	104.1	105.8
Instruments and related products.....	97.1	100.7	99.5	97.9	95.7	82.9	93.9	95.2	95.6	93.4	92.8	91.8	91.5	83.8	92.1
Miscellaneous manufacturing industries.....	102.4	103.4	104.1	103.3	103.0	103.1	101.0	103.1	101.6	101.7	100.7	99.9	100.6	98.8	102.8
Nondurable goods.....															
Food and kindred products.....	93.7	100.0	107.6	111.2	110.7	107.2	101.5	105.1	102.6	100.6	97.9	94.1	91.9	98.8	101.4
Tobacco manufactures.....	96.0	99.2	100.6	102.2	105.2	104.3	100.8	101.2	98.8	98.4	97.9	96.8	96.0	98.2	99.8
Textile mill products.....	88.1	93.3	96.8	102.5	110.0	106.4	101.8	95.9	91.3	89.1	86.5	86.3	88.3	96.5	98.0
Apparel and related products.....	90.6	96.5	99.6	120.5	133.2	104.1	74.0	75.6	75.4	76.3	79.6	85.7	87.8	94.4	97.1
Paper and allied products.....	90.4	93.4	94.4	94.8	94.6	95.7	94.2	97.7	96.4	95.9	95.8	94.9	93.9	93.5	96.5
Printing, publishing, and allied industries.....	99.6	103.5	105.8	105.4	107.8	109.5	102.7	105.5	103.3	105.1	106.1	102.8	96.2	99.1	101.8
Chemicals and allied products.....	101.8	103.0	104.4	105.1	106.6	106.1	104.1	105.8	103.0	102.8	102.3	100.8	101.0	102.0	102.1
Petroleum refining and related industries.....	101.4	104.8	106.0	106.0	106.8	105.1	104.0	105.1	104.8	105.2	105.3	103.9	103.1	104.6	104.4
Rubber and miscellaneous plastic products.....	103.4	103.6	103.5	103.7	104.5	104.3	104.2	104.8	105.7	105.7	103.2	102.3	101.7	100.8	101.6
Leather and leather products.....	81.3	81.0	82.7	83.5	86.5	88.4	90.7	90.2	88.4	87.5	85.4	85.5	87.7	89.0	93.5
Payrolls															
Mining.....	110.6	111.4	111.3	112.0	112.0	109.2	106.8	112.3	108.2	105.9	105.5	104.4	105.4	99.5	101.5
Contract construction.....	97.1	97.8	95.9	93.7	97.0	101.7	99.5	100.6	95.3	96.4	99.9	100.2	101.0	97.4	97.5
Manufacturing.....	112.2	115.0	115.3	115.7	117.4	113.6	113.2	115.1	113.2	112.6	110.9	109.5	108.5	105.2	106.6

¹ For comparability of data with those published in issues prior to December 1961, see footnote 1, table A-2. For mining and manufacturing, data refer to production and related workers and for contract construction, to construction workers, as defined in footnote 1, table A-3.
² Preliminary.

TABLE C-6. Gross and spendable average weekly earnings of production workers in manufacturing¹

[In current and 1957-59 dollars]

Item	1962												1961	Annual average	
	Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1961	1960
<i>Manufacturing</i>															
Gross average weekly earnings:															
Current dollars.....	\$98.42	\$97.36	\$96.72	\$97.68	\$95.75	\$96.80	\$97.27	\$96.80	\$96.56	\$95.91	\$95.20	\$94.88	\$96.63	\$92.34	\$89.72
1957-59 dollars.....	93.02	91.85	91.25	92.06	90.76	91.75	92.37	92.02	91.79	91.34	90.84	90.79	92.47	88.62	87.02
Spendable average weekly earnings:															
Worker with no dependents:															
Current dollars.....	79.35	78.50	77.99	78.76	77.21	78.05	78.43	78.05	77.86	77.34	76.77	76.51	78.04	74.60	72.57
1957-59 dollars.....	75.00	74.06	73.58	74.23	73.18	73.98	74.48	74.19	74.01	73.66	73.25	73.22	74.68	71.59	70.39
Worker with 3 dependents:															
Current dollars.....	87.05	86.19	85.66	86.45	84.87	85.73	86.11	85.73	85.53	85.00	84.41	84.15	85.70	82.18	80.11
1957-59 dollars.....	82.28	81.31	80.81	81.48	80.45	81.26	81.78	81.49	81.30	80.95	80.54	80.53	82.01	78.87	77.70

¹ For comparability of data with those published in issues prior to December 1961, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3.
Spendable average weekly earnings are based on gross average weekly earnings as published in table C-1 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 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.
² Preliminary.
NOTE: These series are described in "The Calculation and Uses of the Spendable Earnings Series," *Monthly Labor Review*, January 1959, pp. 50-54.

D.—Consumer and Wholesale Prices

TABLE D-1. Consumer Price Index.¹ All-city average. *All items, groups, subgroups, and special groups of items

[1957-59=100]

Group	1963		1962											Annual average	
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
All items.....	106.0	105.8	106.0	106.0	106.1	105.5	105.5	105.3	105.2	105.2	105.0	104.8	104.5	105.4	104.2
Food ²	104.7	103.5	104.1	104.3	104.8	103.8	103.8	103.5	103.2	103.4	103.2	103.1	102.5	103.6	102.6
Food at home.....	103.2	101.9	102.6	102.9	103.5	102.3	102.4	102.1	101.9	102.1	101.9	101.9	101.2	102.2	101.5
Cereals and bakery products.....	108.7	108.2	108.4	108.0	107.9	107.8	107.9	107.4	107.5	107.3	107.3	107.1	106.6	107.6	105.4
Meats, poultry, and fish.....	102.5	102.5	103.5	104.1	106.3	102.6	100.8	99.7	99.6	100.1	100.6	100.6	99.8	101.7	99.3
Dairy products.....	103.8	103.9	104.2	104.3	104.2	103.9	103.5	102.7	103.0	103.7	105.0	105.1	105.6	104.1	104.8
Fruits and vegetables.....	106.4	100.2	102.1	102.0	102.2	105.2	109.9	111.9	109.4	108.6	104.4	102.9	100.6	105.0	104.2
Other foods at home ³	97.6	97.2	97.2	98.1	97.8	95.2	94.1	93.4	94.4	95.1	96.1	97.4	97.2	96.1	97.6
Housing ⁴	105.4	105.2	105.1	105.0	104.9	104.8	104.8	104.8	104.7	104.6	104.6	104.6	104.4	104.8	103.9
Rent.....	106.3	106.2	106.2	106.1	105.9	105.8	105.7	105.6	105.5	105.4	105.3	105.2	105.1	105.7	104.4
Gas and electricity.....	108.2	108.1	108.1	108.0	108.0	108.0	108.0	107.7	107.7	107.8	107.9	107.9	107.8	107.9	107.9
Solid and petroleum fuels.....	104.9	104.8	103.6	102.4	101.3	100.1	99.7	99.4	100.1	102.4	103.6	104.0	103.9	102.1	101.6
Housefurnishings.....	97.9	98.6	98.7	98.8	98.7	98.5	99.0	99.1	99.0	99.3	99.3	99.3	98.7	98.9	99.5
Household operation.....	109.3	108.1	107.8	107.6	107.6	107.4	107.5	107.4	107.4	107.1	107.1	106.9	106.5	107.4	105.9
Apparel.....	103.0	103.9	104.3	104.9	104.6	102.5	102.9	102.8	102.7	102.7	102.7	102.7	102.0	101.8	102.8
Men's and boys'.....	103.5	104.3	104.3	104.2	104.0	102.9	103.2	103.1	103.1	102.9	102.8	102.8	102.4	103.3	102.8
Women's and girls'.....	100.2	101.5	102.5	104.0	103.6	99.9	100.4	100.5	100.0	100.3	100.4	99.0	98.6	100.9	101.0
Footwear.....	109.8	109.9	109.7	109.6	109.5	109.3	109.2	109.1	109.1	109.2	109.1	108.8	108.9	109.3	107.8
Other apparel ⁵	100.3	101.3	101.1	101.6	101.2	100.3	100.8	100.4	100.6	100.3	100.3	99.8	100.0	100.6	100.9
Transportation.....	106.6	108.0	108.3	108.1	107.8	107.4	106.8	107.3	107.3	107.2	105.9	106.0	106.0	107.2	105.0
Private.....	105.3	106.8	107.2	106.9	106.7	106.2	105.4	106.0	106.0	106.0	104.6	104.7	104.8	105.9	104.0
Public.....	115.7	115.7	115.4	116.0	115.7	115.7	115.6	115.6	115.6	115.6	114.9	114.8	114.7	115.4	111.7
Medical care.....	115.5	115.3	115.0	114.9	114.7	114.6	114.6	114.4	114.1	113.9	113.6	113.0	112.6	114.2	111.3
Personal care.....	107.4	107.6	107.1	106.9	106.8	106.8	106.8	106.1	106.4	106.3	105.9	105.8	105.6	106.5	104.6
Reading and recreation.....	110.2	110.0	110.1	109.5	110.0	110.3	110.0	109.2	109.5	109.4	109.2	109.1	108.5	109.6	107.2
Other goods and services.....	105.7	105.6	105.6	105.6	105.6	105.5	105.6	105.2	105.1	105.1	105.1	105.0	104.9	105.3	104.6
Special groups:															
All items less food.....	106.5	106.7	106.7	106.7	106.6	106.2	106.1	106.1	106.0	106.0	105.7	105.5	105.3	106.1	104.8
All items less shelter.....	105.9	105.8	106.0	106.1	106.1	105.5	105.4	105.3	105.2	105.2	105.0	104.8	104.4	105.4	104.2
All commodities less food.....	102.6	103.4	103.5	103.6	103.4	102.6	102.5	102.6	102.6	102.8	102.4	102.2	102.0	102.8	102.1
All commodities.....	103.6	103.6	103.9	104.0	104.1	103.2	103.1	103.1	103.0	103.1	102.8	102.7	102.3	103.2	102.4
Nondurables ⁶	104.3	104.0	104.2	104.4	104.7	103.5	103.5	103.4	103.2	103.5	103.2	103.1	102.6	103.6	102.8
Nondurables less food.....	104.0	104.6	104.4	104.6	104.6	103.2	103.3	103.4	103.5	103.8	103.5	103.3	102.9	103.8	103.2
Nondurables less food and apparel.....	104.7	105.1	104.5	104.5	104.6	103.7	103.5	103.8	104.0	104.4	104.0	104.1	103.6	104.2	103.3
Durables ⁷	100.4	101.7	102.2	102.0	101.6	101.7	101.5	101.6	101.5	101.4	100.9	100.8	100.8	101.5	100.5
Durables less cars.....	98.5	98.6	98.6	98.6	98.6	98.7	98.7	98.8	98.9	98.9	99.0	99.0	98.7	98.8	98.9
All services ⁸	110.5	110.1	110.0	109.8	109.8	109.9	109.8	109.5	109.4	109.2	109.0	108.9	108.7	109.5	107.6
All services less rent.....	111.2	110.8	110.6	110.5	110.5	110.6	110.5	110.2	110.1	109.8	109.6	109.5	109.3	110.2	108.3
Household operation services, gas, and electricity.....	109.9	109.1	108.8	108.7	108.6	108.5	108.6	108.5	108.4	108.2	108.2	108.1	107.9	108.5	107.2
Transportation services.....	111.1	110.9	110.7	110.8	110.5	111.7	111.7	111.5	111.5	111.5	111.3	111.2	110.7	111.2	109.5
Medical care services.....	118.5	118.2	118.0	117.8	117.5	117.3	117.2	116.9	116.6	116.2	115.8	115.5	115.1	116.8	113.1
Other services.....	109.7	109.3	109.3	109.1	109.3	109.3	109.1	108.7	108.7	108.2	108.0	107.9	107.9	108.7	106.8

²The Consumer Price Index for January 1963 calculated from a 1947-49 =100 base was 130.1.

¹The Consumer Price Index measures the average change in prices of goods and services purchased by urban wage-earner and clerical-worker families. Data for 46 large, medium-size, and small cities are combined for the all-city average.

²In addition to subgroups shown here, total food includes restaurant meals and other food bought and eaten away from home.

³Includes eggs, fats and oils, sugar and sweets, beverages (nonalcoholic), and other miscellaneous foods.

⁴In addition to subgroups shown here, total housing includes the purchase price of homes and other homeowner costs.

⁵Includes yard goods, diapers, and miscellaneous items.

⁶Includes food, house paint, solid fuels, fuel oil, textile housefurnishings, household paper, electric light bulbs, laundry soap and detergents, apparel

(except shoe repairs) gasoline, motor oil, prescriptions and drugs, toilet goods, nondurable toys, newspapers, cigarettes, cigars, beer, and whiskey.

⁷Includes water heaters, central heating furnaces, kitchen sinks, sink faucets, porch flooring, household appliances, furniture and bedding, floor coverings, dinnerware, automobiles, tires, radio and television sets, durable toys, and sporting goods.

⁸Includes rent, home purchase, real estate taxes, mortgage, interest, property insurance, repainting garage, repainting rooms, reshingling roof, refinishing floors, gas, electricity, dry cleaning, laundry service, domestic service, telephone, water, postage, shoe repairs, auto repairs, auto insurance, auto registration, transit fares, railroad fares, professional medical services, hospital services, hospitalization and surgical insurance, barber and beauty shop services, television repairs and motion picture admissions.

TABLE D-2. Consumer Price Index¹—All items and food indexes, by city

[1957-59=100]

City	1962												Annual average		1963 (1947-49=100)	
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961		1960	Jan.
All Items																
All-city average ²	108.0	105.8	106.0	106.0	106.1	105.5	105.5	105.3	105.2	105.2	105.0	104.8	104.5	104.2	103.1	130.1
Atlanta, Ga.....	(3)	104.5	(2)	(3)	104.7	(3)	(3)	104.0	(3)	(3)	103.7	(3)	(3)	103.2	102.7	(3)
Baltimore, Md.....	(3)	105.7	(2)	(3)	106.0	(3)	(3)	104.8	(3)	(3)	104.6	(3)	(3)	104.4	103.4	(3)
Boston, Mass.....	108.6	(2)	(2)	108.2	(3)	(3)	107.2	(3)	(3)	107.1	(3)	(3)	106.2	105.1	103.6	134.6
Chicago, Ill.....	104.7	104.7	105.0	105.0	105.2	104.4	104.5	104.5	104.6	104.8	104.5	104.4	103.8	103.6	103.0	132.0
Cincinnati, Ohio.....	(3)	104.0	(3)	(3)	104.3	(3)	(3)	103.3	(3)	(3)	103.3	(3)	(3)	102.6	102.2	(3)
Cleveland, Ohio.....	(3)	(3)	103.7	(3)	(3)	103.8	(3)	(3)	103.5	(3)	(3)	103.1	(3)	103.2	102.3	(3)
Detroit, Mich.....	102.5	102.5	102.6	102.8	102.8	102.3	101.9	101.8	102.0	102.2	102.0	102.0	101.1	101.9	101.3	126.4
Houston, Tex.....	(3)	(3)	104.5	(3)	(3)	104.6	(3)	(3)	104.7	(3)	(3)	104.5	(3)	102.6	102.1	(3)
Kansas City, Mo.....	105.9	(3)	(3)	107.1	(3)	(3)	106.0	(3)	106.0	(3)	105.7	(3)	(3)	105.2	104.5	131.0
Los Angeles, Calif.....	107.3	107.2	107.1	107.2	107.2	106.6	106.8	107.0	106.9	106.3	106.1	105.7	105.7	105.4	104.1	133.8
Minneapolis, Minn.....	106.0	(3)	(3)	105.9	(3)	(3)	105.7	(3)	(3)	105.5	(3)	(3)	104.3	104.2	103.1	131.1
New York, N.Y.....	107.5	106.9	107.1	107.2	107.3	106.6	106.4	105.8	105.7	106.0	105.9	105.9	105.6	104.8	103.9	129.5
Philadelphia, Pa.....	105.9	105.7	105.8	105.8	106.0	105.2	105.3	104.9	104.7	105.1	105.0	105.0	104.5	104.4	103.2	130.0
Pittsburgh, Pa.....	106.5	(3)	(3)	106.3	(3)	(3)	106.0	(3)	(3)	105.7	(3)	(3)	(3)	105.0	104.1	131.2
Portland, Ore.....	105.7	(3)	(3)	105.3	(3)	(3)	104.8	(3)	(3)	103.9	(3)	(3)	103.8	104.1	102.9	131.0
St. Louis, Mo.....	(3)	106.0	(3)	(3)	105.6	(3)	(3)	104.4	(3)	(3)	104.8	(3)	(3)	103.9	102.4	(3)
San Francisco, Calif.....	(3)	107.8	(3)	(3)	107.5	(3)	(3)	107.5	(3)	(3)	107.3	(3)	(3)	105.8	104.5	(3)
Scranton, Pa.....	(3)	(3)	106.5	(3)	(3)	106.0	(3)	(3)	105.7	(3)	(3)	(3)	105.5	104.1	102.5	(3)
Seattle, Wash.....	(3)	(3)	107.0	(3)	(3)	106.7	(3)	(3)	(3)	(3)	(3)	105.5	(3)	104.1	102.5	(3)
Washington, D.C.....	(3)	(3)	105.3	(3)	(3)	104.8	(3)	(3)	104.2	(3)	(3)	104.0	(3)	103.7	102.2	(3)
Food																
All-city average ²	104.7	103.5	104.1	104.3	104.8	103.8	103.8	103.5	103.2	103.4	103.2	103.1	102.5	102.6	101.4	-----
Atlanta, Ga.....	104.0	102.7	103.1	103.9	104.3	103.4	102.9	103.0	103.1	102.7	102.5	102.2	101.8	101.8	101.1	-----
Baltimore, Md.....	104.6	103.4	103.6	104.2	104.5	104.2	103.4	103.0	102.7	102.7	102.4	102.8	102.5	102.4	101.0	-----
Boston, Mass.....	106.4	105.7	106.4	105.7	105.7	105.0	104.3	104.2	103.7	103.5	104.0	103.3	103.5	102.4	101.4	-----
Chicago, Ill.....	105.6	104.3	105.7	105.7	106.7	105.8	105.7	105.2	104.6	105.6	105.2	105.2	103.8	103.2	101.9	-----
Cincinnati, Ohio.....	103.1	101.7	102.8	103.0	103.7	102.2	102.4	101.5	101.2	101.5	101.3	101.0	100.3	101.8	100.9	-----
Cleveland, Ohio.....	101.7	100.8	101.3	101.7	102.4	101.5	101.4	101.2	101.1	100.6	100.4	100.1	99.2	100.9	100.8	-----
Detroit, Mich.....	101.3	100.6	101.6	101.5	101.6	100.8	101.2	100.9	101.4	101.2	100.9	100.8	100.5	101.4	100.1	-----
Houston, Tex.....	103.2	102.4	102.8	103.6	104.0	102.9	103.1	102.2	103.1	102.9	102.9	102.9	102.1	101.3	100.0	-----
Kansas City, Mo.....	103.2	103.2	104.4	104.5	105.1	104.2	103.7	103.0	102.6	101.8	103.1	102.5	101.9	101.9	100.2	-----
Los Angeles, Calif.....	106.8	105.6	105.3	105.6	105.9	104.7	105.0	106.1	106.2	105.4	105.5	105.2	105.2	104.5	103.7	-----
Minneapolis, Minn.....	101.5	100.8	100.9	101.5	102.5	101.8	102.5	102.3	102.4	102.4	101.7	102.0	101.1	101.2	101.3	-----
New York, N.Y.....	106.6	104.9	105.8	106.3	107.0	105.7	104.8	103.7	103.5	104.5	104.4	104.5	103.8	102.9	102.8	-----
Philadelphia, Pa.....	104.5	103.0	103.5	104.8	104.8	103.6	103.8	102.6	102.3	102.6	102.5	102.5	101.5	101.9	101.1	-----
Pittsburgh, Pa.....	103.2	101.7	102.5	102.8	103.4	102.5	102.4	102.5	102.4	101.7	102.5	102.3	101.7	102.3	101.4	-----
Portland, Ore.....	105.3	103.9	104.1	104.5	104.8	103.4	103.6	104.2	104.3	103.0	102.5	102.4	102.5	103.0	101.3	-----
St. Louis, Mo.....	104.9	104.6	104.5	103.8	104.2	102.7	102.8	102.3	102.3	102.2	102.5	102.2	102.1	102.0	100.3	-----
San Francisco, Calif.....	106.7	105.6	105.8	105.6	105.0	104.3	105.5	105.9	105.4	105.4	105.7	105.5	104.6	104.0	102.6	-----
Scranton, Pa.....	104.1	102.9	103.6	104.1	103.8	102.3	103.1	103.5	103.2	102.9	102.6	102.3	102.4	101.3	100.0	-----
Seattle, Wash.....	106.3	105.9	105.9	105.9	106.6	106.0	106.1	106.5	105.5	106.3	105.0	105.1	104.0	104.5	102.5	-----
Washington, D.C.....	103.9	101.8	102.1	103.4	103.0	102.6	102.2	101.1	101.5	101.6	101.7	101.3	101.4	101.6	100.7	-----

¹ See footnote 1, table D-1. Indexes measure time-to-time changes in prices of goods and services purchased by urban wage-earner and clerical-worker families. They do not indicate whether it costs more to live in one city than in another.

² Average of 46 cities.

³ All items indexes are computed monthly for 5 cities and once every month on a rotating cycle for 15 other cities.

TABLE D-3. Indexes of wholesale prices,¹ by group and subgroup of commodities[1957-59=100, unless otherwise specified]²

Commodity group	1963	1962											Annual Average		
	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
All commodities.....	100.6	100.4	100.7	100.6	101.2	100.5	100.4	100.0	100.2	100.4	100.7	100.7	100.8	100.3	100.7
Farm products and processed foods.....	99.8	99.3	100.4	100.3	102.1	99.8	98.9	97.7	98.0	98.7	100.1	100.1	100.1	98.6	98.6
Farm products.....	98.5	97.3	99.3	98.7	100.6	97.6	96.5	95.3	96.2	96.9	98.4	98.2	97.9	96.0	96.9
Fresh and dried fruits and vegetables..	104.1	88.5	96.4	97.5	94.9	90.9	92.2	98.7	107.1	99.0	106.0	104.3	97.0	93.7	100.6
Grains.....	102.0	101.1	99.5	98.5	98.6	98.1	99.1	99.9	101.0	98.5	97.4	96.7	97.2	95.6	94.2
Livestock and live poultry.....	95.1	96.2	98.3	98.6	104.4	98.5	95.8	91.6	91.4	94.1	95.7	94.5	95.7	92.5	96.0
Plant and animal fibers.....	99.3	98.1	97.6	97.5	97.4	98.4	99.3	99.6	98.9	98.9	98.5	98.2	98.0	94.8	93.1
Fluid milk.....	101.3	101.9	102.4	102.5	101.6	100.8	99.8	97.0	96.7	98.8	102.7	104.8	105.3	103.9	103.2
Eggs.....	100.1	99.3	112.4	103.1	110.7	98.0	86.2	80.0	75.3	91.7	90.8	97.5	97.9	99.0	103.2
Hay, hayseeds, and oilseeds.....	111.7	108.2	106.9	103.1	99.8	105.2	105.3	106.3	107.6	107.4	105.5	104.7	104.2	107.2	95.2
Other farm products.....	87.4	89.0	90.1	89.7	90.8	89.9	92.5	92.5	93.4	93.2	93.6	93.5	93.5	93.2	92.3
Processed foods.....	100.9	100.9	101.3	101.5	103.3	101.5	100.8	99.8	99.6	100.2	101.6	101.8	102.0	100.7	100.0
Cereal and bakery products.....	107.4	107.6	107.7	107.6	107.6	107.8	107.9	107.6	107.4	108.0	107.4	107.3	106.9	105.1	103.2
Meats, poultry, and fish.....	97.9	99.4	100.1	100.0	106.8	101.0	99.0	95.7	95.5	95.6	98.4	98.7	99.2	95.4	97.8
Dairy products and ice cream.....	107.9	108.1	108.0	107.7	106.0	106.1	105.7	105.0	104.5	106.0	108.0	109.1	109.1	107.5	105.0
Canned and frozen fruits and vegetables.....	100.2	95.7	96.3	96.4	96.6	97.1	98.7	99.1	98.6	99.0	99.3	99.8	99.3	101.7	99.5
Sugar and confectionery.....	105.0	102.8	102.5	103.0	102.1	102.7	102.2	102.4	102.1	102.3	101.7	101.8	101.3	101.3	101.8
Packaged beverage materials.....	80.2	80.2	80.2	80.2	82.4	82.6	82.6	82.6	82.6	82.6	82.4	82.4	82.4	83.7	86.7
Animal fats and oils.....	82.5	85.2	92.2	95.2	91.4	89.5	85.8	85.7	87.7	86.2	89.1	88.2	84.3	94.4	86.6
Crude vegetable oils.....	81.0	78.9	79.8	80.9	76.7	77.9	78.2	80.8	87.1	91.4	92.9	93.9	96.2	102.6	82.4
Refined vegetable oils.....	88.4	90.0	88.7	86.2	84.6	85.2	85.2	88.8	89.9	94.9	105.5	106.9	111.7	108.3	86.8
Vegetable oil end products.....	91.9	91.8	91.8	90.9	92.6	92.9	94.5	100.1	101.9	101.9	102.5	103.3	103.4	102.7	90.5
Miscellaneous processed foods ⁵	100.2	100.4	101.2	104.6	102.8	101.1	101.0	100.1	100.7	101.2	102.7	102.0	102.2	105.8	106.2
All commodities except farm products.....	100.8	100.8	100.8	100.8	101.2	100.8	100.8	100.6	100.7	100.8	100.9	101.0	101.2	100.8	101.1
All commodities except farm and foods.....	100.7	100.7	100.7	100.7	100.8	100.8	100.8	100.7	100.9	100.9	100.8	100.8	101.0	100.8	101.3
Textile products and apparel.....	100.4	100.6	100.5	100.5	100.6	100.8	100.9	100.8	100.7	100.5	100.4	100.4	100.3	99.7	101.5
Cotton products.....	100.6	100.8	100.7	101.0	101.3	101.7	101.9	102.0	102.1	102.4	102.4	102.2	102.0	100.4	104.4
Wool products.....	100.7	100.2	100.1	99.6	99.4	99.3	99.3	99.1	98.9	98.6	98.3	98.1	97.8	97.1	98.2
Manmade fiber textile products.....	93.8	93.7	93.6	93.6	94.0	94.3	94.7	94.6	94.5	93.7	93.5	93.3	93.3	93.4	97.5
Silk products.....	149.8	143.3	130.3	129.5	125.2	132.4	130.2	130.7	126.4	121.6	116.3	113.2	111.5	113.2	105.7
Apparel.....	101.5	101.7	101.7	101.7	101.6	101.8	101.8	101.5	101.4	101.3	101.3	101.2	101.2	101.0	101.3
Miscellaneous textile products ⁶	123.2	127.9	127.8	121.6	122.1	119.4	121.6	123.9	119.7	118.5	122.3	121.7	122.4	123.3	111.9
Hides, skins, leather, and leather products.....	106.1	106.9	107.3	107.4	107.5	107.0	107.5	108.0	107.2	106.9	107.4	107.7	108.2	106.2	105.2
Hides and skins.....	95.2	101.6	107.1	108.8	110.8	105.1	104.2	108.5	105.4	103.3	103.8	105.4	110.1	107.9	100.5
Leather.....	105.2	106.1	106.8	106.5	106.6	106.9	108.4	110.0	110.6	109.5	109.6	110.6	110.9	106.0	103.5
Footwear.....	108.5	108.7	108.6	108.6	108.8	108.8	108.8	108.7	108.7	108.7	108.7	108.5	108.5	107.4	107.0
Other leather products.....	105.4	105.5	105.0	104.8	104.0	103.9	105.0	104.9	101.7	102.6	104.5	104.6	104.7	103.2	104.2
Fuel and related products, and power.....	100.5	100.8	100.8	100.8	100.8	99.5	100.0	99.6	99.7	100.2	99.9	100.4	101.0	100.7	99.6
Coal.....	98.3	98.3	97.7	97.2	96.6	95.6	95.3	94.6	94.6	95.3	98.7	98.7	98.7	97.7	98.8
Coke.....	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6
Gas fuels ⁷	121.8	123.1	122.3	122.7	120.1	117.8	119.7	113.8	116.6	115.3	119.4	122.0	118.1	118.7	116.6
Electric power ⁷	102.6	102.7	102.7	102.7	102.8	102.8	102.8	102.8	102.9	103.0	103.1	103.0	102.5	102.4	101.9
Crude petroleum and natural gasoline.....	98.1	98.1	98.1	98.1	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.2	98.0	97.7
Petroleum products, refined.....	98.2	98.6	98.9	98.9	99.2	97.2	98.0	98.1	97.9	98.9	95.3	97.8	99.6	99.3	97.6
Chemicals and allied products.....	96.9	96.8	97.0	97.1	96.9	97.0	97.2	97.6	97.7	97.9	98.0	98.1	98.4	99.1	100.2
Industrial chemicals.....	96.0	95.9	95.9	96.1	95.9	95.9	96.1	96.2	96.3	96.5	96.6	96.8	97.3	98.4	100.5
Prepared paint.....	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.7	103.7	103.7	103.7	103.6	100.7
Paint materials.....	93.0	92.9	93.9	93.9	94.5	93.8	96.0	96.2	96.4	96.6	96.5	97.0	97.4	99.6	101.7
Drugs and pharmaceuticals.....	95.3	94.8	95.1	95.1	95.0	95.0	95.1	97.0	97.0	97.0	97.1	97.1	97.2	98.3	100.2
Fats and oils, inedible.....	71.7	72.8	75.9	76.7	72.3	73.0	73.5	73.4	77.1	79.3	81.3	77.0	83.0	87.5	81.5
Mixed fertilizer.....	103.0	102.8	103.1	103.4	103.9	103.9	103.9	103.9	103.9	104.3	104.3	104.0	103.7	102.6	100.9
Fertilizer materials.....	100.8	99.6	99.2	99.0	98.6	98.4	101.0	103.6	103.6	103.7	103.7	106.3	105.8	104.3	102.2
Other chemicals and allied products.....	99.6	99.5	99.5	99.5	99.5	99.4	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2	100.3
Rubber and rubber products.....	94.3	94.4	93.7	93.1	92.8	92.7	92.7	93.0	93.2	92.9	93.6	93.5	94.1	96.1	99.9
Crude rubber.....	94.1	94.7	92.8	92.7	92.0	92.3	92.4	93.5	94.9	94.1	94.3	94.6	94.5	96.3	109.3
Tires and tubes.....	89.0	89.0	88.0	86.4	86.4	86.4	86.4	86.4	86.4	86.1	87.6	87.0	88.5	92.4	93.0
Miscellaneous rubber products ⁸	99.7	99.7	99.7	100.0	99.4	99.1	99.1	99.4	99.4	99.1	99.5	99.5	99.4	100.0	102.6
Lumber and wood products.....	95.9	95.8	96.3	96.6	97.0	97.4	97.5	97.3	97.1	96.8	96.2	95.2	94.7	95.9	100.4
Lumber.....	95.9	95.8	96.3	96.7	97.2	97.7	98.0	97.6	97.5	96.8	95.8	94.8	94.0	94.7	99.8
Millwork.....	102.3	102.1	102.3	102.3	102.3	102.7	102.3	101.9	101.8	101.3	101.1	100.7	100.9	101.9	104.5
Plywood.....	90.4	90.4	91.5	91.9	92.2	92.1	92.4	92.9	92.2	94.2	94.2	92.8	92.2	95.7	97.8
Pulp, paper, and allied products.....	99.0	99.0	99.1	99.3	99.5	99.7	100.0	100.5	100.8	101.3	101.0	99.9	99.9	98.8	101.8
Woodpulp.....	89.4	89.4	89.4	91.3	93.6	93.6	93.6	93.6	93.6	95.0	95.0	95.0	95.0	95.0	100.2
Wastepaper.....	94.7	94.6	96.0	96.1	96.4	95.1	96.8	96.4	96.2	98.0	103.2	100.1	100.9	80.5	90.3
Paper.....	102.2	102.2	102.2	102.3	102.4	102.6	103.1	103.1	103.1	103.1	102.7	102.5	102.0	102.2	102.0
Paperboard.....	94.1	94.1	94.1	94.0	94.0	94.0	94.0	93.8	93.8	93.8	92.8	89.7	89.7	92.5	99.4
Converted paper and paperboard products.....	99.6	99.6	99.7	100.0	100.0	100.4	101.0	101.6	102.1	103.0	102.5	101.3	101.4	99.5	102.8
Building paper and board.....	95.6	96.2	96.6	96.3	97.1	97.1	96.3	95.5</							

TABLE D-3. Indexes of wholesale prices,¹ by group and subgroup of commodities—Continued[1957-59=100, unless otherwise specified]²

Commodity group	1963		1962										Annual Average		
	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
All commodities except farm and foods—Continued															
Metals and metal products.....	99.4	499.3	499.3	99.4	99.7	99.8	99.7	99.8	100.2	100.3	100.4	100.6	100.7	100.7	101.3
Iron and steel.....	98.8	98.7	98.4	98.7	99.0	99.1	98.9	98.9	99.2	99.6	99.8	100.4	100.6	100.7	100.6
Nonferrous metals.....	97.9	97.7	98.3	97.9	98.9	99.0	99.0	99.3	99.9	99.8	100.1	100.3	100.5	100.4	103.9
Metal containers.....	104.6	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	102.0
Hardware.....	103.8	103.8	103.8	103.7	103.7	103.7	103.7	104.2	104.1	104.1	104.4	104.4	104.5	103.8	102.8
Plumbing fixtures and brass fittings...	97.5	97.5	97.5	97.2	96.8	96.8	97.1	98.5	103.8	103.7	103.9	104.1	104.1	103.1	103.1
Heating equipment.....	92.3	493.3	492.8	92.7	92.6	92.9	92.9	92.9	93.1	93.7	93.7	93.8	93.8	94.6	98.2
Fabricated structural metal products.....	98.1	498.1	98.1	98.2	98.2	98.3	98.3	98.3	98.3	98.1	98.1	98.2	98.3	99.0	100.8
Fabricated nonstructural metal products.....	103.7	103.8	4103.9	103.8	103.9	103.9	103.9	103.9	104.1	104.4	104.1	103.3	103.2	103.1	100.6
Machinery and motive products.....	102.3	4102.3	4102.2	102.2	102.3	102.3	102.3	102.4	102.3	102.3	102.3	102.3	102.3	102.3	102.4
Agricultural machinery and equipment.....	110.8	4110.5	110.2	109.6	109.4	109.4	109.5	109.5	109.3	109.2	109.4	109.2	108.8	107.4	105.4
Construction machinery and equipment.....	108.3	108.3	108.2	108.0	107.7	107.7	107.6	107.7	107.7	107.7	107.6	107.6	107.7	107.5	105.8
Metalworking machinery and equipment.....	109.2	109.3	109.3	109.3	109.3	109.5	109.6	109.7	109.5	109.4	109.2	109.0	108.9	107.0	105.5
General purpose machinery and equipment.....	103.9	4103.8	103.7	103.7	103.6	103.3	102.9	103.1	103.2	103.1	103.2	102.8	102.9	102.8	103.6
Miscellaneous machinery.....	103.6	4103.6	4103.4	4103.4	4103.4	4103.6	103.2	103.2	103.1	103.2	103.4	103.3	103.2	102.8	101.8
Special industry machinery and equipment ⁴	102.9	4102.8	102.5	102.2	102.0	102.0	102.0	101.8	101.8	101.7	101.5	101.5	101.4	100.4	(⁵)
Electrical machinery and equipment.....	98.0	498.1	498.1	498.4	498.4	98.0	98.1	98.4	98.6	98.6	98.7	98.8	98.8	100.0	101.3
Motor vehicles.....	100.4	100.4	100.4	100.4	100.9	100.9	100.9	100.9	100.1	100.1	100.1	100.2	100.3	100.7	101.0
Transportation equipment, railroad rolling stock ⁶	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.2	(⁵)
Furniture and other household durables.....	98.3	498.4	498.6	98.5	98.6	98.7	98.8	98.9	99.0	98.9	99.0	99.1	99.3	99.5	100.1
Household furniture.....	104.4	104.2	104.1	104.0	103.9	104.0	104.1	103.9	103.7	103.4	103.4	103.5	103.4	102.8	101.6
Commercial furniture.....	102.3	4102.3	102.5	102.5	102.5	102.5	102.4	102.2	102.2	102.2	102.2	102.2	102.2	101.8	102.2
Floor coverings.....	96.2	96.4	96.8	96.8	96.7	96.7	96.7	96.7	97.0	97.0	97.0	97.0	98.9	99.3	100.5
Household appliances.....	92.2	493.0	493.1	93.0	93.2	93.6	93.9	94.3	94.3	94.7	94.9	95.0	95.0	95.2	97.0
Television, radio receivers, and phonographs.....	90.4	490.4	90.4	90.7	90.7	90.8	90.8	90.9	92.3	91.2	91.4	91.7	92.4	95.3	97.3
Other household durable goods.....	102.7	102.8	102.9	102.9	103.1	102.9	103.0	103.2	103.2	103.2	103.2	102.9	103.1	102.5	102.8
Nonmetallic mineral products.....	101.4	101.5	101.6	101.6	101.5	101.6	101.6	101.9	102.1	102.4	102.2	102.1	101.9	101.8	101.4
Flat glass.....	96.6	96.6	96.6	96.6	96.6	96.6	98.0	98.0	98.0	97.9	96.2	96.2	96.2	96.8	97.9
Concrete ingredients.....	102.9	103.2	103.3	103.3	103.3	103.3	103.2	103.2	103.2	103.1	103.1	103.0	102.8	102.8	102.7
Concrete products.....	102.5	4102.5	4102.8	4102.7	4102.6	4102.6	4102.7	4102.5	4102.5	4102.6	4102.6	4102.6	4102.2	102.5	102.4
Structural clay products.....	103.5	103.5	103.4	103.4	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.5	103.4	103.2	103.1
Gypsum products.....	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.8
Prepared asphalt roofing.....	89.4	89.4	89.4	89.4	89.4	89.4	89.4	95.3	99.0	101.4	101.4	101.4	102.1	98.6	91.6
Other nonmetallic minerals.....	102.4	102.4	102.4	102.2	101.5	101.7	101.7	102.0	102.0	102.8	102.8	102.8	101.7	102.2	102.8
Tobacco products and bottled beverages.....	104.3	104.3	104.5	104.5	104.2	104.2	104.2	104.1	104.1	104.0	104.0	103.8	103.8	103.2	102.5
Tobacco products.....	102.2	102.2	102.2	102.2	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	101.9
Alcoholic beverages.....	101.1	4101.1	101.5	101.5	101.1	101.1	100.7	101.1	101.1	100.8	100.8	100.7	100.7	100.6	100.3
Nonalcoholic beverages.....	117.4	117.4	117.4	117.4	117.1	117.1	116.7	116.7	116.7	116.7	116.7	116.2	116.2	112.8	110.3
Miscellaneous products.....	111.7	110.2	109.8	108.7	109.1	107.2	107.6	105.4	106.0	106.0	105.6	105.6	106.7	103.9	99.3
Toys, sporting goods, small arms, ammunition.....	101.2	101.3	101.2	101.2	101.1	101.0	101.0	100.7	100.5	100.5	100.5	100.3	100.5	100.9	100.2
Manufactured animal feeds.....	118.3	115.7	4114.9	112.8	113.7	110.2	111.0	107.2	108.2	108.3	107.5	107.6	109.7	104.6	96.4
Notions and accessories.....	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.8	98.8	98.9	99.5
Jewelry, watches, and photographic equipment.....	104.4	104.4	104.4	104.4	104.4	104.4	104.3	104.2	104.1	104.1	103.7	103.8	103.6	103.5	102.7
Other miscellaneous products.....	101.8	101.5	4101.7	101.6	101.2	101.0	101.0	100.9	100.9	101.3	101.6	101.2	101.2	101.2	101.0

¹ As of January 1961, new weights reflecting 1958 values were introduced into the index. See "Weight Revisions in the Wholesale Price Index 1890-1960," *Monthly Labor Review*, February 1962, pp. 175-182.

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.

³ Preliminary.

⁴ Revised.

⁵ Formerly titled "other processed foods."

⁶ Formerly titled "other textile products."

⁷ January 1958=100.

⁸ Formerly titled "other rubber products."

⁹ January 1961=100.

TABLE D-4. Indexes of wholesale prices for special commodity groupings¹[1957-59=100, unless otherwise specified]²

Commodity group	1963			1962										Annual average	
	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
All foods.....	101.1	499.9	101.3	101.2	102.9	100.5	99.6	98.9	99.3	99.7	101.4	101.7	101.3	100.0	100.0
All fish.....	121.9	120.9	118.3	119.0	119.8	121.6	119.0	118.3	119.4	118.9	120.3	119.7	115.2	107.9	102.0
All commodities except farm products.....	100.8	100.8	100.8	100.8	101.2	100.8	100.8	100.6	100.7	100.8	100.9	101.0	101.2	100.8	101.1
Textile products, excluding hard fiber products.....	98.5	498.5	98.3	98.4	98.7	99.0	99.2	99.2	99.2	99.0	98.9	98.6	98.5	97.7	101.4
Bituminous coal—domestic sizes.....	101.5	101.5	100.4	99.1	98.1	95.9	95.0	94.0	93.6	95.4	102.1	102.3	102.3	99.9	101.3
Refined petroleum products.....	98.7	498.6	98.6	98.9	99.2	97.2	98.0	98.1	97.9	98.9	95.3	97.8	99.6	99.3	97.6
East Coast markets.....	99.6	100.1	98.9	97.8	97.8	97.8	97.8	97.8	99.0	100.0	101.5	102.2	102.2	100.9	97.7
Midcontinent markets.....	94.4	97.5	101.4	101.4	101.4	101.4	101.4	101.4	98.6	99.4	85.1	91.6	97.5	99.6	99.0
Gulf Coast markets.....	98.1	97.4	95.6	97.9	99.2	99.2	99.2	97.2	96.0	97.9	99.9	102.0	102.0	101.2	99.0
Pacific Coast markets.....	91.7	91.7	91.7	91.4	91.4	91.4	91.4	92.9	92.9	89.3	89.3	89.3	88.0	89.9	88.7
Midwest markets ⁴	97.6	97.7	98.3	97.2	97.2	87.0	90.8	93.4	95.9	98.4	88.2	90.7	95.8	93.5	(5)
Soaps.....	103.5	103.5	103.5	103.5	103.5	102.2	102.2	102.2	102.1	102.1	102.1	102.1	102.1	101.4	100.2
Synthetic detergents.....	99.6	99.6	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100.8	101.2
Pharmaceutical preparations.....	96.7	96.1	96.4	96.3	96.3	96.3	96.4	98.5	88.4	98.3	98.3	98.3	98.3	98.9	100.5
Ethical preparations ⁵	95.7	95.0	95.4	95.3	95.4	95.4	95.5	98.4	98.4	98.3	98.4	98.4	98.4	98.4	99.3
Anti-infectives ⁵	88.5	86.6	87.6	87.6	87.7	87.7	87.9	98.7	98.7	98.7	98.7	98.9	98.9	98.9	(5)
Anti-arthritis ⁵	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.3
Sedatives and hypnotics ⁵	112.7	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	(5)
Ataractics ⁵	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Anti-spasmodics and anti-cholinergics ⁵	101.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Cardiovasculars and anti-hypertensives ⁵	100.7	498.7	101.6	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.5
Diabetics ⁵	103.8	103.8	103.8	103.8	103.8	103.8	104.2	104.2	104.2	104.2	104.2	103.8	103.8	101.9	(5)
Hormones ⁵	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100.0	100.0	100.0	(5)
Diuretics ⁵	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Dermatologicals ⁵	100.8	100.8	100.8	100.8	100.8	100.8	100.8	100.8	100.8	100.8	100.6	100.6	100.6	100.2	(5)
Herminatics ⁵	109.0	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	108.5	106.1	(5)
Analgesics ⁵	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	100.9	(5)
Anti-obesity preparations ⁵	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Cough and cold preparations ⁵	100.7	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	98.9	98.9	98.9	98.9	99.4	(5)
Vitamins ⁵	88.0	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	88.1	95.0	(5)
Proprietary preparations ⁵	101.1	100.7	100.7	100.5	100.5	100.5	100.5	100.7	100.7	100.4	100.3	100.3	100.3	100.1	(5)
Vitamins ⁵	100.3	100.3	100.3	99.6	100.3	100.3	100.3	100.3	100.3	100.0	100.0	100.0	100.0	100.0	(5)
Cough and cold preparations ⁵	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Laxatives and elimination aids ⁵	101.6	101.6	101.6	101.6	101.6	101.5	101.5	101.5	102.0	102.0	101.2	99.7	99.7	99.8	(5)
Internal analgesics ⁵	101.7	101.3	101.3	101.3	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	(5)
Tonics and alteratives ⁵	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
External analgesics ⁵	101.5	101.3	101.3	100.8	100.7	100.7	100.7	101.2	101.2	101.2	100.2	100.2	100.2	100.0	(5)
Antiseptics ⁵	102.1	100.9	100.9	100.1	100.1	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)
Antacids ⁵	100.0	98.9	98.9	98.9	98.9	98.9	98.9	98.9	100.6	100.6	100.0	100.0	100.0	100.0	(5)
Lumber and wood products (excluding millwork).....	94.6	494.6	95.2	95.6	96.1	96.4	96.8	96.6	96.4	96.2	95.5	94.3	93.5	94.7	99.5
Softwood lumber.....	95.0	495.0	95.6	96.1	96.8	97.3	97.6	97.1	67.0	96.1	95.0	93.8	92.9	93.5	98.6
Pulp, paper, and allied products (excluding building paper and board).....	99.1	499.1	99.2	99.4	99.6	99.9	100.2	100.7	101.0	101.5	101.1	100.0	100.0	98.7	101.8
Special metals and metal products ⁶	100.2	100.1	100.1	100.1	100.4	100.5	100.5	100.5	100.5	100.6	100.7	100.9	101.0	101.0	101.4
Steel mill products.....	101.3	101.3	101.3	101.4	101.3	101.3	101.4	101.5	101.5	101.5	101.5	101.5	101.5	101.7	102.1
Machinery and equipment.....	103.0	4103.0	102.8	4103.0	102.8	102.8	102.9	103.0	103.1	103.1	103.1	102.8	103.0	102.9	102.9
Agricultural machinery (including tractors).....	111.8	111.4	111.3	110.7	110.5	110.4	110.5	110.5	110.3	110.2	110.4	110.2	109.7	108.3	106.1
Metalworking machinery.....	108.6	108.7	108.7	108.8	108.7	109.0	109.1	109.2	109.0	109.0	108.8	108.5	108.5	106.6	104.5
All tractors.....	110.4	4110.2	110.0	109.5	109.2	109.1	109.3	109.4	109.4	109.3	109.6	109.3	108.8	108.0	106.0
Industrial valves.....	107.8	108.0	108.0	108.0	107.7	107.3	4104.6	106.6	107.2	107.9	107.9	107.4	109.0	108.7	110.8
Industrial fittings.....	94.6	94.6	94.6	94.6	93.9	93.9	93.9	92.7	92.7	92.7	92.7	89.8	89.8	88.2	96.2
Antifriction bearings and components.....	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	94.4
Abrasive grinding wheels.....	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	98.3	98.3	100.4	100.4	100.3	96.2	96.6
Construction materials.....	97.7	497.7	97.9	98.0	98.1	98.3	98.4	98.5	98.9	98.9	98.7	98.4	98.2	98.6	100.5

¹ See footnote 1, table D-3.² See footnote 2, table D-3.³ Preliminary.⁴ Revised.⁵ New series. January 1961=100.⁶ Metals and metal products, agricultural machinery and equipment, and motor vehicles.

TABLE D-5. Indexes of wholesale prices,¹ by stage of processing and durability of product[1957-59=100]²

Commodity group	1963		1962										1961 Annual average		
	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961 ⁴	1960
All commodities.....	100.6	100.4	100.7	100.6	101.2	100.5	100.4	100.0	100.2	100.4	100.7	100.7	100.8	100.3	100.7
<i>Stage of processing</i>															
Crude materials for further processing.....	96.8	96.8	97.6	97.4	99.2	97.2	96.5	95.2	95.8	96.5	97.6	97.5	97.8	96.1	96.6
Crude foodstuffs and feedstuffs.....	97.1	97.1	98.2	97.9	100.6	97.4	96.0	94.0	94.7	95.5	96.9	96.3	96.7	94.9	96.2
Crude nonfood materials except fuel.....	95.8	95.8	95.9	96.0	96.3	96.6	97.0	97.3	97.9	98.3	98.7	99.3	99.5	97.9	96.8
Crude nonfood materials, except fuel, for manufacturing.....	95.2	95.1	95.3	95.3	95.7	96.0	96.5	96.8	97.4	97.9	98.3	99.1	99.3	97.4	96.2
Crude nonfood materials, except fuel, for con- struction.....	102.9	103.2	103.3	103.3	103.3	103.3	103.3	103.2	103.3	103.1	103.1	103.0	102.9	102.8	102.7
Crude fuel.....	103.6	104.0	103.4	103.2	102.0	100.6	101.0	98.7	99.6	99.7	103.1	104.0	102.7	102.3	102.5
Crude fuel for manufacturing.....	103.5	103.9	103.4	103.2	102.0	100.6	101.0	98.8	99.6	99.7	103.0	103.9	102.6	102.2	102.4
Crude fuel for nonmanufacturing.....	103.8	104.3	103.7	103.5	102.2	100.8	101.2	98.8	99.7	99.7	103.3	104.2	102.9	102.4	102.6
Intermediate materials, supplies, and components.....	100.2	100.1	100.1	100.1	100.2	100.1	100.3	100.2	100.4	100.5	100.3	100.2	100.3	100.3	101.0
Intermediate materials and components for manu- facturing.....	98.8	98.7	98.8	98.9	99.0	99.1	99.2	99.3	98.8	99.4	99.5	99.4	99.5	99.8	100.9
Intermediate materials for food manufacturing.....	101.1	99.9	100.2	100.8	100.4	99.8	99.4	99.5	99.6	100.4	101.5	101.9	102.2	102.6	99.5
Intermediate materials for nondurable manu- facturing.....	97.3	97.3	97.4	97.6	97.7	97.8	98.1	98.3	98.4	98.5	98.3	98.2	98.4	98.6	100.8
Intermediate materials for durable manu- facturing.....	100.0	99.9	100.1	100.1	100.4	100.5	100.6	100.6	100.7	100.7	100.6	100.4	100.3	100.5	101.9
Components for manufacturing.....	98.7	98.8	98.6	98.6	98.7	98.7	98.9	98.9	98.8	98.9	99.1	99.0	99.1	99.6	100.6
Materials and components for construction.....	98.8	98.9	99.0	99.1	99.2	99.3	99.3	99.5	99.7	99.8	99.7	99.4	99.2	99.7	101.1
Processed fuels and lubricants.....	100.7	101.4	101.7	102.0	102.1	100.8	101.4	101.2	101.2	101.5	99.5	100.6	101.3	101.6	100.4
Processed fuels and lubricants for manufactur- ing.....	102.0	102.6	102.7	102.9	102.9	100.9	102.4	102.1	102.2	102.4	101.1	102.0	102.3	102.5	101.2
Processed fuels and lubricants for nonmanu- facturing.....	98.4	99.4	100.0	100.4	100.6	99.0	99.6	99.7	99.5	99.9	96.8	98.2	99.5	100.1	99.0
Containers, nonreturnable.....	101.6	101.5	101.6	101.4	101.4	101.6	102.1	102.6	102.7	103.4	103.1	102.3	102.4	100.9	101.8
Supplies.....	106.6	105.9	105.6	105.0	105.2	104.3	104.7	103.8	104.2	104.2	103.9	103.5	104.1	102.3	101.0
Supplies for manufacturing.....	105.8	105.9	105.9	106.1	106.0	105.8	105.9	105.9	105.7	105.5	105.5	105.4	105.2	105.2	106.4
Supplies for nonmanufacturing.....	106.4	105.3	104.9	104.0	104.3	103.2	103.7	102.4	103.0	103.1	102.7	102.2	103.1	100.6	98.2
Manufactured animal feeds.....	111.5	109.1	108.3	106.2	107.0	103.7	104.5	100.8	101.8	101.9	101.1	101.2	103.2	97.5	88.8
Other supplies.....	101.3	101.1	101.0	100.9	100.8	101.1	101.3	101.6	101.9	102.1	101.8	101.1	101.2	100.5	101.5
Finished goods (goods to users, including raw foods and fuels).....	101.8	101.6	102.0	101.9	102.6	101.7	101.5	101.1	101.2	101.4	101.8	102.1	102.1	101.4	101.4
Consumer finished goods.....	101.3	101.0	101.5	101.5	102.3	101.1	100.8	100.4	100.5	100.7	101.3	101.7	101.7	100.9	101.1
Consumer foods.....	101.5	100.7	102.1	101.9	103.9	101.3	100.3	99.3	99.5	100.1	101.9	102.3	101.9	100.4	100.8
Consumer crude foods.....	103.5	95.9	102.8	100.9	101.5	96.3	93.4	93.7	96.7	97.6	101.7	102.9	99.4	97.6	102.2
Consumer processed foods.....	101.1	101.4	101.9	102.0	104.3	102.1	101.4	100.2	99.9	100.4	101.9	102.2	102.3	100.8	100.6
Consumer other nondurable goods.....	101.7	101.8	101.7	101.8	101.7	101.4	101.5	101.4	101.5	101.6	101.3	101.8	102.0	101.5	101.5
Consumer durable goods.....	99.9	99.9	100.0	99.9	100.1	100.1	100.2	100.0	100.0	99.9	100.0	100.1	100.2	100.5	100.9
Producer finished goods.....	103.1	103.0	102.9	102.8	102.9	103.0	103.0	102.8	102.9	102.9	102.8	102.8	102.8	102.5	102.3
Producer finished goods for manufacturing.....	104.7	104.7	104.6	104.5	104.5	104.5	104.6	104.4	104.4	104.4	104.3	104.3	104.3	103.8	103.4
Producer finished goods for nonmanufacturing.....	101.5	101.4	101.3	101.3	101.3	101.5	101.5	101.3	101.4	101.4	101.4	101.4	101.4	101.2	101.2
<i>Durability of product</i>															
Total durable goods.....	100.7	100.7	100.7	100.7	100.9	101.0	101.0	101.0	101.1	101.2	101.2	101.2	101.1	101.3	101.7
Total nondurable goods.....	100.3	100.0	100.5	100.4	101.2	100.0	99.8	99.3	99.5	99.7	100.2	100.3	100.5	99.6	99.9
Total manufactures.....	100.6	100.6	100.7	100.7	101.1	100.7	100.8	100.6	100.7	100.7	100.7	100.8	101.0	100.7	101.1
Durable manufactures.....	101.1	101.1	101.1	101.1	101.3	101.3	101.4	101.4	101.5	101.5	101.4	101.3	101.3	101.4	101.9
Nondurable manufactures.....	100.0	100.0	100.2	100.2	100.9	100.0	100.1	99.8	99.8	99.9	100.0	100.1	100.6	100.0	100.2
Total raw or slightly processed goods.....	100.2	99.4	100.5	100.2	101.1	99.2	98.4	97.3	98.1	98.8	100.1	100.3	100.0	98.3	98.8
Durable raw or slightly processed goods.....	87.7	86.4	85.4	86.3	87.8	88.3	86.8	86.7	89.1	90.8	91.9	95.1	96.1	95.2	93.5
Nondurable raw or slightly processed goods.....	100.9	100.1	101.4	101.0	101.9	99.9	99.0	97.9	98.6	99.2	100.6	100.7	100.3	98.5	99.1

¹ See footnote 1, table D-3.² See footnote 2, table D-3.³ Preliminary.⁴ Revised.NOTE: For description of the series by stage of processing, see "New BLS Economic Sector Indexes of Wholesale Prices," *Monthly Labor Review*, December 1955, pp. 1448-1453; and by durability of product and data beginning with 1947, see *Wholesale Prices and Price Indexes, 1957*, BLS Bulletin 1235 (1958).

E.—Work Stoppages

TABLE E-1. 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	In effect during month	Number	Percent of estimated working time
1935-39 (average).....	2,862		1,130,000		16,900,000	0.27
1947-49 (average).....	3,573		2,380,000		39,700,000	.46
1945.....	4,750		3,470,000		38,000,000	.47
1946.....	4,985		4,600,000		116,000,000	1.43
1947.....	3,693		2,170,000		34,600,000	.41
1948.....	3,419		1,960,000		34,100,000	.37
1949.....	3,606		3,030,000		50,500,000	.59
1950.....	4,843		2,410,000		38,800,000	.44
1951.....	4,737		2,220,000		22,900,000	.23
1952.....	5,117		3,540,000		59,100,000	.57
1953.....	5,091		2,400,000		28,300,000	.26
1954.....	3,468		1,530,000		22,600,000	.21
1955.....	4,320		2,650,000		28,200,000	.26
1956.....	3,825		1,900,000		33,100,000	.29
1957.....	3,673		1,390,000		16,500,000	.14
1958.....	3,694		2,060,000		23,900,000	.22
1959.....	3,708		1,880,000		69,000,000	.61
1960.....	3,333		1,320,000		19,100,000	.17
1961.....	3,367		1,450,000		16,300,000	.14
1962: January ²	265	400	\$ 70,000	\$ 95,000	\$ 940,000	\$.10
February ²	225	330	67,000	100,000	808,000	.09
March ²	260	350	98,000	136,000	1,180,000	.12
April ²	320	460	125,000	155,000	1,240,000	.13
May ²	440	625	195,000	240,000	2,650,000	.26
June ²	410	650	155,000	300,000	2,880,000	.29
July ²	350	575	90,000	189,000	2,040,000	.21
August ²	335	570	120,000	186,000	1,950,000	.18
September ²	350	580	95,000	170,000	1,590,000	.18
October ²	275	500	110,000	168,000	1,440,000	.13
November ²	215	430	80,000	125,000	1,000,000	.11
December ²	105	265	50,000	150,000	1,400,000	.15
1963: January ²	230	360	75,000	185,000	2,340,000	.23

¹ The data include all known strikes or lockouts involving 6 or more workers 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.

² Preliminary.

³ Revised preliminary.

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