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Unit Labor Costs in Eight Countries

New Features of the Revised CPI

NLRB Operations for 1962-63

Government and Manpower Requirements

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS



UNITED STATES DEPARTMENT OF LABOR

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Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

LAWRENCE R. KLEIN, *Editor-in-Chief*

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This Issue in Brief . . .

MANUFACTURING PRODUCTION AND WAGES in eight free industrial countries underwent immense change between 1950 and 1962, with consequent shifts in the economic relationships between countries. Notable changes also took place in the cost of labor per unit of production, as some countries allowed inflationary forces to boost costs while others maintained cost stability. *Unit Labor Costs in Eight Countries Since 1950* (p. 377), by John H. Chandler and Patrick C. Jackman, estimates cost trends and examines methods followed by national statistical agencies in reporting industrial production and labor expenditure information.

AN ENLARGED but more selective market basket, additional weighting to service factors such as medical fees, and refinements in statistical techniques are the basis for the new Consumer Price Index. In *New Features of the Revised CPI* (p. 385), Phyllis Groom describes the background and makeup of the new index series, and the continuing effort to insure its accuracy.

IN 1962, the 18½ million jobs stemming from Government programs represented more than one-fourth of all employment in the United States. *Government and Manpower Requirements* (p. 407), excerpted from *Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training* by the U.S. Department of Labor, gives a view of the overall effect of Government projects on manpower requirements nationally, as well as on individual workers and groups of workers, and illustrates the manpower implications of specific Government programs.

IT APPEARS that the higher the level of a woman's education, the more likely she is to take a job. As Sol Swerdloff shows in *Job Opportunities for Women College Graduates* (p. 396), 57 percent of women with college degrees were in the labor force in March 1962, as compared with 41 percent of those with high school diplomas and 28 percent of those with elementary education. Working college women are mostly in professional, technical,

and managerial positions. Women generally do not seem to plan "careers" but rather take "jobs," probably because of the demands of family life.

WHILE EARNINGS of laundry plant workers vary widely, more than one-quarter earn less than \$1 an hour, as shown by a BLS survey of *Earnings in Laundries and Cleaning Services, June 1963* (p. 419), reported by Charles M. O'Connor. Flatwork finishers—predominately women and numerically most important—were lowest paid, with average earnings as low as 67 cents an hour in some cities. Only one-third of the plant workers, countrywide, are covered by collective bargaining agreements.

CONTINUING THE DISCUSSION of the decline in apprenticeship training, *Statistics on Apprenticeship and Their Limitations* (p. 391) by Phyllis Groom points up the need for better data as a tool in assuring that the maximum number of young workers who could profit from apprenticeship receive such training.

Following are some recent key statistics from continuing BLS series. See *Current Labor Statistics*, pp. 461-500.

March	1964	1963
Total civilian labor force (in thousands).....	72,810	71,650
Employment.....	68,517	67,148
Unemployment.....	4,293	4,501
Unemployment rate (seasonally adjusted) (percent).....	5.4	5.7
Earnings of production workers in manufacturing (preliminary):		
Average hourly earnings.....	\$2.51	\$2.44
Average weekly hours.....	40.4	40.2
Average overtime hours.....	2.7	2.6
February		
Index of average hourly earnings of production workers in manufacturing (excluding overtime and interindustry shifts) (1957-59=100).....	117.7	114.6
Consumer Price Index (1957-59=100):		
Revised series (including single workers).....	107.6	-----
Revised series (excluding single workers).....	107.6	-----
Old series (excluding single workers).....	107.6	106.1

ERRATA: Preliminary figures for earnings of production workers in manufacturing, shown in this space in the March Review, were for the month of February, rather than January as listed.

LEADERS OF DEVELOPING NATIONS, seeing many similarities between their own problems and those which faced Israel in its early days, have called upon that country for technical assistance in a wide variety of subjects, described in *Israel's Training Program for Modernizing Nations* (p. 432) by William Gerber, appearing as a Foreign Labor Brief.

The Labor Month in Review

Plans for Industrial Peace in Newspaper Publishing

A NEWLY FORMED joint labor-management board for New York City's newspaper industry will address itself on a year-round basis to the acute problems of economics and technology that beset the papers and their employees.

The board, composed of 2 representatives of each of the 7 newspaper members of the Publishers' Association and 2 representatives of each of the 10 unions and of the Allied Printing Trades Council, held 2 meetings in March. Henceforth, it is to meet at least once a month. The board is to set up 10 subcommittees, one for each jurisdiction represented by a union, with at least 2 union and 2 management members on each subcommittee.

Advocated by some of the labor and management leaders for some time, it was nursed into being by Mayor Robert F. Wagner who had been active in settling the 114-day newspaper dispute that ended on March 31, 1963. Forming the committee was not an easy or simple task, and the Pressmen's local, officially listed as a member of the board, has not yet sent a representative to its meetings. (The local withdrew from the Newspaper Trades Council, a group composed of all the other unions.) The New York Post, which left the Publishers' Association during the 1963 conflict, is not a member of the board either.

Both sides, severely damaged by their last negotiating encounter, are optimistic that the board will be useful. They have been discussing manpower problems and forecasts in their first meetings. According to Thomas J. Murphy, executive vice president of the New York Newspaper Guild, the union was shown that the closing of the New York Mirror half a year after the strike lost more jobs for workers than all the technological changes made on all the papers in the previous decade.

CONSOLIDATION OF NEWSPAPERS and increasing mechanization have been providing some stormy weather for labor-management relations in the newspaper industry in many parts of the country. New York papers had the 114-day dispute in 1963; Cleveland had one lasting 126 days. In Portland, Oreg., there is a 4-year-old dispute; Detroit papers had labor-management problems in the first half of 1962.

As a whole, however, labor-management relations in the newspaper industry have been calmer than in many other industries. Much of the time, peace has been bought at the price of uneconomic work practices. The New York strike illuminated some of the problems in other cities and brought an awareness of a need for more constructive approaches to industrial relations.

Many of the recent points of friction are the same as those that have troubled the industry since the beginning of negotiations between the parties—jurisdiction, union security, work practices developed to ameliorate the effects of improvements in technology, and struck-work clauses. Adding to the problems are the difficulties in negotiating in multiunion situations and the lack of newspaper competition in many cities. In 1962, there were 1,760 daily newspapers in the United States, 26 fewer than there were in the postwar peak year of 1952. Of these, 579 were under the control of 125 publishing groups.

Other portions of the publishing industry are not immune from the same kinds of industrial relations difficulties. In the 1963 New York strike, one of the issues was the papers' use of punched-tape typesetting. In early March, International Typographical Union members at the Vail-Ballou Press in Binghamton, N.Y., walked out over the introduction of perforated tape. At the Kingsport Press, a large book publisher located in Kingsport, Tenn., five craft unions have been on strike over a year. In addition to wages, the strike started over issues related to the safeguarding of jobs.

TALKING to the American Society of Newspaper Editors shortly after the New York newspaper strike, Secretary of Labor W. Willard Wirtz called for "what might be called, suggesting its purpose, a Constructive Bargaining Council." He proposed that it include the presidents of the

newspaper union and representative publishers of comparable stature and that it explore problems in the industry, provide for a free exchange of ideas and information, and spotlight possible new approaches and procedures.

Some of the groundwork has been laid by conferences and meetings sponsored by outside institutions. The Center for the Study of Democratic Institutions invited leading publishers and trade union officials, as well as several prominent arbitrators, to "an off-the-record frank discussion of the difficult problems for collective bargaining in the newspaper industry," in September 1963.

In January 1964, a conference of national leaders in newspaper labor and management was held under the auspices of the American Arbitration Association. The group agreed to institute joint factfinding studies on the effect of new technology on future employment techniques for resolving or avoiding jurisdictional disputes, and the possibility of greater use of voluntary arbitration to prevent strikes.

IN THE FEBRUARY 1964 ISSUE of the *Notre Dame Lawyer*, Stuart Rothman, former Solicitor of the Department of Labor, proposed consideration of four types of machinery on four levels to improve collective bargaining.

1. A "Newspaper industry joint conference." Such a commission organized at the national level would consist of duly chosen representatives of the publishers and of the international unions involved. . . . Such a conference would deal only with problems of general interest and not be limited to specific bargaining areas.

2. An "Industry joint board." A prime example is "The Council on Industrial Relations" which is composed of representatives of the National Electrical Contractors Association and of the International Brotherhood of Electrical Workers. This board . . . was set up "to remove the causes of friction and dispute in the electrical contracting industry." . . . The Council's representatives are leaders on a national level to whom the locals come for settlement of disputes. . . . it is a court of justice, rather than arbitration, and . . . its settlements involve "the application of definite and certain principles without any accommodation between the parties."

3. "Joint study committees" at the level of the particular newspaper establishment. Arrangements for some kind of counsel and advice from the "industry joint board" of stage 2, above, to the "joint study committees" at the local level and the passing of information up and down from the "industry joint board" to the "joint study committee" would be appropriate. Such arrangements may be necessary because of local personalities, provincial ap-

proaches, and interunion rivalry at the local level.

4. An "Industry joint board for the determination of jurisdictional disputes." Section 10(k) of the National Labor Relations Act contemplates voluntary arrangements within an industry whereby the parties agree to resolve their jurisdictional disputes without recourse to NLRB procedures. In such cases, . . . the NLRB will leave the parties to their own voluntary devices.

A start has been made, as just noted, on the first procedure. Rothman asserts that the second step "may be looked upon either as arbitration (which the unions may not favor) or as an extension of collective bargaining which would be more acceptable to them [It] "seems necessary for the straightening out, through higher level advice, of some issues at the local level." Step three is being initiated in the New York newspaper industry. On point 4, Rothman recognizes that the employers and the unions would probably not favor arbitration of jurisdictional disputes as called for in point 4, but he asserts that the worth of such a procedure has been proved in the construction industry.

NOT ALL THE AMELIORATIVE DEVELOPMENTS in the newspaper industry are joint labor-management endeavors. In the graphic arts industry, where the traditional dividing lines between the crafts are being erased by new processes, the merger of two unions may well help to solve other problems as well as those of jurisdiction and job security—the ones which hastened the merger. The Lithographers and the Photoengravers are to hold a merger convention in May; Kenneth J. Brown, who is president of the Lithographers and is slated to become president of the new organization, has said the merger could mobilize the strength of the members to develop job security in the wake of the new technological developments and would end wasteful jurisdictional conflict.

Secretary Wirtz had observed, in his speech to the newspaper editors, that "entirely separate bargaining by 10 different unions with a newspaper—or a group of newspapers—leads to inevitable chaos." Reasoning that the unity committee approach of the locals had proved inadequate for the situation, and that although the common expiration date achieved in the current contracts was a step in the right direction, serious consideration should be given to the proposals made by some of the unions for mergers.

Unit Labor Costs in Eight Countries Since 1950*

JOHN H. CHANDLER AND PATRICK C. JACKMAN*

MANUFACTURING PRODUCTION AND WAGES both increased substantially in eight free industrial nations between 1950 and 1962, but wages sufficiently outstripped output to raise the cost for each unit of output in seven of these countries from 10 to as high as 70 percent. A Bureau of Labor Statistics study of trends in unit labor costs in Canada, France, Federal Republic of Germany, Italy, Japan, Sweden, the United Kingdom, and the United States roughly measures the extent to which costs per output unit were boosted in each country, and indicates the direction of changes in the economic relationship among these nations.

Unit labor cost is the ratio of labor expenditure to production. In this article, labor expenditure is treated as including all payments for labor, comprised of wage and other direct payments, and legally required and voluntary supplements paid to the employee or into special employee benefit funds. Production may be described as the total physical output of the manufacturing sector. An index of unit labor cost represents this ratio, but may be calculated from indexes of labor expenditure and production rather than from actual expenditure and production volume figures. The technical problems of defining and measuring unit labor cost have been described recently in the *Monthly Labor Review*,¹ and therefore will not be discussed in detail here.

Published information on labor compensation, production, and labor productivity was collated for the manufacturing sectors of eight industrial countries. Indexes of unit labor cost for these countries were constructed for the years 1950

through 1962. These indexes throw light on the general trends in unit labor cost within each country but do not disclose the ratio of unit labor cost in one country to that in another. They also contain certain technical limitations. The national statistical series from which the indexes have been calculated are generally similar in concept but are not prepared uniformly from country to country. It is possible, therefore, that the trend estimates are influenced by shortcomings of the data for some of the countries. A somewhat different problem arises from variations in the exchange value of currencies in three of the countries.

Recent Trends

The trends in unit labor cost in manufacturing since 1950 show sharp differences among the eight countries. If no adjustment is made for the effects of changes in currency valuations, the record of the United States occupies a middle position among the countries. U.S. unit labor cost for all manufacturing employees rose 27 to 34 percent over the 12 years, while unit labor costs were rising 10 percent in Japan and 70 percent in the United Kingdom. Since 1957, however, the United States shows very little change, whereas most of the other countries show significant increases.

Cost Groupings

The findings for the eight countries are divided into two groups, those for which the data represent all employee costs and those for which the data represent costs for production workers or wage earners only.² For the United States and Ger-

*Of the Division of Foreign Labor Conditions, Bureau of Labor Statistics.

¹ See William C. Shelton and John H. Chandler, "The Role of Labor Cost in Foreign Trade" and "International Comparisons of Unit Labor Cost: Concepts and Methods," in *Monthly Labor Review*, May 1963, pp. 485-490 and 538-547. These articles include discussion of the relationship between labor cost and total cost, hourly and unit labor cost, intercountry productivity differences, and approaches to measurement of unit labor cost. See also Philip Arnow, "Foreign Trade and Collective Bargaining," *Monthly Labor Review*, July 1960, pp. 693-699.

² The terms "production worker" and "wage earner" have similar meanings although they are defined differently from country to country, applying in some instances to nonsupervisory workers engaged in production and directly related processes and in others to manual workers or to workers paid by the hour or day. Where "production workers" and "wage earners" are discussed collectively in this article, the term "production worker" is used to describe both groups.

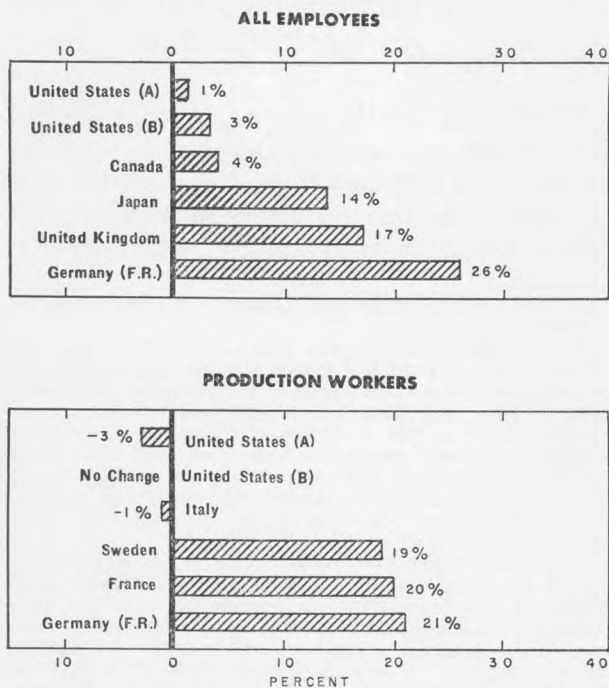
many, indexes relating both to all employees and to production workers have been computed; data are available only for all employees in Canada, Japan, and the United Kingdom and only for wage earners in Italy, Sweden, and France. The U.S. indexes are based upon two sources for production data. Thus, there are four indexes of unit labor cost presented for the United States, two representing all employee cost and two representing production worker cost.

Unit Cost Rankings

The changes in the indexes between 1957 and 1962 are shown in chart 1, and the 1950-62 changes in chart 2. The year-to-year indexes are presented in table 1, with 1957 serving as the base year for all series.

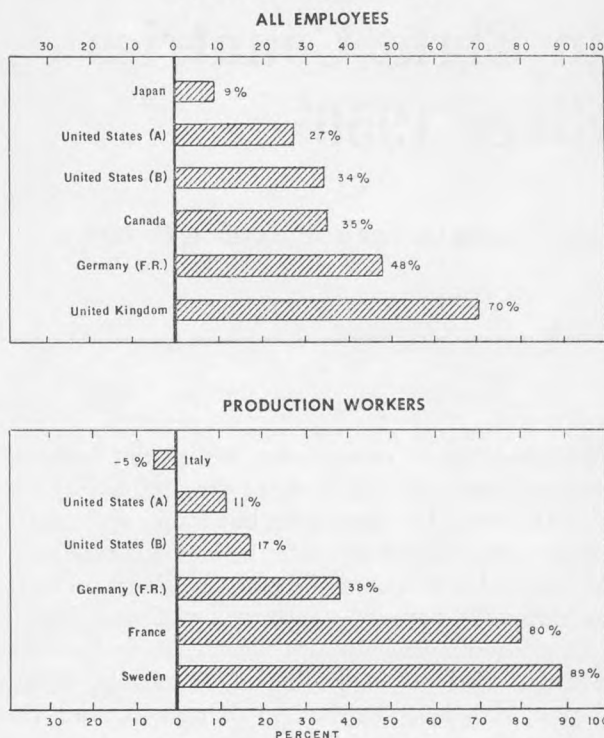
Canada, Italy, and the United States show little net change over the 1957-62 period. Japan and the United Kingdom have posted moderate increases (14 and 17 percent), and France, Germany, and Sweden show somewhat greater increases (19 to 21 percent).

Chart 1. Percentage Change in Unit Labor Cost in Manufacturing, 1957-62



NOTE: For the bases of the percentage changes shown in this and the following chart, see text.

Chart 2. Percentage Change in Unit Labor Cost in Manufacturing, 1950-62



A ranking of the eight countries by increase in unit labor cost shows Sweden and France leading, followed by the United Kingdom and Germany. The increase in Canada corresponds closely with the United States trend. Italy and Japan have shown the least change in level of unit labor cost over the 12 years.

Within the United States and Germany, at least, all-employee unit cost has risen more rapidly than production worker unit cost. In the United States, the all-employee unit cost series rose 27 and 34 percent from 1950 to 1962, while the respective production worker unit cost series were rising only 11 and 17 percent. For Germany, the rise was 48 percent for all-employee unit cost and 39 percent for wage-earner unit cost. Although the same comparisons cannot be made for the United Kingdom, the proportion of salaried employees to wage employees has increased there too, and for this reason, the trends are likely to parallel those in the other two countries. The ratio of total salaries to total wages in United Kingdom manufacturing has risen from 36 percent in 1952 to 46 percent in 1962, according to the Treasury.

For the remaining countries, more data will be required in order to determine this relationship.

Currency Revaluations

The unit labor cost trends discussed so far are based upon expenditure data reported in terms of the national currencies of each country. For France, for example, the index represents labor cost changes in current French francs per unit of output. For use in international trade analysis, however, this type of index for France may be misleading because of the 1957-58 devaluations of the franc. The devaluations did not reduce costs in franc terms but permitted the reduction of prices to foreign purchasers.³

Canada, France, and Germany have undergone significant changes in currency valuation between 1950 and 1962. For the other countries considered here, fluctuations have remained within narrow trading limits. Table 2 presents unit labor cost indexes for the three countries, adjusted for changes in official exchange rates since 1950.

After exchange adjustments, the positions of Canada and France⁴ are markedly different with respect to the United States. Instead of showing

a net increase in unit labor cost since 1957, these two countries show a decrease. As a result, their unit labor cost positions relative to the United States are lower in 1962 than in 1957. For Germany, the exchange rate adjustment only adds to the rising cost trend of 1961-62.

An Appraisal of the Trends

One approach to the appraisal of unit labor cost indexes is to examine the changes shown by the component series from which the indexes are constructed. The trends, of course, express the interaction of independent trends in production and labor expenditure, each of which contains numerous variable elements in itself. Unit labor cost trends, however, cannot be satisfactorily explained simply in terms of the trends shown by the components of the equation. In both of the periods under discussion, four of the eight countries have shown relatively low rates of annual production growth, amounting to less than 4 percent per year in manufacturing. For two of these countries, Sweden and the United Kingdom, the rate of unit labor cost increase has been relatively high (over 4 percent annual average since 1950), whereas the other two, United States and Canada, show much lower rates of cost increase. The other four countries show average annual growth rates in manufacturing production of 6 percent or more. Of these, France and Germany have shown a relatively high rate of increase in unit labor cost.

TABLE 1. INDEXES OF UNIT LABOR COST IN MANUFACTURING, EIGHT COUNTRIES, 1950-62
[1957=100]

Country	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
ALL EMPLOYEES													
United States:													
Series A ¹	80	87	91	93	95	92	96	100	103	101	101	101	101
Series B ²	77	83	87	88	92	90	94	100	102	101	105	105	103
Canada.....	77	84	90	92	94	91	93	100	101	100	104	105	104
Germany (Federal Republic).....	85	91	95	93	92	92	88	100	104	103	110	118	126
Japan.....	104	98	108	104	106	103	101	100	106	105	105	107	114
United Kingdom.....	69	74	84	84	85	89	96	100	105	104	106	114	117
PRODUCTION WORKERS													
United States:													
Series A ¹	88	95	97	98	97	96	99	100	100	98	98	97	97
Series B ²	85	90	93	94	95	94	97	100	99	99	101	101	100
France.....	67	79	90	89	88	91	95	100	106	110	114	121	120
Germany (Federal Republic).....	87	94	97	94	90	93	99	100	103	101	108	115	121
Italy.....	104	104	110	105	103	101	101	100	100	93	91	93	99
Sweden ³	63	74	88	89	89	93	98	100	102	103	107	114	119

¹ Based on Federal Reserve Board index of manufacturing production.

² 1950-59 data based on BLS index of real product; 1960-62 data based on index of gross national product originating in manufacturing, published by the U.S. Department of Commerce, Office of Business Economics.

³ Manufacturing and mining.

NOTE: Indexes represent unit labor cost in national currency units. No adjustment has been made for exchange rate variations.

Italy and Japan have shown the most rapid growth in production, accompanied by little change in unit labor cost over 12 years.

Table 4 shows the average annual rates of change in unit labor cost and principal components for the 1957-62 and 1950-62 periods. The rates of increase in labor compensation have been distinctly lower in the United States and Canada than in the other countries, whether expressed in annual aggregates or in hourly averages per employee. Labor expenditure in the United States, including supplements, has increased by an average of 3.5 percent per year since 1957. The rates of annual increase in the European countries and Japan have ranged between 5 and 10 percent.

Improvement of the Indexes

The data used to compile these unit labor cost indexes have been taken in most cases from official statistical reports issued by the individual countries. Each country has been measuring its manufacturing output and labor expenditure for many years and each is experienced in dealing with the measurement problems involved. A review of the statistical systems for each country shows, nevertheless, several variations in method and several degrees of completeness of coverage. In a few cases where data are incomplete, it has been necessary to make interpolations or estimates. Statistical officers in each country have had an opportunity to comment on the calculations, and their suggestions have been adopted wherever possible. They agree that the calculations represent the most practical estimates of trends in their countries that can be made at this time. Most of the technical differences or deficiencies appear to be minor in extent, although there are some that may be significant. A description of sources used, adjustments made, and data limitations for each country will be presented in a forthcoming BLS report on international unit labor cost comparisons.

Trends Within Countries

An examination of individual components of the unit labor cost equation does not reveal a direct correlation between rate of production growth and rate of labor expenditure increase within the countries studied. Some countries with high growth rates have experienced substantially higher in-

TABLE 2. INDEXES OF UNIT LABOR COST IN MANUFACTURING ADJUSTED FOR VARIATIONS IN EXCHANGE RATES, CANADA, FRANCE, AND GERMANY, 1950-62

Year	[1957=100]							
	Canada		France		Germany (Federal Republic)			
	All employees		Wage workers		All employees		Wage workers	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
1950---	77	68	67	72	85			87
1951---	84	76	79	85	91			94
1952---	90	88	90	97	95			97
1953---	92	90	89	96	93			94
1954---	94	92	88	95	92			90
1955---	91	88	91	98	92			93
1956---	93	91	95	103	98			99
1957---	100	100	100	100	100			100
1958---	101	100	106	88	104			103
1959---	100	100	110	85	103			101
1960---	104	103	114	88	110			108
1961---	105	99	121	93	118	124		115
1962---	104	94	120	92	126	132		121

NOTE: Until 1961, the Canadian dollar had no par value and was allowed to fluctuate freely in international exchange markets.

Adjustments for France are based upon changes that took place in 1957 and 1958.

Adjustments for Germany are based upon a change in par value that took effect March 5, 1961.

creases in unit labor cost than others. For countries with lower growth rates, the trend in unit labor cost has varied appreciably.

United States. Some of the calculations for the United States summarized in table 3 relate to all manufacturing employees, and the others are for production workers only. In addition, alternative production indexes are used in the calculations for each employment group. The first production index, labeled as Series A in the table, is the Federal Reserve Board (FRB) index of manufacturing production. The second index, labeled as Series B, is based upon BLS estimates of real gross national product (GNP) originating in manufacturing from 1950 to 1959. Both series of output measures are used here because the measurement of manufacturing production is now being revised. Work now in progress will be used to develop revised constant dollar GNP in manufacturing—and to recalculate output and productivity indexes.⁵ But the FRB index is probably more comparable to the indexes shown for other countries.

Whichever output measure is used, unit labor cost for all employees shows an upward trend from 1950 to 1957. Since 1957, however, both

⁵ See "Output Per Man-Hour in the Private Economy, 1947-63," in this issue of *Monthly Labor Review*, p. 428.

indexes have nearly leveled out. The 1957-62 increase amounted to only 1 percent based on FRB production data and 3 percent on BLS-OBE production data.

For production workers, the rate of increase in unit labor cost has been slower. The FRB-based index shows a 10-percent increase from 1950 to 1952, but in the 10 years from 1952 to 1962, there is no net change. A 3-percent rise from 1952 to 1957 was offset by a 3-percent decline from 1957 to 1962. The unit labor cost index based on BLS-OBE output estimates shows a general rise amounting to 18 percent from 1950 to 1957, followed by a period of no significant change from 1957 to 1962. With either series, production worker unit labor cost has changed very little since the early 1950's.

Canada. Canadian unit labor cost for all employees increased 17 percent between 1950 and 1952, and rose further from 1955 to 1957. Without adjustments for currency exchange values, unit labor cost calculations show a slightly rising trend (4 percent) between 1957 and 1962. In general, however, the trend in Canada, particularly when unadjusted for currency valuation, is strikingly similar to the United States trend. Increases in production and in labor compensation have been approximately the same in the two countries.

Prior to 1961, the Canadian dollar was traded at a nominally floating exchange rate, but in fact was kept relatively steady between 1952 and 1960 at a moderate premium over the United States dollar. For the years shown, the Canadian dollar reached its highest position relative to the United States in 1957. Monetary reforms in 1961 and 1962 lowered the exchange value of the Canadian dollar. Table 4 includes a calculation of unit labor cost adjusted for exchange rate variations which show a decline of 6 percent in unit labor cost between 1957 and 1962.

⁶ Output per man-hour refers to wage and salary earners, whereas the compensation data refer to wage earners only. This inconsistency does not appear to be serious, since the ratio of wage earners (ouvriers) to all paid workers (salaries) in French industry was 75.7 percent in 1954 and 75.0 percent in 1960, a change of less than 1 percent in 6 years, according to data published in *Conjoncture Economique* in 1963.

⁷ Italian sources omit significant segments of manufacturing production and wages. An alternative calculation, based upon Bank of Italy data, shows a decline in unit labor cost from 1958 to 1962 generally similar to the decline shown in table 3. The bank data do not cover earlier periods.

France. Output per man-hour⁶ in French manufacturing has nearly doubled between 1950 and 1962, while hourly compensation per wage earner rose by over 250 percent. Consequently, the 12-year increase in unit labor cost, without regard to currency devaluation, was 80 percent. The increase since 1957 was 20 percent.

After adjustment for the 1957-58 devaluations of the franc, the overall increase in unit labor cost is only 28 percent from 1950 to 1962, and the 1957-62 change has been an 8-percent decline. It is worth noting, however, that unit cost has risen 9 percent since 1959, although the 1962 level is still below the predevaluation level. Compared to U.S. production-worker unit labor cost, France has shown a greater increase between 1950 and 1962, even after allowance is made for devaluation.

Federal Republic of Germany. Production in Germany has nearly trebled since 1950 and has risen 38 percent since 1957. Wage and salary expenditures have risen even more rapidly, 335 percent since 1950 and 74 percent since 1957. Unit labor cost has increased sharply over the 12 years, but the advance has occurred at irregular intervals. Marked increases occurred from 1950 to 1952, from 1955 to 1958, and from 1959 to 1962. There was a decline between 1952 and 1954 and a pause between 1958 and 1959. For all manufacturing employees, the overall increase (based on the deutschemark) was 48 percent from 1950 to 1962 and 26 percent since 1957. For production workers, the increase was 39 percent since 1950 and 21 percent since 1957. After adjustment for appreciation of the deutschemark resulting from the revaluation of March 1961, the increases are somewhat greater, but it will be noted that unit labor cost increased considerably in 1961 and 1962 even before account is taken of the revaluation.

Italy. The estimates show a moderate decline in Italian unit labor cost since 1950. From a peak in 1952, the index had declined 17 percent by 1960. Since 1960, it has risen 8 percent.⁷ Italy has shown a steady and substantial rate of increase in production during the entire period, nearly doubling since 1950 and increasing by 63 percent since 1957. Total labor compensation has also increased steadily, but at a somewhat lower rate, during most years.

TABLE 3. INDEXES OF PRODUCTION, LABOR, EXPENDITURES, AND UNIT LABOR COST IN MANUFACTURING, EIGHT COUNTRIES, 1950-62—Continued

Year	Germany (Federal Republic)					Italy		
	Production	All employees		Wage workers		Production	Total labor expenditures	Unit labor cost
		Aggregate wages and salaries	Unit labor cost	Aggregate wages	Unit labor cost			
1950	48	40	85	42	87	56	59	104
1951	57	52	91	54	94	64	67	104
1952	61	57	95	59	97	65	72	110
1953	67	63	93	64	94	72	76	105
1954	76	69	92	68	90	79	81	103
1955	88	81	92	82	93	86	87	101
1956	94	93	98	94	99	93	93	101
1957	100	100	100	100	100	100	100	100
1958	103	107	104	106	103	103	103	100
1959	112	115	103	113	101	115	107	93
1960	124	137	110	134	108	133	121	91
1961	132	156	³ 118 (124)	151	³ 115 (120)	148	137	93
1962	138	174	³ 126 (132)	167	³ 121 (127)	163	161	99
Japan			Sweden			United Kingdom		
Monthly output per worker	Average monthly expenditures	Unit labor cost	Annual output per worker	Average hourly expenditures	Unit labor cost	Production	Total labor expenditures	Unit labor cost
1950	46	47	82	52	63	81	56	69
1951	62	61	98	84	74	85	63	74
1952	65	70	108	84	74	81	68	84
1953	77	80	104	87	77	89	73	84
1954	80	85	106	90	80	89	79	85
1955	84	87	103	93	87	93	87	89
1956	95	95	101	97	94	98	94	96
1957	100	100	100	100	100	100	100	100
1958	94	100	106	106	102	99	104	105
1959	103	108	105	107	111	103	109	104
1960	111	118	105	110	118	107	120	106
1961	121	129	107	112	128	114	129	114
1962	124	142	114	115	137	114	133	117

¹ Series A is based upon the Federal Reserve Board index of manufacturing production. Series B is based upon BLS real output data for 1950-59 and U.S. Department of Commerce data on gross national product originating in manufacturing for 1960-62.

² Department of Commerce will complete revision of output data for

recent years early in 1964. In view of these revisions, the U.S. Department of Labor considers it inappropriate to publish interim, revised output per man-hour indexes for manufacturing for the years 1960-62.

³ Figures in parentheses show unit labor cost indexes after adjustment for currency revaluation.

hours worked by Swedish employees. Incomplete data for 1956-60 suggest that there was, in fact, a reduction of nearly 1 percent yearly in hours worked per man. The rise in Swedish unit labor cost, therefore, may be overstated to a corresponding extent.

United Kingdom. The unit labor cost index for the United Kingdom shows a generally rising trend except for the years 1953 and 1959. Since 1950, unit labor cost has risen 70 percent, with production rising 41 percent and total labor expenditure 138 percent. Since 1957, unit labor cost has risen by 17 percent. Total labor expenditures followed a consistently rising course throughout the 12-year period but production has increased more gradually—and erratically.

Prices and Unit Labor Costs

Since labor cost is often an important part of total cost in manufacturing, it is useful to compare these changes with changes in wholesale prices of industrial commodities. The rates of price change shown in table 4 were calculated from published indexes of industrial or finished goods prices. They show that average rates of price change in five of the countries correspond closely to unit labor cost changes during 1957-62. For three countries, Germany, Japan, and Sweden, the average annual price changes have been 2 to 4 percent lower than unit labor cost changes. A complete analysis of these cost-price relationships would require a far more intensive review of industrial price data than comes within the scope of this

TABLE 4. AVERAGE ANNUAL RATES OF INCREASE IN SELECTED PRODUCTION, WAGE, LABOR COST, AND PRICE SERIES, EIGHT COUNTRIES, 1957-62 AND 1950-62

Period and series	United States		Canada	France	Germany (Federal Republic)	Italy	Japan	Sweden	United King- dom
	A	B							
1957-62									
Production.....	3.3		2.9	(6.0)	6.6	10.3	(13.6)	(3.8)	2.6
Output per man-hour.....				¹ 5.5			² 4.4	³ 2.8	
Total labor expenditure, all employees.....	3.5	3.5	3.8		¹ 11.7	¹ 10.0			5.9
Average hourly expenditure per wage worker.....	⁴ 3.5	⁴ 3.5	(3.2)	9.4	(8.7)	(6.7)	⁵ 7.2	6.4	(5.4)
Unit labor cost, all employees.....	.2	.7	⁶ -1.4	⁶ 8	4.7		2.7		3.2
Unit labor cost, wage workers.....	⁴ -1.6	⁴ -1.1		3.7	3.9	-2		3.6	
Industrial prices.....	(.3)	(.3)	(.8)	⁶ -1.6	(4.1)	(-.1)	(-.6)	(1.8)	(2.4)
1950-62									
Production.....	3.8		3.8	(6.8)	9.3	9.3	(16.5)	(3.2)	2.9
Average hourly expenditure per wage worker.....	⁴ 4.7	⁴ 4.7	(5.1)	11.1	(8.4)	(5.9)	⁵ 9.5	8.4	(6.6)
Unit labor cost, all employees.....	2.0	2.5	2.6		3.3		.8		4.5
Unit labor cost, wage workers.....	⁴ 1.8	⁴ 1.3	⁶ 2.7	5.0	3.8	-4		5.5	
				⁶ 2.1	3.2				

¹ Wage workers.² Monthly output per regular worker.³ Output per man, wage workers.⁴ Production workers.⁵ Monthly expenditure per regular worker.⁶ Adjusted for currency revaluation.

NOTE: Data in parentheses represent series not used in calculating unit labor cost.

study. This cursory review does, however, suggest the importance of the other components of the industrial pricing process.

There are a number of determinants of trade flows, of which cost as reflected in prices is just one. It is unlikely that sharp changes in trade would occur solely as a result of short-run changes in industry costs. Also, labor cost trends do not necessarily coincide with total cost trends.⁹

Cost trends in individual industries may bear little or no relationship to overall trends in a major industrial sector. Furthermore, it is likely that

trends in export industries of the countries studied differ from overall trends applicable to industries producing for domestic markets. The preponderance of exports of an individual country is often concentrated among a small number of products or industries, to which overall unit labor cost trends may not apply. These are among the questions which appear to be particularly deserving of further study.

⁹ For fuller discussion of causes of trade flows, see Shelton and Chandler, op. cit., pp. 485-487.

New Features of the Revised CPI*

EDITOR'S NOTE.—*Rib roast, women's nightgowns, men's pajamas, an appendectomy, and a baseball glove were among the items not carried over to the 1964 CPI market basket. Among the new items are between-meal snacks, hotel and motel rooms, demountable air conditioners, garbage disposal units, legal services, funeral services, moving expenses, parking fees, taxicabs, outboard motors, phonograph records, golf fees, college tuition and textbooks, and music lessons.*

THE 1964 REVISED CONSUMER PRICE INDEX (CPI) series represents current price changes more accurately than the old series because it is based on up-to-date weighting factors, market basket items, and distribution of retail establishments, as well as developments such as coverage of single workers—to make it more representative of the urban wage and clerical-worker population—and improved statistical techniques.

The basic index concepts of the CPI, now in its 51st year, have not been changed. The national index still measures average changes over time in prices of goods and services bought by urban wage earners and clerical workers. The same statistical formula is employed in the index calculations, and the reference base period has not been changed since 1962 when the shift was made to 1957-59=100 base.

The 1964 revisions, on which work was begun in 1959, represent the continuing efforts of the Bureau of Labor Statistics to make the CPI reflect as accurately as possible changes in consumer buying patterns and incomes and shifts in the geographic distribution of the population.

Population Coverage

Since its inception in 1913, the Consumer Price Index applied only to wage-earner and clerical-worker families of two persons or more. To make the index more reflective of its actual users, representation of single workers living alone has been

added to the new index series. By 1960-61, such workers constituted about 10½ percent of the wage-earner and clerical-worker consumer units. Since single workers' incomes and their consumption expenditures are generally lower than those of families, their weight in the new series is about 6 percent of the total. (The expanded pricing of such items as restaurant meals and recreation also makes for more adequate representation of expenditures of single workers, who typically spend proportionately more in these areas than families.)

The wage-earner and clerical-worker family and single person index series is regarded as the successor to the old series and is the one upon which analysis and discussion of price changes will be based in future reports. It applies to about one-half of the total urban population and more than one-third of the total population. To provide continuity in population coverage with the old series, a separate series for families will continue to be published, but on a national basis only.

Weighting Factors

Weighting factors for the new series indexes were derived from reported expenditures of a carefully selected sample of wage-earner and clerical-worker families and individuals in 1960-61. (The old index series from January 1953 for-

* Prepared by Phyllis Groom of the Division of Publications, Bureau of Labor Statistics. Papers upon which this article was based may be obtained from the Division of Prices and Living Conditions.

ward was based on expenditures in 1950.) The distribution of the old series expenditure weights for major components, adjusted for price changes up to December 1963, is compared with the new series weights as of the same date in table 1.

The major difference between weights in the old and the new series is a significant decline in the weight for food which is balanced by increased weights for housing, transportation, and health and recreation. Homeownership weights are up substantially, but weights for furniture and appli-

TABLE 1. WEIGHTS OF MAJOR CONSUMER PRICE INDEX COMPONENTS, NEW AND OLD SERIES, DECEMBER 1963

Components	Percent of all items	
	New series	Old series ¹
All items.....	100.00	100.00
Food.....	22.43	28.18
Food at home.....	17.89	23.11
Cereals and bakery products.....	2.45	3.27
Meats, poultry, and fish.....	5.63	6.43
Dairy products.....	2.80	3.81
Fruits and vegetables.....	3.02	4.46
Other foods at home.....	3.99	5.14
Food away from home.....	4.54	5.07
Housing.....	33.23	30.71
Shelter.....	20.15	18.34
Rent.....	5.50	6.16
Hotel and motel rates.....	.38
Homeownership.....	14.27	12.18
Home purchase and financing.....	9.11	7.51
Taxes and insurance.....	2.13	1.61
Maintenance and repairs.....	3.03	3.06
Fuel and Utilities.....	5.26	4.91
Fuel oil and coal.....	.73	1.21
Gas and electricity.....	2.71	2.11
Other utilities.....	1.82	1.59
Household furnishings and operation.....	7.82	7.46
Furniture.....	1.44	1.55
Appliances.....	1.36	1.71
Other.....	5.02	4.20
Apparel and upkeep.....	10.63	10.58
Men's and boys'.....	2.86	2.79
Women's and girls'.....	4.08	3.67
Footwear.....	1.51	1.41
Other apparel.....	2.18	2.71
Transportation.....	13.88	11.65
Private.....	12.64	9.98
Automobiles and related goods.....	9.02	7.38
Automobile services.....	3.62	2.60
Public.....	1.24	1.67
Health and recreation.....	19.45	18.03
Medical care.....	5.70	5.88
Personal care.....	2.75	2.27
Reading and recreation.....	5.94	5.57
Other goods and services.....	5.06	4.31
Miscellaneous ²38	.85
Special groups:		
Commodities.....	65.97	67.73
Durable.....	18.78	17.53
Nondurable.....	47.19	50.20
Services.....	34.03	32.27

¹ Individual items reclassified according to new series classification into groups and subgroups. For example, home purchase was classified as a service in the old series, but is classified as a durable commodity in the new series. In order to place weights for the old and new series, special groups, on a comparable basis in the accompanying table, home purchase has been shifted to durable commodities in the old series weights.

² Not actually priced; imputed to priced items.

ances have declined. While the weights for automobile purchase and operation are significantly higher, the weight for public transportation is down. Services as a whole have increased weight in the new series, as have durable commodities; but the weight for nondurable commodities is reduced, primarily because of the lower food weight.

The movement of prices for services, some of which have been rising more rapidly in the past few years than other prices, will have more influence on the index in the future. Food prices, which will have a lessened but still large effect on the index, rose sharply between 1950 and 1952, and again from 1956 to 1958, but have risen slowly since 1959. With the decreased influence of food prices, there should also be less month-to-month fluctuation in the series. Prices of some durables such as automobiles, appliances, and furniture have been relatively steady in recent years and, collectively, their weight is only a little less in the new index.

Readjustment of prices of various types of goods and services to more normal relationships after the disruptions caused by depression and war appears to have been almost complete by 1958. In the absence of similar disruptions in the future, differential movements of prices should be less marked, which would mean that shifts in the weights assigned to various items would have less effect on the course of the total index. The principal exception is that prices of services may continue to move up more rapidly than prices of commodities; and, to the extent that they have more weight in the new index, they will exert more upward pressure on it.

New Market Basket

Price changes for the sample group of items known as the market basket are assumed to represent price movements for all the thousands of goods and services bought by the wage and clerical family or individual. The concept has not changed in the new series but the number of items in the market basket has increased from about 325 to approximately 400. In addition, the new sample excludes some items formerly priced.

The changes do not necessarily signify that the items dropped are individually less important in

TABLE 2. TIMING OF METROPOLITAN AREA INDEXES, NEW SERIES AND OLD SERIES

Index status	Frequency			
	Monthly	Jan., Apr., July, Oct.	Feb., May, Aug., Nov.	Mar., June, Sept., Dec.
Cities included in both old and revised CPI.	Chicago Detroit Los Angeles New York Philadelphia	Boston Houston ^{1 2} Kansas City ^{1 3} Minneapolis ¹ Pittsburgh	Cleveland Houston ^{1 3} Milwaukee ¹ Seattle Washington, D. C.	Atlanta Baltimore Cincinnati ¹ Kansas City ^{1 2} San Francisco St. Louis Honolulu
Cities added in first quarter 1964.	-----	-----	Buffalo Dallas San Diego	
Cities to be added in August 1965.	-----	-----		
Cities available on old basis only.	-----	Portland (Oreg.)	Scranton	

¹ These cities will be published only on the old basis during 1964 and the first half of 1965; the new series indexes will begin in the third quarter of 1965.

² Revised basis.

³ Old basis.

family budgets than they were a decade ago, or that the new items are more important now. The composition of each market basket represents the selection of items which would best represent the movement of all consumer prices, using the data and techniques available at the time.

Component Indexes

The new index contains a number of changes in the list of published group and subgroup indexes. Groups and subgroups not previously published are shelter (includes room rents and hotel and motel rates not shown separately), home ownership (includes home purchase, mortgage interest, settlement charges, taxes, insurance, and repairs and maintenance), fuel and utilities (includes telephone, water, and sewer not shown separately), and health and recreation. Household furnishings and operations (includes house furnishings and housekeeping supplies and services) replaces two groups—house furnishings and household operation. What was formerly the apparel group has been redefined to include laundry and drycleaning of apparel (formerly included in household operation) and is now called apparel and upkeep.

Special Groups

A number of the special groups have been redefined; the most important change was in the reclassifying of home purchase from a service to a durable commodity. Temporarily these indexes

are being published on the base of December 1963=100. The complete list of special groups to be published is as follows:

- All items less food
- All items less shelter
- Commodities
 - Nondurables
 - Food
 - Nondurables less food
 - Apparel commodities
 - Apparel less footwear
 - Nondurables less food and apparel
- Durables
 - New cars
 - Used cars
 - Household durables
- Commodities less food
- Services
 - Rent
 - Services less rent
 - Household services
 - Transportation services
 - Medical care services
 - Other services

The index for durables less cars is being continued but under a new name, household durables. With the reclassification of home purchase as a durable good, the old group, durables less cars, would have included home purchase, a combination which appeared to be of little value. The new index for household durables will be linked at December 1963 to durables less cars. It will include furniture, floor coverings, appliances, other house furnishings, radio and television, and tape recorder. Thus, it will be comparable to durables less cars except for the exclusion of tires, toys, and sporting goods.

An index called household services less rent is being initiated. It will include gas and electricity, housekeeping services, other utilities, mortgage interest, taxes and insurance, home maintenance, and repair services.

Another new group, other services, includes all services not classified under household services less rent, transportation services, and medical care services. The redefined group is being computed retroactively but will be published initially on the base December 1963=100. It will not be comparable with the previously published indexes for other services.

City Indexes

The Bureau plans henceforth to publish a monthly or quarterly index for each metropolitan area of 1 million or more population (23 cities) in 1960 (table 2). In the past, as byproducts of developing the national CPI, separate indexes for some cities have been published if they fell within the national sample for consumer expenditure surveys and collection of retail price data. This meant that whenever a new sample was drawn—as for the 1940 and 1953 revisions of the index—some cities were dropped and others added. To maintain the continuity of the city indexes, it was decided to publish indexes for the 22 metropolitan areas of 1 million or more population within the conterminous United States (table 2). Six of these areas were not selected in the original sample of cities to be represented in the new national index series,¹ thus they had not been covered in the 1960–61 consumer expenditure surveys, which means that the new index series for these areas will be delayed until surveys are completed, and new price data collection bases for them are established. The new series is based on the Standard Metropolitan Statistical Area (which includes the suburbs), rather than the urbanized area, as before. Meanwhile, old series indexes will be continued for four of the areas for which such indexes have been available since 1953 or longer. Additional cities being covered are Honolulu (quarterly), and Anchorage, Fairbanks, Juneau, and Ketchikan (semiannually).

Statistical Improvements

For the first time, statistical techniques will permit checking the sampling errors in the index. A method of replication has been adopted which matches two or more independent samples. By matching the results of price changes calculated independently from each separate sample, a measure of the possible range of sampling error in the index may be obtained. It also may be possible to glean some information regarding the components of the sampling error, i.e., whether they result from inadequate representation of areas, retail establishments, or items. These computations, however, will not reflect other kinds of errors or biases that may exist in operation of the index.

Another important improvement is the increased use of probability techniques for selecting the new samples of areas, items, and retail establishments, to minimize sampling bias. Strict probability sampling could not be carried out completely, largely because basic information about retail establishments and about consumer purchases was not available in the detail required. In some of the sampling stages, it became necessary to adopt other selection procedures. On the whole, however, it is believed that both the weighting factors and the price data base for the new index series are as objective and as free from bias as it is presently possible to make them.

The new series also permits introduction of important new items into the index more easily between major revisions. This has been done by organizing all significant consumer goods and services into 52 expenditure classes from which the sample of items to be included in the market basket has been drawn. The weight for each of these expenditure classes will remain fixed until the next comprehensive revision of the Consumer Price Index, and henceforth the Bureau can introduce important items or draw a completely new sample of items, making necessary readjustments only within any given class. In its continuing task of adjusting quoted prices for changes in quality, the Bureau has strengthened its research program to further improve the methods of evaluating quality changes.

In addition, there will be more flexibility in obtaining price quotations. When a BLS field representative cannot find a price quotation in an establishment for an item which matches the prescribed specification, a quotation on another article nearest to the specification can be substituted. However, the representative must obtain a technical description of the substitute article, to insure that prices will be quoted on the same quality and quantity in the future. Previously, the representative attempted to price the article at another establishment. This procedure has resulted in broadening the representation of retail stores and qualities of items in the new index series.

¹ The selection of the revised city sample is described in "The Revised City Sample of the Consumer Price Index" in *Monthly Labor Review*, October 1960, pp. 1078–1083.

TABLE 3. COMPARISON OF OLD AND NEW SERIES CONSUMER PRICE INDEX

Item	Old series index	New series index
Title.....	Consumer Price Index—U.S. city average.....	Consumer Price Index—U.S. city average for wage earners and clerical workers. (An additional U.S. city average index is computed for wage-earner and clerical-worker families.)
Formula.....	$I_n = I_{n-1} \frac{\sum q_n P_{n-1} P_n}{\sum q_n P_n}$	Same.
Base Period.....	1957-59=100. Series was changed from the 1947-49 base period in January 1962, but continued to be published on this base as well as 1939=100.	1957-59=100. Series will also be published on 1947-49 and 1939 bases.
Duration.....	To be discontinued after June 1964.....	January 1964 forward.

POPULATION COVERAGE

Place of residence.....	Urban places of 2,500 or more in 1950; excluding Alaska and Hawaii.	Urban places of 2,500 or more in 1960; including Alaska and Hawaii.
Family size.....	2 or more persons; single person consumer units excluded.	No restriction; single person consumer units included.
Occupation.....	Wage-earner and clerical-worker families. (Head of household must have been employed in wage-earner or clerical-worker occupation.)	Wage-earner and clerical-worker families and single individuals living alone. (More than half total family income must come from wage-earner or clerical-worker occupations.)
Length of employment.....	No specific requirement, but major portion of income of family head must have been from employment as wage earner or clerical worker.	At least one family member must have been employed for 37 weeks or more during the survey year in wage-earner or clerical-worker occupations.
Income.....	Family income under \$10,000 after taxes in 1950. No lower income limit, except that families without income from wages or salaries were excluded.	No criterion as to family income except the qualification above.
Definition of index expenditure weights.....	Average family expenditures for urban wage earners and clerical workers derived from the 1950 Consumer Expenditure Survey in 91 urban places, adjusted for changes in prices and income between 1950 and 1952.	Average expenditures for urban wage earners and clerical consumers (including single workers) derived from the 1960-61 Consumer Expenditure Survey in 66 urban places, adjusted for price changes between the survey dates and 1963.
Basis for allocation to priced items.....	Direct allocation of unpriced to priced items based on expected similarity of price movements.	Expenditures classified into 52 expenditure classes. Certainty items assigned their own importance; remainder of expenditures assigned equally to probability selections within expenditure classes.

CITY COVERAGE

Sample of priced cities.....	46 urbanized areas, selected to represent urban places in the U.S. having populations of 2,500 or more in 1950, excluding Alaska and Hawaii.	50 metropolitan areas and cities selected to represent all urban places in the U.S. including Alaska and Hawaii, with populations of 2,500 or more in 1960. Six additional areas will be added in 1966.
Pricing cycle.....	Foods, fuels, and a few other items priced monthly in all cities. Most other commodities and services priced monthly in the 5 largest cities; quarterly in remaining cities.	Same.
Population weights.....	Based on 1950 Population Census; Alaska and Hawaii excluded. Proportion of population in wage-earner and clerical-worker group covered by index based on BLS expenditure surveys.	Based on 1960 Population Census; Alaska and Hawaii included. Proportion of population in wage-earner and clerical-worker group covered by index based on BLS expenditure surveys.
Published indexes.....	U.S. and 20 cities, for families only.....	U.S. for families and single persons combined, and for families separately. Seventeen large metropolitan areas for families and single consumer units combined. Indexes for six more large metropolitan areas will become available in the latter part of 1965.
Commodity coverage.....	Goods and services purchased for family living, including necessities and luxuries; excluding personal insurance, income and personal property taxes, but including real estate taxes and sales and excise taxes.	Same.
Number of items priced.....	About 325, priced in all cities.....	About 400 in U.S. index and in published city indexes. Certainty items priced in all other cities; other items in 1 of 2 subsamples of other cities.
Basis of sample selection.....	Most important items in family spending.....	Probability proportionate to importance in family spending.

REPORTER SAMPLES

Location.....	Within boundaries of central cities of 46 urban areas.....	In central cities and selected suburbs of 50 metropolitan areas.
Number of reporters:		
Food stores.....	About 1,500.....	About 1,525.
Tenants.....	30,000.....	34,000.
Others.....	5,500.....	15,000.
Number of quotations obtained per year—		
Food prices.....	About 1 million.....	Over 1 million.
Rent charges.....	About 60,000.....	About 68,000.
Other items.....	About 230,000.....	About 350,000.
Pricing techniques.....	Personal visit of BLS agent except for a few items collected by mail or from secondary sources. Specification pricing; same quality priced in all stores in a city.	Specification pricing, but agent is permitted to price deviations from specification under prescribed conditions.

Expected Results of Changes

Since the base periods have not been changed and the new indexes have been linked to the old one as of December 1963, the new indexes start out at the same level as the old one. Movements of the old and the new indexes in the period from January through June 1964, when both sets will continue to be published, may be a little different, but probably not enough to be significant. However, over the next 10 years, it is expected that the new index will move differently than the trend the old one would have followed as its weighting and pricing structures become more obsolete with rising incomes, changing consumer preferences, appearance of new goods and services, and changes in the character of the population.

In January, there was a slight divergence; the old series remained unchanged, and there was a 0.1-percent rise in the new series. The most significant cause was the rise of fruits and vegetables by 2.4 percent in the new series, compared with 0.8 percent in the old. While some of the variation was due to large price increases for certain new items in the revised index, it was largely because of greater price changes in the newly covered establishments in the suburbs.

Effect on Escalator Contracts

Widely used as a reflection of inflationary or deflationary trends in the economy, the Consumer Price Index is employed extensively by parties to long-term contracts to protect themselves against price changes. Many long-term rent contracts, insurance policies, long-term bonds, and other contracts are geared to changes in the CPI. A much better known use of the CPI is as an escalator in labor-management contracts. At various times from 2 to 4 million workers have been covered by contracts with escalation clauses calling for automatic wage changes based on changes in

the CPI. For example, based on the "old series" national index for January, about 1 million workers will receive cost-of-living increases of 1 cent an hour, based on quarterly reviews. More than three-fourths of these (780,000) are employed in the automobile industry. Of the remainder, 100,000 are employed in the farm and construction equipment, 75,000 in the aerospace, and 14,000 in the business machine industries.

Wage Contracts

Since the old index series will end with the June 1964 index, wage contracts extending beyond June may need examination to determine whether they need to be changed. Where a contract is sufficiently general to permit the use of the new index, presumably the only action necessary is for the parties to agree on the month that the shift is to be made.

From a statistical standpoint, there is a strong preference that the shift be made as soon as possible, to take advantage of the more accurate representation of current price changes in the new series. If the shift was not made in December 1963, when the indexes were identical, it may be necessary to adjust the escalation steps by a conversion factor based upon the difference between the two indexes at the time of the shift.

The specific course of action to be followed will, of course, have to be decided by the contracting parties. If the contracting parties find that they need statistical assistance in such situations, and jointly request such assistance, the Bureau of Labor Statistics will attempt to suggest conversion factors and escalation adjustments appropriate to the particular contract terms; it cannot provide legal advice. The contracting parties will need to supply complete information about the specific contract escalation provisions.

Significant features of the old and new series indexes are listed in table 3.

An Assessment of Apprenticeship

EDITOR'S NOTE.—*The following article, which examines the data on the number of apprentices in various trades and industries, is the third in a series on apprenticeship. A fourth article, summing up the Federal Government role in apprenticeship, will appear in the June issue.*

III. Statistics on Apprenticeship and Their Limitations

PHYLLIS GROOM*

ANALYSIS OF THE DECLINE in apprenticeship is hampered by the lack of adequate statistics and conflicts in those that do exist. However, it is clear that apprenticeship during the 1950's provided a decreasing proportion of the young workers entering skilled trades. From 1950 to 1960, there was an overall decline of about 25 percent in the number of apprentices, only part of which may be accounted for by the large number of veterans who were still in training in 1950. Since 1957, there has been a steady drop of several thousand each year.

Attempting to reverse this trend are national manpower policies for improving both the quality and the supply of young workers for the labor force. In the 1960's, young workers will constitute a very large proportion of the 17-percent increase expected in the labor force. By 1970, the 14-19 age group will increase by 26 million. At the same time, there will be a decline in those in the prime working ages of 35 to 44.

During this period, the need for foremen, craftsmen, and kindred workers is expected to grow about 20 percent, according to U.S. Department of Labor projections based upon full employment. Mechanics and repairmen, building trades craftsmen, and skilled metal workers will account for most of the growth in the skilled worker group.

Given these estimates, plus a rate of unemployment for youths under 21 that averaged a little over 15 percent during 1963, the various means of training a skilled work force comes under examination. Although the number of apprentices

has declined with the growth of the machine age and the development of the wage system, apprenticeship, still considered by many the best means for teaching thorough mastery of a trade, has survived in a number of trades. In the 1962 graduating high school class, there were about 360,000 males who did not go to college and were in the labor force in October 1962. During that year some 55,000 apprentices entered training.

Many questions need to be pursued to determine why apprenticeship is declining. Do firms find it uneconomic because of the narrowing of wage differentials between apprentices and journeymen? Has the growth of apprenticeship been affected by the increasing number of firms in the construction industry which operate for short times in widely scattered areas and find it uneconomical to employ apprentices for the time necessary to complete their training? What effect may reduction in skill differentials have in discouraging youths from taking craftsmen training? Basic to an examination of these questions is knowledge of which industries and trades train apprentices today. The following discussion provides some information on this subject and points out where better data needs to be collected.

Estimates of Apprenticeship

Today, most craftsmen appear to have reached the journeyman level through on-the-job experience. A recent survey of the training background

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of American workers¹ confirms earlier observations to this effect. Of craftsmen, foremen, and kindred workers surveyed (those between 22 to 64 years old in the civilian labor force who completed less than 3 years of college), 64.8 percent had learned their skills on the job and 40.6 percent had formal training either through apprenticeship, the Armed Forces, or schools. Some casual training, chiefly from a friend or relative, had been received by 47.5 percent. (As might be expected, many workers had taken more than one type of training.)

At the end of 1962, there were 159,000 apprentices registered² by the Bureau of Apprenticeship and Training and State agencies, and BAT estimates that there may have been 50,000 to 55,000 more in unregistered programs.³ This estimate of unregistered apprentices, which is substantially lower than earlier estimates, is based on benchmarks established by the Bureau of Apprenticeship 1962 survey of training programs in industry.

While the number of registered apprentices has been published by the BAT since 1941, the only source for data on all apprentices, until the 1962 survey, was the decennial census. The census figures may be useful for year-to-year comparisons, but they appear to consistently understate the totals. The 1960 census found only 87,000 apprentices.⁴ Illustrative of the apparent inconsistencies of the counts are the following:

	Census	Registered apprentices
Plumbers.....	8, 314	20, 698
Carpenters.....	6, 084	22, 341
Electricians.....	9, 519	18, 342
Metal tradesmen.....	21, 353	23, 795
Printers.....	11, 667	13, 259

¹ Prepared by the Bureau of Labor Statistics for the Office of Manpower, Automation and Training from a Bureau of the Census survey in April 1963.

² Occupations recognized by the Federal Committee on Apprenticeship [for registration] are "those that customarily have been learned . . . through 2 or more years' training and work experience on the job, and that are clearly identified and commonly recognized throughout industry."

³ *Training of Workers in American Industry* (Bureau of Apprenticeship and Training), to be published in 1964.

⁴ But the *Digest of Annual Reports of State Boards for Vocational Education, fiscal year ended June 30, 1961* (U.S. Department of Health, Education, and Welfare, 1963), table 22, p. 47, shows 132,027 apprentices receiving classroom instruction in schools giving vocational training during fiscal year 1961.

⁵ A comprehensive review of collective bargaining provisions by the Bureau of Labor Statistics was published in *Collective Bargaining Provisions: Apprentices and Learners* (BLS Bulletin 908-4, 1948).

In large part, these discrepancies may be accounted for by the difference between BAT's calendar year count of apprentices and the census survey count at one time in the year, since there appears to be a substantial movement in and out of apprenticeship during a year. Turnover rates for apprenticeship, particularly in the construction industry, are probably quite high, as is unemployment. Another major factor is the census question on occupation. It asks what kind of work the person was doing the week before. If he said bricklayer, rather than apprentice bricklayer, he would not be reported in the apprenticeship category.

Major Trades

Three major trade groups account for almost 90 percent of registered apprentices. In 1962, 65 percent of the registered apprentices were in the building trades (in the construction industry and elsewhere), 15 percent in metal trades, and 8 percent in printing. The remaining 12 percent were found in diverse occupations, with some concentrations in such trades as butcher, cabinetmaker, and stationary engineer.

Generally, the workers in these trades have long been organized in strong craft unions which actively participate in apprentice training. Detailed analyses of the collective bargaining contracts and union constitution provisions on selection procedures, training, wages and working conditions, apprentices' rights and privileges on the job and in the union, and union-management procedures await up-to-date studies on these subjects.⁵

Building Trades. With the exception of jobs for carpenters, employment in the building trades expanded during the 1950's. The number of apprentices dropped greatly between the 1950 and the 1960 censuses, except in the electrician craft. Since the drop in employment for workers under age 25 in the building trades as a whole was not nearly as severe as for apprentices, one may conclude that informal training is providing a larger proportion of craftsmen in the building trades than formerly.

Carpenters comprise the largest single group of skilled workers in the country and in 1960 ac-

counted for approximately one-third (923,837) of all building trades craftsmen. In the 1960 census, the number of journeymen carpenters was about 7 percent lower than in the 1950 census—the only substantial drop in the building trades group. (See table 1.) At the same time, the number of apprentice carpenters decreased 44 percent. Although the decrease may be due in large part to the backlog of World War II veterans still in training in 1950, it was much higher than the 27-percent decline for all apprentices during the same time. Carpenter apprentices constituted about one-tenth of the building trades apprentices in the 1962 training survey and roughly one-fifth of the registered apprentices in the building trades in 1962.

The 51-percent drop in bricklayer apprentices was even sharper than that for carpenters and occurred while the number of journeymen rose by 18 percent. Similarly, plumbers' apprentices declined about a third, journeymen increased by 11 percent.

In the electrician craft, the only one without a significant drop in apprentices during the 1950's, at least one current collective bargaining contract⁶ covering 8,000 workers prohibits the hiring of additional journeymen until the required ratio of apprentices is hired, in addition to the more common practice of setting a maximum ratio of apprentices to journeymen. Although the former does not appear to be a common provision in the

industry, it leads to speculation that the International Brotherhood of Electrical Workers may be more aggressive than some unions in maintaining an adequate quota of apprentices. As long ago as 1941, the IBEW and the National Association of Electrical Contractors established the National Joint Committee On Apprenticeship and Training to encourage the development of local apprenticeship programs.

Metal Trades. Journeymen machinists, who numbered more than half a million in the 1960 census, constitute the largest craft in the metal trades. Their numbers declined almost 4 percent in the 1950's. The next largest craft, toolmaking and die-making and setting, grew by about a fifth to 187,000 journeymen.

For machinist and toolmaker apprentices combined, the only census data on apprentices in metal crafts, there was no significant change between 1950 and 1960. Registered apprentices in the metal trades as a whole have increased since 1957, a trend contrary to that in other major trades.

Few automobile mechanics seem to learn their trade through apprenticeship. Although there was a net increase of 20,000 men in the trade during the 1950's, there were about 4,000 apprentices in 1950 and fewer than 2,000 in 1960—fewer than

⁶ Between the Electrical Contractors Association of Chicago and the International Brotherhood of Electrical Workers.

TABLE 1. JOURNEYMEN AND APPRENTICES IN SELECTED OCCUPATIONS OF THE EXPERIENCED CIVILIAN LABOR FORCE, 1950 AND 1960

Occupation	Craftsmen, foremen, and kindred workers			Apprentices		
	Number		Percent change	Number		Percent change
	1960	1950		1960	1950	
Total.....	9,240,983	8,204,921	12.6	87,615	120,171	-27.1
Construction and maintenance craftsmen:						
Brickmasons, stonemasons, and tile setters.....	207,601	176,575	17.6	3,199	6,475	-50.6
Carpenters.....	923,837	992,558	-6.9	6,084	10,779	-43.6
Electricians.....	355,522	326,260	9.0	9,519	9,235	3.1
Plumbers and pipefitters.....	331,012	297,853	11.1	8,314	12,395	-32.9
Metal craftsmen, except mechanics:						
Boilermakers.....	26,872	39,058	-31.2			
Machinists.....	515,532	535,312	-3.7	15,598	15,734	-.9
Toolmakers and diemakers and setters.....	186,602	157,005	18.9			
Molders.....	52,180	63,586	-17.9			
Automobile mechanics and repairmen.....	703,140	681,683	3.1	1,908	3,916	-51.3
Printing trades.....				11,667	15,600	-25.2
Bookbinders.....	28,207	32,474	-13.1			
Compositors and typesetters.....	182,937	179,146	2.1			
Electrotypers and stereotypers.....	9,275	11,965	-22.5			
Photoengravers and lithographers.....	25,452	29,030	-12.3			
Pressmen and plate printers, printing.....	75,406	50,405	49.6			

SOURCE: U.S. Census of Population, 1960, U.S. Summary, table 201, p. 1-524.

3 apprentices for every 1,000 journeymen. One of the largest unions in the metal trades, the International Association of Machinists, has been emphasizing the development of automobile mechanic apprenticeship programs as one phase of its growing interest in apprenticeship, and to induce more firms to start training it recently set national standards for training truck mechanics. In October 1963, the union reported that there were only 112 trucking firms in the United States with established apprenticeship programs for mechanics.

Printing Trades. While the two largest crafts in the printing trades grew during the 1950's (compositors and typesetters by 2 percent and pressmen by 50 percent), the others lost from 12 to 22 percent of their workers. The number of apprentices in the printing trades as a whole declined by a quarter during this period. Apprenticeship data by craft is not published for the printing trades by the census. A review of BAT's count of registered apprentices in the printing trades shows a downward trend since 1957, not quite as sharp, however, as the trend for all crafts.

The proportion of apprentices to journeymen pressmen appeared to increase substantially during the later years of the decade. There has been little change in the apprenticeship ratio for compositors and typesetters, but there was a considerable drop in the proportion of apprentices to journeymen stereotypers and electrotypers, whose employment dropped 22 percent due to rapid technological changes in the industry.

Industries

More than half of the 45,000 establishments with apprenticeship programs in the 1962 BAT survey were in the contract construction industry, but the number of apprentices employed in manufacturing exceeded those in construction. Of the 131,000 apprentices reported, about 64,000 (49 percent) were in manufacturing; 44,000 (34 percent) in contract construction; 12,000 (9 percent) in transportation, communication, and public utilities; 8,000 (6 percent) in wholesale and retail trade; and the remainder in other industries. The census distribution of apprentices among industries shows relatively the same proportions.

About a quarter of all apprentices were employed in establishments with 500 employees or

more, as shown in the following tabulation of trades with significant numbers of apprentices in large establishments.

	Total	In larger establishments
Total apprentices.....	131, 269	32, 884
Boilermakers.....	634	450
Butchers and meatcutters.....	806	366
Draftsmen and designers.....	905	381
Instrumentmakers.....	523	523
Linemen and cable splicers.....	2, 213	1, 012
Machinists.....	10, 753	5, 369
Millwrights.....	933	690
Patternmakers.....	764	580
Tool and die makers.....	6, 233	3, 354

More than half of those in the metal trades were found in such large establishments. Since construction firms tend to be relatively small, it is reasonable to assume that their apprenticeship programs are generally small scale, thus accounting for relatively more programs in the contract construction industry but fewer apprentices in training. In the printing industry, the situation is similar.

An area with great potential for apprenticeship and other on-the-job training is the Federal Civil Service. Of the 2 million employees of the Federal Government in 1960, 10 percent were classified as skilled workers, but there were fewer than 3,000 apprentices employed by the Federal Government at that time. More than half of these were working in ship and boat building industries.

There are few apprentices found in State and local government employment. Illinois, which ranks as one of the top States in employment of apprentices in private industry, announced in October 1963 the establishment of a 4-year apprenticeship program for auto mechanics and body and fender repairmen. The apprenticeships are to be served in highway garages of the Illinois Department of Public Works and Buildings.

Negro Opportunity

Campaigns by government, civil rights groups, and others to open up apprenticeship to Negroes must be viewed in relation to the total number of new apprentices each year. In 1962, there were 55,465 registered new apprentices. The number has fluctuated between 50,000 and 60,000 since 1957. Of the 85,282 male apprentices in the experienced civilian labor force in the 1960 census,

TABLE 2. OCCUPATIONS OF THE MALE EXPERIENCED CIVILIAN LABOR FORCE, BY COLOR, FOR THE UNITED STATES, 1960

Occupation	Experienced civilian labor force			
	Total	White	Nonwhite	
			Number	Percent
Males, 14 years old and over.....	45,686,330	41,314,544	4,371,786	9.6
Craftsmen, foremen, and kindred workers.....	8,972,749	8,529,126	443,623	4.9
Bakers.....	94,183	86,105	8,078	8.6
Blacksmiths, forgers, and hammermen.....	33,025	31,327	1,698	5.1
Boilermakers.....	26,827	26,002	825	3.1
Cabinetmakers and patternmakers.....	107,718	105,076	2,642	2.5
Carpenters.....	920,862	872,163	48,699	5.3
Compositors and typesetters.....	167,046	162,487	4,559	2.7
Cranemen, derrickmen, and hoistmen.....	131,398	118,298	13,100	10.0
Electricians.....	352,806	345,201	7,605	2.2
Foremen (not elsewhere classified).....	1,117,338	1,096,394	20,944	1.9
Manufacturing, durable goods.....	433,314	428,414	4,900	1.1
Manufacturing, nondurable goods (including not specified manufacturing).....	262,595	258,200	4,395	1.7
Nonmanufacturing industries (including not reported).....	421,429	409,780	11,649	2.8
Linemen and servicemen, telegraph, telephone, and power.....	272,579	267,915	4,664	1.7
Locomotive engineers.....	57,561	57,276	285	.5
Locomotive firemen.....	39,008	38,085	923	2.4
Machinists and job setters.....	548,579	533,465	15,114	2.8
Masons, tile setters, and stone cutters.....	213,194	186,972	26,222	12.3
Mechanics and repairmen: Airplane.....	116,800	111,426	5,374	4.6
Automobile.....	700,716	648,841	51,875	7.4
Radio and TV.....	104,368	99,072	5,296	5.1
Other mechanics and repairmen and loom fixers.....	1,375,025	1,298,404	76,621	5.6
Millwrights.....	67,792	66,519	1,273	1.9
Molders, metal.....	50,564	38,689	11,875	23.5
Painters (construction), paperhangers, and glaziers.....	432,842	399,614	33,228	7.7
Plasterers and cement finishers.....	100,205	77,379	22,826	22.8
Plumbers and pipefitters.....	329,983	317,372	12,611	3.8
Printing craftsmen, except compositors and typesetters.....	127,202	123,896	3,306	2.6
Shoemakers and repairers, except factory.....	35,509	30,879	4,630	13.0
Stationary engineers.....	273,896	267,523	6,373	2.3
Structural metal workers.....	65,885	62,610	3,275	5.0
Tailors and furriers.....	36,546	33,842	2,704	7.4
Tinsmiths, coppersmiths, and sheet-metal workers.....	143,777	140,357	3,420	2.4
Toolmakers and diemakers and setters.....	185,395	183,580	1,815	1.0
Other craftsmen and kindred workers.....	744,120	702,357	41,763	5.6

SOURCE: U.S. Census of Population, 1960, U.S. Summary, table 205, p. 1-544.

3.1 percent were nonwhite. Almost 5 percent of the journeymen were nonwhite. There is no classification by trade for Negro apprentices, but as shown in table 2, nonwhites comprised from less than 1 percent to almost a fourth of the journeymen. As observers have pointed out, in some of the trades, alternative systems of craft training offer Negroes greater opportunities for entering the skilled trades than apprenticeship.⁷

According to the 1963 training survey, which reveals that the more education a person had the more likely he was to have taken training, 32 percent of the nonwhites had taken some training, compared with 46 percent of all workers, and this disparity prevailed in all age groups. The education level where training was most common—high school graduation or some college—was achieved by 25 percent of the nonwhites compared with 45 percent of all workers. About 30 percent of nonwhite workers with training had never used such training, compared with 18 percent of all workers with training who had never used it.

⁷ See also "Negroes in Apprenticeship, New York State," *Monthly Labor Review*, September 1960, pp. 952-957.

Conclusion

In the long run, the proportion of craftsmen acquiring skills through apprenticeship may continue to decrease because of the changing nature of the workplace and the needs of the employers and employees. However, the decline is by no means equal throughout industry. In some localities and in some trades, only a token number of those who could profit from apprenticeship receive such training. With the need for training the large numbers of youths entering the labor force now and for the next several years, this report indicated where apprenticeship could be doing a better job.

A more adequate job of assessing apprenticeship and developing policies for training can be done if data can be improved. The 1962 BAT survey and the 1963 census survey of training provide useful benchmarks, but there is a need for better data on such matters as the numbers of those who do not finish apprenticeship and the reasons therefor, the ages of apprentices, their earnings, and even (as shown by the foregoing pages) the total number of apprentices.

Job Opportunities for Women College Graduates

SOL SWERDLOFF*

WOMEN are presently receiving 2 of every 5 bachelor's degrees awarded in this country. If present projections are realized, between 1964 and 1975 they will earn 3.4 million degrees—more than double the number awarded to women in the preceding 11 years. As the level of educational attainment increases among women so does labor force participation. In March 1962, about 2.2 million college-educated women were employed, and projections indicate that 3 million women with degrees will be working in 1975. Eight of every 10 employed college women are presently working in professional or managerial jobs which would indicate that a great majority of them are using their college training in their jobs. However, college-trained women earn considerably less than their male counterparts in the same occupations.

Employment of College Women

Labor force participation of women increases in proportion to the amount of their education. The following tabulation shows that in 1962, 57 percent of all women with college degrees were working, in contrast with 41 percent of women with only a high school diploma and 28 percent of those with only an elementary school education.

Employed women as a percent of all women 18 years old and over with specified levels of educational attainment

	1962	1967	1962
Elementary school:			
Less than 8 years.....	23	25	27
8 years.....	28	30	30
High school:			
Less than 4 years.....	34	34	34
4 years.....	41	40	40
College:			
Less than 4 years.....	41	41	37
4 years or more.....	57	55	50

SOURCE: BLS Special Labor Force Report No. 30 and *Current Population Reports* (U.S. Bureau of the Census), Series P-50, Nos. 45 and 78.

Perhaps even more significant is the rapid increase between 1952 and 1962 in the labor force participation of college-educated women compared with the lack of substantial change, or decline, at lower educational levels. The proportion of women with a college degree who worked climbed from 50 to 57 percent, while the proportion of women with a high school diploma stayed about the same, and that for women with less than a high school education actually declined. These trends reflect, at least in part, the rapid growth of jobs requiring relatively more education.

Women with a college degree are also more apt to be working full time, and those who usually work part time are more likely to be doing so by preference rather than from lack of full-time opportunities. Of the college-educated women in the labor force, slightly less than 20 percent reported they were working part time in March 1962.¹ Of the high school graduates in the labor force, about 20 percent were working part time, but at lower levels of educational attainment the comparable proportions increased more sharply: 27 percent of the elementary school graduates, 33 percent with only 5 to 7 years of elementary school, and 36 percent with 1 to 4 years of elementary school were working part time.

Most women work at some time in their lives. For example, at the time of the census of population in 1960, 8 of every 10 women 20 to 30 years old reported some work experience during the 1950 decade. It is probable that 9 out of 10 college women work at some time in their life after leaving school. A recent report² noted that of the 1958 college graduates, 87 percent of the single women were working 2 years later, as were 81 percent of the childless married college women, and

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¹ See *Educational Attainment of Workers, March 1962* (BLS Special Labor Force Report No. 30, 1963).

² *Two Years After the College Degree; Work and Future Study Patterns* (National Science Foundation, 1963), NSF Bulletin 63-26, p. 43.

34 percent of the married women with children. College women are also apt to be in the labor market for many years. The work-life expectancy for all single women is approximately 40 years—almost as long as for men (43 years); for all childless married women, 31 years; and for all married women with children, 27 years. Although data are not separately available for college women, it seems likely that their work-life expectancy would exceed these cited.

Kinds of Employment

In 1962, 8 of every 10 employed women with a college degree were in professional, technical, or managerial occupations—fields in which a college degree is a usual prerequisite for entry (table 1). Their primary concentration is in the professional, technical, and kindred occupational group which attracts nearly two-thirds of all working college graduates today—3.1 million men and 1.6 million women. A greater proportion of working women with a college degree are employed in professional, technical, and kindred occupations than is true for men. About three-quarters of all employed women with a college degree are working in this occupational group, compared with about three-fifths of the men. Moreover, the proportion of college women in this group increased substantially between 1952 and 1962. This concentration results

TABLE 1. EMPLOYED WOMEN WITH 4 YEARS OR MORE OF COLLEGE, BY MAJOR OCCUPATIONAL GROUP, 1952, 1957, AND 1962

[Numbers in thousands]

Occupational group	March 1962		March 1957		October 1952	
	Number	Percent	Number	Percent	Number	Percent
All occupations.....	2,161	100.0	1,664	100.0	1,449	100.0
Professional, technical, and kindred workers.....	1,610	74.5	1,248	75.0	974	67.2
Farmers, farm managers, farm laborers, and foremen.....	10	.5	4	.2	18	1.3
Managers, officials, and proprietors, except farm.....	98	4.5	108	6.5	66	4.6
Clerical and kindred workers.....	315	14.6	228	13.7	264	18.2
Sales workers.....	33	1.5	32	1.9	46	3.2
Craftsmen, foremen, and kindred workers.....	3	.1	1	.1	6	.4
Operatives and kindred workers.....	25	1.2	14	.8	15	1.0
Private household workers.....	17	.8	13	.8	20	1.4
Service workers, except private household.....	51	2.4	18	1.1	41	2.8
Laborers, except farm and mine.....						

Note: Because of rounding, sums of individual percents may not equal 100.

Source: *Current Population Reports*, Series P-50, Nos. 49 and 78 (U.S. Bureau of the Census), and BLS Special Labor Force Report No. 30.

TABLE 2. WOMEN WITH 4 YEARS OR MORE OF COLLEGE WORKING IN THE PROFESSIONAL, TECHNICAL, AND KINDRED OCCUPATIONAL GROUP, BY OCCUPATION, 1960

Occupation	Employed (thousands)		Percent distribution of women
	Total	Women	
Total, all occupations.....	6,213	1,768	-----
Professional, technical, and kindred workers.....	3,857	1,324	100.0
Teachers, elementary and secondary (not elsewhere classified).....	1,271	858	64.8
Professional nurses.....	80	77	5.8
Musicians and music teachers.....	83	45	3.4
Social and welfare workers, except group.....	64	41	3.1
Librarians.....	47	39	2.9
College presidents, professors, and instructors (not elsewhere classified).....	168	35	2.6
Sport instructors and officials.....	53	18	1.4
Medical and dental technicians.....	26	18	1.4
Artists and art teachers.....	38	16	1.2
Editors and reporters.....	48	15	1.1
Physicians and surgeons.....	225	14	1.1
Therapists and healers (not elsewhere classified).....	21	11	.8
Religious workers.....	22	10	.8
Natural scientists.....	113	10	.8
Dietitians and nutritionists.....	10	10	.8
Accountants and auditors.....	182	9	.7
Other professional, technical, and kindred workers.....	1,406	98	7.4

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

SOURCE: *Census of Population, 1960*, PC (2) 7A (U.S. Bureau of the Census), table 9, pp. 123-124.

in part from the predominance of college-educated women in the traditional women's occupations (teaching, nursing, social work, dietetics, and library work) which are, for the most part, numerically large, growing, and heavily represented by college graduates (table 2). It may be that some college-educated women are less willing than men to take jobs other than those in the professions, electing instead to stay home or do volunteer work. While the proportion of college-educated women working in most other occupational groups declined during the 10-year period, significant numbers are still employed in such areas; nearly 450,000 women with college degrees were working in these jobs. As shown in the following tabulation, 7 of every 10 were employed in clerical and related jobs in March 1962 while most of the others were either in sales or service jobs.

Occupational group	Employed women with 4 or more years of college	
	Number	Percent
Total.....	444,000	100.0
Clerical and kindred workers.....	315,000	70.9
Sales workers.....	33,000	7.4
Craftsmen, foremen, and kindred workers.....	3,000	.7
Operatives and kindred workers.....	25,000	5.6
Private household workers.....	17,000	3.8
Service workers, except private household.....	51,000	11.5

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

For the most part, these women are believed to be underutilized or at least not making maximum use of their college training. It is recognized that some women in the professional and managerial occupations may also be underutilized and, contrariwise, that some women in clerical, sales, and other jobs may be in positions that do utilize their college training, but these situations are thought to be atypical. The fact that the proportion of college-educated women working outside the professional and managerial areas is generally declining suggests that an increasing percentage are using their college training on the job.

Earnings

A great disparity exists in the earnings of men and women in the same occupation. Among the professional, technical, and managerial occupations, women not only lag behind men in average earnings in every occupation, but, compared with men, only a very small proportion had earnings of \$10,000 and over (table 3).

Even among some of the traditional women's occupations, the median earnings in 1959 of women were well below those of men in the same occupation. In teaching (not elsewhere classified), the 1959 median earnings of women were 64

percent of those for men, while social workers averaged 83 percent of men's earnings. The widest earnings disparity among all professional occupations shown was for physicians and musicians and music teachers, where the median earnings of women were 44 and 27 percent, respectively, in relation to men. On the average, women lawyers earn only about half as much as men, and among salaried managers, women earned only a little more than half as much as men. In the earnings range of \$10,000 and over, women fell even further behind men. Among the 17 professional and managerial occupations for which data are available for both sexes, the percentages of women earning \$10,000 and over ranged from 0.3 for elementary school teachers and medical and dental technicians to 27.5 for physicians and surgeons. In 40 percent of the professional occupations shown, the proportion of women earning \$10,000 and over was less than 1 percent in each occupation; and in only two occupations were the proportions 10 percent or more. The percentages of men earning \$10,000 or more in the professions ranged from 3.3 for elementary school teachers to 63.9 for physicians and surgeons. In 10 of the professional and managerial occupations shown, 10 percent or more of the men had earnings in this bracket.

TABLE 3. MEDIAN EARNINGS¹ OF EMPLOYED PERSONS 14 YEARS OLD AND OVER, BY SELECTED OCCUPATION AND SEX, 1959

Occupation and sex	Median earnings ¹ of persons working 50 to 52 weeks in 1959		Median earnings ¹ of women as a percent of men's median earnings	Percent earning \$10,000 or more	
	Men	Women		Men	Women
Workers, 14 years old and over.....	\$5,307	\$3,118	58.8	7.1	0.4
Professional, technical, and kindred workers.....	\$7,124	\$4,186	58.8	20.4	1.0
Accountants and auditors.....	6,828	4,532	66.4	15.6	1.2
Artists and art teachers.....	6,774	4,351	64.2	15.8	1.5
Authors, editors, and reporters.....	7,154	4,172	58.3	20.1	4.2
College presidents, professors, and instructors (not elsewhere classified).....	7,971	5,814	72.9	22.9	4.0
Designers and draftsmen.....	6,349	4,717	74.3	7.1	4.1
Lawyers and judges.....	10,981	5,681	51.7	52.7	14.1
Musicians and music teachers.....	5,478	1,503	27.4	7.6	.7
Natural scientists (not elsewhere classified).....	8,083	5,535	68.5	23.9	2.5
Physicians and surgeons.....	14,784	6,562	44.4	63.9	27.5
Social scientists.....	7,999	4,851	60.6	26.7	4.1
Social, welfare, and recreation workers.....	5,551	4,591	82.7	4.7	.7
Teachers: Elementary school.....	5,635	4,559	80.9	3.3	.3
Secondary school.....	6,328	4,931	77.9	5.7	.8
Teachers (not elsewhere classified).....	5,952	3,834	64.4	5.6	.6
Technicians: Medical and dental.....	4,892	3,670	75.0	5.0	.3
Managers, officials, and proprietors, except farm.....	6,926	3,800	54.9	25.1	.5
Managers, officials, and proprietors (not elsewhere classified)—salaried.....	7,544	4,221	56.0	28.5	3.4
Managers, officials, and proprietors (not elsewhere classified)—self-employed.....	6,010	2,722	45.3	24.8	6.5
Clerical and kindred workers.....	5,206	3,546	68.1	2.4	.2
Sales workers.....	5,639	2,370	42.0	12.3	.4

¹ Earnings represent wage and salary payments plus self-employment income. Totals may include figures not shown separately because of insufficient data.

SOURCE: Cols. 1 and 2: *Census of Population, 1960*, PC (2) 7A, Occupational Characteristics (U.S. Bureau of the Census), table 16, p. 232; cols. 3, 4, and 5: *Census of Population, 1960*, PC (1) 1D U.S., U.S. Summary, Detailed Characteristics (U.S. Bureau of the Census), table 208, pp. 553-555.

Employment Outlook

Between 1964 and 1975, about 3½ million bachelor's degrees, more than half a million master's degrees, and about 25,000 doctorates will be awarded to women—approximately double the number of each type of degree awarded in the preceding 11 years. In March 1962, there were about 2.2 million employed women with college degrees, and projections indicate that 3 million women with degrees will be working by 1975. What are the job prospects for this increasing supply of womenpower?

Analysis of the requirements of individual occupations indicates that rapid growth can be expected in most professional and managerial occupations, and at the same time, employers increasingly are seeking college graduates to fill such openings. College women may even have an added advantage because of their predominance in teaching, nursing, library work, and social work, which together employed 1 million women in 1960. The need for personnel in these four occupations is expanding, replacement requirements are substantial because of the size of the occupations, and turnover is high.

If women were to maintain the same proportion relative to men that they now hold in each professional and managerial occupation, the supply-demand situation in these fields would result in favorable employment prospects for college-trained women. The outlook, however, may not be quite this bright. How college women actually fare will depend on many factors, including their career planning, the attitude of employers toward hiring women, and particularly on the competition for available jobs from the large number of college-trained men.

Competition With Men

The increasing competition with men for jobs is a very real problem for college women. Projections indicate that about 7 million men with college degrees will be in the labor force in 1975—over 2 million more than in 1962. In the years

ahead, many of these men may be competing for jobs in occupations in which women have long predominated. The decennial censuses afford a clue to the extent of men's inroads into some "women's occupations." For example, between 1950 and 1960, the proportion of men among secondary school teachers increased from 43 to over 50 percent; among social workers, from 31 to 37 percent; in library work, from 11 to 14 percent; and in elementary teaching, from 9 to 14 percent. On the other hand, despite the publicity given the growing acceptance of women in the occupations once reserved exclusively for men, the number of women in these occupations is still small and not increasing significantly. For example, between 1950 and 1960, the number of women engineers with a college degree only increased from 2,600 to 2,800; accountants from 7,500 to 8,900; physicians and surgeons from 8,900 to 13,800; natural scientists from 8,600 to 10,200; draftsmen from 1,200 to 2,700; and pharmacists from 3,600 to 4,600. In 1960, college-trained women generally still made up only a small percentage in each occupation: 0.6 percent of the engineers, 4.9 percent of the accountants, 6.1 percent of the physicians, and so on. Since personnel shortages are reported in many of these areas, it seems likely that the chief reasons for the relatively small numbers entering these fields are the lack of trained applicants and, perhaps indirectly, a feeling by women that they would be denied opportunities even if they were to qualify for them.

Jobs Versus Careers

In spite of the high proportion of women who appear to be using their college training on their jobs, considerable evidence suggests that college women often fail to make specific plans while in college for their working careers. A recent survey found that "the majority of women with irregular labor force participation have 'jobs' instead of 'careers' and they constitute a substantial proportion of all women workers."³ This report points out that women, unlike men, ". . . do not expect to remain in paid employment all of their lives, and for a very simple reason. Almost all women expect to and do in fact marry, and the great majority bear children. That being the case, many of the women who work throughout

³ *Work-Attachment Patterns in Six Cities* (Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Industrial Research Department, 1953). Unpublished study based on data from the Survey of Patterns and Factors in Labor Mobility.

their lives do so without planning it that way." College women should be made aware of the facts concerning the probability of their labor force participation so they can plan appropriately.

Employer Attitudes

The lower earnings of women, the fact that a significant proportion of college women do not use their educational background in their jobs, and their concentration in "women's occupations" can be attributed not only to lack of career planning and competition with men, but also to the resistance of employers to hiring women in many professional, technical, and managerial occupations.

The Presidential Commission on the Status of Women⁴ considered this problem and summarized employer attitudes⁵ as follows:

The reasons given by employers for differential treatment cover a considerable range. Frequently, they say they prefer male employees because the nonwage costs of employing women are higher. They say that the employment pattern of young women is in and out of the labor force, working for a time before marriage and thereafter putting family obligations first until their children are grown. They say that women's rates of sickness, absenteeism, and turnover are higher than men's; that the hiring of married women introduces one more element into the turnover rate because the residence of a married couple is normally determined by the occupation of the man. They say that though attendance rates of older women are often better than those of men, insurance and pensions for older workers are expensive, and that compli-

ance with protective labor legislation applying to women is sometimes disruptive of schedules. They say that men object to working under women supervisors.

A survey of Federal employment practices revealed that "men (in the survey) do not consider women as able as men, either as supervisors or non-supervisors in their own occupational field. The preference of men for other men is stronger in considering supervisory roles rather than nonsupervisory."⁶

Thus it appears that women still have many hurdles to cross to attain equal employment opportunities and earnings despite some evidence of improving employer attitudes and the passage of the Equal Pay Act of 1963 (Public Law 88-38). Employer reservations about hiring women may be related, in part, to women's inadequate career planning, but the intertwining of these problems makes abundantly clear the need for women to plan in college for a career, to strive for high academic performance, and to go on for specialized training at the graduate level whenever possible, so that they can compete with the large number of men also seeking room at the top.

⁴ *American Women: Report of the President's Commission on the Status of Women, 1963*, p. 23.

⁵ It is recognized that these employer attitudes may apply to a lesser degree to college women because their attachment to the labor force is greater.

⁶ See Appendix E, *Report of the Committee on Federal Employment of the President's Commission on the Status of Women, 1963*, p. 110.

Summaries of Studies and Reports

Papers from the AMA Winter Meeting

EDITOR'S NOTE.—*The following three articles are excerpts from papers delivered at the February 12–14, 1964, meeting in Chicago of the American Management Association. Minor changes in wording have been made and signs to denote elisions have not been employed.*

Appraisal of Kaiser's Sharing Plan

BEFORE LAUNCHING into the appraisal discussion, I must emphasize two major reservations which will qualify all subsequent parts of my presentation: Number One—it is far too early to form any significant judgment as to the success of this new plan for Kaiser Steel and certainly no conclusions can be drawn as to more general value to the steel or other industries. The plan has been in effect since March 1, 1963, and we have just concluded the eleventh month of plan operation. During this period, we enjoyed a sharp upswing in business volume which peaked in the second quarter of 1963. This was followed by a slackening of steel shipments during the summer months, and we have not as yet seen a return to the high operating rates of 1963.

The employment security feature of the plan, potentially one of the most important concepts, has not yet been tested to any significant extent. We are just beginning to face these employment security and automation displacement questions and to work them out in actual practice. Furthermore, several years may be required to measure the impact of business cycles and to judge the real depth of change in management-labor attitudes and relationships.

The plan has had a good start. This was vital to ultimate success, and we are encouraged and

thankful. Kaiser Steel management is firmly dedicated to the proposition that this plan can and will work. Ultimate success will undoubtedly require major efforts and basic changes in attitudes which can only come gradually.

The second major reservation deals with the applicability of the plan to business situations in general. The plan embodies various ideas and principles which might be useful in a broad sense. For example, the employment reserve concept for coping with technological displacement, the overall cost savings approach to incentives as distinguished from straight production volume measurement, and broad motivation through fair sharing of economic progress are ideas which might have merit in many circumstances. However, the Kaiser Steel plan was designed and tailored specifically to accomplish our objectives at the Fontana Steel Plant with its particular operating and accounting systems and procedures. Application of the plan's mechanical details to other specific situations would probably range from difficult to impossible. We have a considerable problem within Kaiser Steel as to how the plan might be related to departments and operations not located at Fontana.

Financial Results

For the 10 months through December on which results have been reported, payments to more than 4,800 employees have averaged 46 cents per hour, ranging from 66 cents in April to 24 cents in August. As a percentage of the standard hourly wage rates, these payments have averaged 18 percent for the 10-month period, ranging from 25.8 percent in April to 9.5 percent in August. Month by month, average payments per hour [were]: March, 55 cents; April, 66 cents; May, 50 cents; June, 62 cents; July, 40 cents; August, 24 cents; September, 46 cents; October, 46 cents; November, 42 cents; and December, 30 cents.

In terms of total dollar cost, the figures are impressive. For the period March through December, total charges recorded on the company's books amounted to approximately \$3.5 million. This figure includes cash payments to participants of nearly \$3.2 million, plus set-aside provisions for the wage and benefit reserve and related payroll fringe charges. These costs amounted to approximately \$3 per ton of finished steel produced during the 10-month period. What has Kaiser Steel received for this seemingly lavish outlay of moneys?

At the beginning of the year, we prepared, as we do quarterly, a forecast of sales and earnings covering 1963. We reduced our steel prices at the Fontana plant by about \$12 per ton in late 1962, thereby bringing the national steel price structure to the West Coast market for the first time. Taking into account adjusted freight allowances, the net impact on sales revenue and profits came to \$7 to \$8 per ton, or a total revenue loss of about \$10 million per year. This represented quite a chunk to make up by increased volume and cost improvements.

Our 1963 tonnage prospect, when we were forecasting back in January, was for approximately 70 percent of capacity and our profit and loss crystal ball showed a small loss which we chose to call break-even. At that time, we gave only token recognition to the impact of the sharing plan which had been approved by the Fontana workers on January 11.

Two weeks ago, we announced Kaiser Steel's net earnings of \$11.3 million for 1963 which amounts to \$2.49 per share of common stock after the preferred and preference dividends. This earnings amount is not reduced by Federal taxes since we were still working off an operating loss carryforward from 1962. These \$11.3 million of earnings compare with a loss of \$5.2 million in 1962, so we have a swing between the 2 years amounting to \$16.5 million.

But here is the interesting point—the actual sales tonnage for 1963 was virtually the same as that forecasted in January a year ago and, at that time, we were forecasting a break-even in earnings for 1963. This sharp earnings improvement, therefore, does not come from steel sales volume.

To some extent the earnings picture was helped by April and October price increases of 3 to 5 percent on certain steel products, but the main credit for the earnings rise must be attributed to manu-

facturing cost improvements. By any reasonable standard of comparison, our cost performance during 1963 has been the best in the company's history. Several major factors have combined to bring about this excellent cost performance. In my opinion, it is not possible to segregate these causes with any degree of accuracy. There is no question, however, but that the new sharing plan was an important contributing factor.

Opinions and Impressions

The top management of Kaiser Steel is pleased and encouraged with initial results. However, they are quick to refer to the big reservations which I expressed earlier and are extremely cautious of claiming any major breakthrough. They do believe that operating performance and benefits have been obtained which would not otherwise have been forthcoming. Also, it is felt that it was important and very fortunate to get off to a strong and dramatic start. The top management group is determined to make the plan work.

Despite early success, the plant management people feel that the surface has been barely scratched. The supply and material savings have come on fast, but a big potential remains both in labor and material savings.

Beginnings of a new atmosphere in labor-management relations are apparent. Plant management can now approach problems of work practices previously considered too hot to handle in the face of violent opposition. Some supervisors, previously frustrated, now feel that they are able to get their message across to the workers and can motivate a constructive response.

There has been a dramatic change in the union grievance situation. In 1961, there existed a backlog of over 500 grievances which had bogged down in the grievance procedure and were headed for arbitration. In recent months, the grievances in process have run in the neighborhood of 70 and only a few, if any, of these are expected to require arbitration. Also, the filing of grievances has been greatly reduced. Where in the past we might have had as many as 100 grievances filed in a month, present experience is running at about 30 per month.

After the strong second quarter in 1963, business volume turned down and we operated at substantially reduced volume levels for several months.

Again, it is too early to draw any firm conclusions, but the indications were that cost performance responded well to the volume decline. This is encouraging since traditionally there is a stretch-out of work at the start of a downturn with costs tending to snowball. For the first time in our experience, the sharp increase in costs did not occur.

There is some feeling on the part of the plant management that capital expenditure requirements may be lessened if successful operation of the plan continues. This would be the result of improved care and maintenance of the mill machinery and equipment and better operating utilization of the existing equipment, thereby reducing justification for increased automation.

The workers themselves and their union representatives appear to be making a genuine effort to make the plan go. Union officials all along the line, from the local to the international level, are cooperating in attempting to work out the numerous problems and difficulties which arise in the installation of such a complex scheme. These cooperative efforts are all the more impressive in view of the basic conflict with traditional behavior which is difficult to overcome all at once.

Late last year, the idea of forming sharing plan savings committees really got rolling. The program had started early in the year on an informal basis with small and large groups gathering together for brainstorming sessions in search of savings ideas. There are now 169 of these committees in existence, and the flow of savings ideas has been really amazing. During the last 3 months, 729 idea proposals were submitted by employees throughout the plant. Of this total, 85 percent were found to have merit and have been approved for installation. And, this does not mean that 15 percent were rejected since it takes some time to evaluate each proposal and a considerable number were still in process at the end of January. Of the 729 cost savings proposals, 64 percent had actually been installed by the end of January.

Our competitors in the steel industry have shown great interest, laced with skepticism. The industrial relations people are, of course, particularly attentive to the plan's progress. Generally, I would say the industry has adopted an attitude of watchful waiting.

On the whole, there is little antagonism and few violent reactions. Many of the industry leaders feel that our program is a "giveaway" and that the same operating performance could be obtained without this added expense. The whole thing is a new and radical concept which is hard to take, particularly by the oldtimers.

When the plan first started some customers were apprehensive that quality might suffer, but this problem has not materialized. Actually, the plan motivates improved quality because of the total cost concept as distinguished from an incentive based fundamentally on production volume. Under the plan, returns of material represent additional cost charged directly against sharing gains.

Major Misconceptions

In concluding my remarks, I would like to discuss briefly several of the misconceptions which are repeatedly encountered. First, there is much misuse of the term "profit sharing." It is probably not really very important, but we try to make it clear that the plan is based upon cost savings without regard to whether the company is in a profit position for that period.

Perhaps a more serious misconception has to do with the idea that the Kaiser plan represents "a big giveaway" and that moneys are being paid out unnecessarily for labor performance which could be otherwise obtained. This idea overlooks the individual incentive plan situation which existed at the Fontana plant as compared with the steel industry. Our incentive plan coverage of the production and maintenance workers had been running in the neighborhood of 43 percent as compared with 75-80 percent for the industry. We had an obligation which was going to have to be faced sooner or later, to cover all or substantially all of the remaining workers with some kind of an incentive program. Extension of this coverage could have cost something in the magnitude of the incentive rates being paid on the established individual incentive plans. Furthermore, there is no real reason to believe that extension of the very unsatisfactory individual incentive plan system would have produced any performance benefits to the company, while the cost could easily have exceeded the payout under the new sharing plan.

Another misunderstanding has to do with the handling of wage and fringe benefits which may be negotiated by the steel industry. This question arose this past year with the industry agreement with respect to extended vacations which we estimate will cost in the neighborhood of 9 to 10 cents per man-hour. Kaiser Steel has agreed to provide comparable vacation benefits to its employees. However, the cost of these benefits are covered by amounts set aside from the employees' share of

savings generated under the sharing plan. Now this assumes, of course, that we would have a sufficient savings pool to cover such additional benefit payments, and we do not anticipate that there will be any problem. The plan does guarantee the basic level of the industry wage and fringe benefits.

—C. A. MACILVAINE
Treasurer, Kaiser Steel Corp.

Extended Vacations at Alcoa

FOLLOWING the 1962 steel settlement, Alcoa and the majority of other major aluminum producers agreed to a supplemental vacation plan (SVP) to be financed by a 3-cent-per-hour contribution. In addition, the financing of supplemental unemployment benefit (SUB) plans was increased from 5 cents per hour to 9½ cents per hour, with a provision providing for "spill-over" up to 4½ cents from this fund of moneys not needed for SUB purposes, the spill-over to be added to the 3 cents per hour.

Alcoa began to spill-over in 1963, and if experience continued in that pattern, would have been spilling over the full 4½ cents for the 1964 financing of SVP vacations had this plan and the SUB plans remained unchanged.

It is our understanding that in their negotiations the steel industry early came to the conclusion that extended vacations were an earnest desire on the part of the union. Certainly, this was quite apparent to us as we began our negotiations in aluminum.

The steel settlement provided that the 13 weeks' extended vacation would apply to 50 percent of the work force, accompanied by a continuation of the extra week or weeks of vacation under the SVP for the so-called junior group of the work force. The program was to be financed at a rate of 9½ cents per hour plus 3 cents from the old SVP. It is our understanding that this financing route was intended to insure the same costs

to all of the companies participating in those negotiations.

When we opened our negotiations with the Steelworkers, this was the program (the financed plan) proposed to us. Certain objectionable points became apparent. We did not like the idea of splitting the work force into senior and junior groups. If this splitting were done on a companywide basis, certain of our older plants would have all of their employees covered by extended vacations; some of the newer plants would have none eligible at the beginning of the program. On the other hand, if we went the plant-by-plant route and split the work force into senior and junior groups by plants, at some of our younger plants employees with 5 years or less service would be eligible for extended vacations while at some of the older plants employees with 20 years or more would not be eligible. In light of the SUB experience in aluminum and the amount of spill-over then occurring, it appeared that 9½ cents plus 3 cents was more money than was needed to provide 13 weeks' extended vacation to 50 percent of the work force, whether taken companywide or on a plant-by-plant basis. This was obvious to the union, and they began to talk in terms of providing extended vacations of 13 weeks for more than 50 percent of the work force. To do so would create a greater impact, from the standpoint of scheduling and disruption, in aluminum than in steel.

At this point, the union proposed that we approach the matter of extended vacations from a "benefit" standpoint. This approach appealed to us even though there was some element of a gamble. Tied in with the negotiations of the extended

vacation plan, and very important to it, was the elimination of the SVP negotiated in 1962 and financed at a firm 3 cents per hour, and a chance in the SUB plan wherein the spillover was eliminated completely.

Another item which had some appeal was that instead of having to take the entire impact of 13 weeks among a limited portion of the work force (e.g., 50 percent), our approach spreads the impact through 10-week vacations (with 13 weeks' pay) for the entire work force; our method and rate of vesting gives us a large base from which to schedule people.

We thus evolved a plan that has no cents per hour attached to it; rather it is approached entirely from a benefits standpoint.

Résumé of Plan

The plan grants to each employee who becomes vested (see below) 10 consecutive weeks of time off with 13 weeks of vacation pay once in each 5-year period beginning January 1, 1964. The weekly amount of 13 weeks' extended pay is calculated on the same basis as the regular vacation pay.

Vesting of Extended Vacation. Essentially 50 percent of the work force at each plant vests for (i.e., becomes entitled to) an extended vacation on January 1, 1964, the effective date of the plan, another 25 percent 1 year later, and the remainder at the beginning of the third year. The plan also provides for the subsequent vesting of extended vacations for those employees who were not eligible for a regular vacation on the vesting date, but later become eligible for a regular vacation. In addition, an employee who retires on pension on or after December 31, 1963, and who has not previously vested, becomes vested upon such retirement.

Scheduling Provisions. Extended vacations are to consist of 10 consecutive weeks. The company, to the extent practicable, will schedule employees for extended vacations in approximately equal numbers each year.

With Alcoa, the vacation period for regular vacations, as well as extended vacations, is the entire calendar year, January 1 to December 31, inclusive. This helps to level out the scheduling so that we are able, to some extent, to avoid peaks and valleys.

More and more in recent years, we have followed the practice of scheduling all vacations over the 12-month period. Our agreement provided for negotiations between the local union and local management on vacation scheduling practices with the object of arriving at mutually satisfactory scheduling arrangements for the 5-year period.

If the local parties could not agree, then a Master Contract provision would apply. This provided:

The employee shall take his vacation as scheduled by the Management . . . The employee's wishes as to the time his vacation is to be scheduled will be given consideration, but such scheduling will necessarily be governed by the operating requirements of the plant.

The company—as protection against undue dilution of experienced employees in a classification, department, or subdivision—may limit scheduling of such employees to not more than 20 percent to start extended vacations in any one year. In cases of substantial increase in employment at any plant, time for scheduling extended vacations shall be extended past December 31, 1968.

An employee scheduled for extended vacation is to be notified at least 90 days in advance, and no change is permitted without 60 days' notice unless the employee otherwise agrees. An employee on layoff or sick leave, after exhaustion of sickness and accident benefits, may elect to take his extended vacation, if entitled, with the approval and under the conditions set forth by local plant management. An employee 63 years or older at the time his extended vacation is scheduled (provided he is scheduled within 2 years of his vesting date) may, at his option, take the vacation as scheduled, elect to take it during the 10 weeks prior to retirement, or take a lump sum payment at retirement.

Impact

Since our extended vacation plan is tied in with the elimination of the SVP 3 cents per hour and the elimination of the SUB spill-over, which could have been as high as 4½ cents, we cannot, in honesty, accurately put a cost on our extended vacation plan.

Obviously, there will be some impact on work scheduling, training of replacements, upgrading of personnel, disruption of work arrangements, in-

cluding the upsetting of crews, but to what extent, it is much too early to speculate. It is interesting to note the employee reaction to this program. Some of us were of the opinion that this was an "organization" program sponsored by the union, with very little enthusiasm on the part of the employees. Employee acceptance has generally been good, however—which was surprising to many of us. Either the union did an excellent job of selling its program and its objectives, or we misjudged what employee reaction would be—or both.

Again, it is too early to predict with any accuracy the effect of the extended vacation program on our employment situation or that of the aluminum industry, and certainly that of industry in general. The outcome of all this, I suspect, is wrapped up in how well the levels of production fare, how universal such vacations become, and how fully they are paid for by changes in productivity.

—E. D. MATRS

Vice President, Personnel Relations,
Aluminum Company of America

Extended Vacations at Timken

THE 1963 Extended Vacation Benefit Agreement was negotiated between The Timken Roller Bearing Co. and the United Steelworkers of America in September 1963 and became effective January 1, 1964.

The benefit provided by this agreement consists of 5 weeks extended vacation time off with 7 weeks' vacation pay to eligible employees once during the 5 years (term of the Extended Vacation Benefit Agreement). To be eligible for extended vacation, an employee must have 5 years' continuous service on or prior to any calculation date during the life of the agreement. The vacation benefit provided under this agreement is in addition to all other vacation benefits to which an employee may be entitled.

The amount of extended vacation pay which an employee will receive under this plan is equal to 280 hours at the employee's average hourly rate during the first two of the last four pay periods worked prior to the date on which he starts his extended vacation. To receive his extended vacation pay, an employee must take his extended vacation time off. He is also required to take any regular vacation allowance to which he is entitled in the vacation year in which he takes his extended vacation.

The first calculation date under the plan was January 31, 1964, and calculation dates occur

monthly thereafter. Employees will be scheduled for extended vacations in about equal number each month and, insofar as possible, in the order of their continuous service, unless this will cause too many experienced employees in any seniority unit to be on extended vacations during any given year. In this case, the company may at its discretion schedule these vacations over the entire 5-year period covered by the agreement. The final right to schedule extended vacations is reserved exclusively to the company to enable it to provide for efficient operation, subject to the following qualifications: (1) an employee scheduled for an extended vacation must be notified at least 60 days before the start of such vacation, and (2) a scheduled extended vacation shall not be changed without at least 25 days' notice to the employee unless he consents to shorter notice.

An employee who is 60 years of age or older at the time he becomes entitled to an extended vacation may defer such vacation until immediately before retirement, or he may elect to receive extended vacation pay immediately following his retirement without taking an extended vacation.

Partial benefits are provided for employees who retire or die before becoming entitled to extended vacation. The amount of this partial benefit is equal to 40 hours' pay for each 8 months (or major fraction thereof) in which such employee retains continuous service during the term of this agreement.

—DALLAS G. RAYL

Director of Labor Relations,
Timken Roller Bearing Co.

Government and Manpower Requirements

EDITOR'S NOTE.—*The following article is an excerpt from Part III of A Report on Manpower Requirements, Resources, Utilization, and Training, transmitted along with the Manpower Report of the President to the Congress on March 9, 1964. Minor changes have been made in wording to facilitate transitions, and signs to denote elisions have not been employed.*

TO MEET THE NEEDS of national defense and provide a great number of other services essential to the country's strength and welfare, Federal, State, and local government agencies employed about 12 million people in civilian and military positions in 1962. In addition, government purchases of goods and services generated about 6½ million jobs in private industry. The 18½ million jobs stemming from government programs represented more than one-fourth of all employment, civilian and military, in the country in 1962.

Because of the magnitude of [these] programs and their ability to create rapid shifts in manpower requirements, increased attention to their manpower implications is an objective of high importance. By a more complete assessment of the manpower impact of government programs nationally, as well as on individual workers and groups of workers, it will be possible to provide consistency and avoid unnecessary human and economic dislocations.

EFFECTS OF GOVERNMENT EXPENDITURES

Federal, State, and local governments spent \$123 billion for goods and services in 1962—nearly one-fourth of the total national expenditure for goods and services.

Not quite half of this government spending (somewhat more than \$60 billion) was for wages, salaries, and other compensation of the 12 million government employees. The remainder was used to purchase goods and services from private industry, where it generated employment for about 6.5 million workers.¹

Federal Government

Defense and Related Programs. Defense and related programs accounted for about \$53 billion in purchases of goods and services in 1962 and 7.2 million jobs in government and private industry, whereas the comparable totals for the rest of the Federal Government were almost \$14 billion and 1.8 million jobs. Purchases of goods and services costing almost \$34 billion were made from private industry [and] generated some 3.3 million jobs.

Expenditures for compensation of [Federal] employees, military as well as civilian, totaled \$28 billion, or 42 percent of all Federal spending for goods and services. This sum included the compensation of an estimated 2.4 million civilian employees, of whom 1.1 million were in defense and related programs. In addition, 2.8 million persons were serving in the Armed Forces. Together, the military and civilian personnel in defense and related activities represented about three-quarters of all Federal personnel.

Though recent year-to-year changes in the level of defense spending have not been great relative to its overall magnitude, they have been large enough to have major effects on manpower requirements in particular areas, industries, and occupations. Changes in the nature and industrial and geographic distribution of defense purchases, owing to shifts in weapons systems or other factors, can also have a sharp impact on the economies of local areas.

Defense procurement is oriented toward purchases of hard goods to a much greater extent than either Federal nondefense purchases or State and local purchases of goods and services from private industry. About 81 percent of all prime contracts of \$10,000 or more awarded by the Department of Defense in fiscal year 1962 went for military hard goods and for the associated development costs. Only 19 percent was for new construction, soft goods, or services.

¹ The money spent in private industry covered not only compensation of employees but also capital costs, profits, and taxes. The estimates of purchases from private industry and of the associated employment are not limited to the prime contractors but also include subcontractors and suppliers of materials. However, these estimates do not make any allowance for the further generation of employment through respending of wages and other income (the multiplier effect), nor for the labor required to make the capital equipment consumed in production.

The five industries in which defense procurement is chiefly concentrated are aircraft and parts, communication equipment, electronic components and accessories, ordnance and accessories, and ship and boat building and repair. Practically all employment in the ordnance industry is on defense and related orders. More than 9 of every 10 employees in the aircraft industry also are on such work. In the other three industries, the degree of dependence on defense and related purchases is less. Nevertheless, in each of these industries, over half of the employment is connected with the production of goods and services for the defense, space, and atomic energy programs.

Nondefense Programs. In the nondefense programs of the Federal Government, the balance in expenditures as between purchases from the private economy and compensation of Government employees is very different from that in defense and related programs. Whereas close to two-thirds of all spending for defense, space, and atomic energy programs in 1962 (\$34 billion out of \$53 billion) went for goods and services from private industry, the comparable figure for the rest of the Government was less than two-fifths (\$5 billion out of \$14 billion).

This difference in proportions reflects the heavy expenditures for research and development and purchases of equipment from private industry required by the defense, space, and atomic energy programs, and the relatively low equipment needs and greater direct personnel requirements of non-defense programs such as the social insurance system and the postal service.

Of the 1.3 million Federal employees in non-defense jobs in 1962, nearly half (about 600,000) were employees of the Post Office Department. Postal employment would have to be even higher were it not for recent major advances in the technology of mail handling. Future gains in efficiency are expected to make possible further increases in the volume of mail without comparable rises in postal employment.

Increases in expenditures for goods and services by nondefense agencies have been moderate over the past 15 years. Spending for goods and services, excluding an estimated \$3.7 billion in compensation of employees of government enterprises, totaled \$10 billion, or \$54 per capita, in 1962. The

comparable figures for 1947 (measured in 1962 dollars) were \$8.6 billion and \$60 per capita.

State and Local Governments

State and local government agencies spent more than \$56 billion for goods and services in 1962, about \$10 billion less than the Federal Government. Compensation of these agencies' 6.8 million employees accounted for three-fifths of the \$56 billion, approximately the same proportion as in Federal nondefense agencies. State and local government purchases from the private sector of the economy amounted to \$24 billion and generated an estimated 2.7 million jobs.

Because of the types of goods and services purchased, the employment created per dollar spent in the private economy tends to be greater in the case of these governments than of the Federal Government. Over half the 1962 expenditure by State and local governments for purchases from private industry was for construction, which uses a comparatively large amount of labor. In contrast, much of the Federal defense and related spending is for missiles and other scientifically advanced equipment, the production of which involves fewer and higher paid workers relative to the total cost. Thus, State and local government purchases from private industry generated an average of 112 jobs per million dollars spent in 1962, compared with 98 jobs per million dollars of Federal defense and related purchases. The comparable figure for Federal nondefense spending was 102 jobs per million dollars.

In total, however, the private employment stemming from State and local government purchases was much less than that resulting from defense and other Federal expenditures (2.7 million compared with 3.8 million jobs). This finding is the more striking because it is the reverse of the distribution for government employees, of whom many more are in State and local than in Federal jobs (6.8 million compared with 5.2 million Federal personnel, including the Armed Forces, in 1962).

Public school teachers and other employees of public educational systems are by far the largest group of State and local government workers. They represented almost half of all such workers in 1962, and their salaries and other compensation constituted about the same proportion of all com-

pensation paid to employees of government agencies at these levels. If account is taken also of all construction and other purchases, it appears that close to 40 percent of the total purchases of goods and services by State and local governments was for educational purposes.

In view of the many unmet needs which still remain and the further large increases in urban population which are in prospect, the pressure for expansion in State and local government services will continue. Financial resources are and will be a limiting factor, of particular urgency in certain States and localities, and will depend in part on the future magnitude of Federal grant-in-aid programs.

EFFECTS OF SPECIFIC GOVERNMENT PROGRAMS

Public Construction

Expenditures and Employment Generated. In 1962, government agencies at all levels spent about \$17.7 billion for new construction projects. This outlay represented over a quarter of all construction expenditures in the United States. It generated about 2.0 million jobs in the private economy, including about 0.9 million in the construction industry and 1.1 million in the industries producing materials and in the distribution and transportation of the materials and equipment used in construction.

State and local governments spent about \$13.9 billion for new construction in 1962, thereby creating some 1.6 million jobs. In terms both of expenditures and employment, these State and local construction projects represented close to three-fifths of the total purchases from private industry by government agencies at these levels.

New construction connected with nondefense programs of the Federal Government involved an expenditure of \$2 billion, and generated about 0.2 million jobs in the construction and other industries. When these figures are added to those for State and local governments, the resulting totals for nondefense construction represent over half (about 55 percent) of all government purchases for nondefense purposes and also of the associated employment.

Important as was the impact of public nondefense construction on the private economy in 1962,

however, it did not equal—in either dollars of purchases or generated private employment—the total requirements (construction and other) of the defense and related programs of the Federal Government.

The amount of public construction financed directly by the Federal Government, for either defense or nondefense purposes, represents only a small fraction of the total undertaken by all levels of government (\$3.8 billion out of \$17.7 billion in 1962). However, the Federal Government also gives considerable financial help to State and local governments in carrying out needed construction projects, through grants-in-aid and other types of assistance. In fiscal 1962, it disbursed over \$3 billion to these governments in assistance for construction of public facilities. The largest disbursement (\$2.75 billion) was for highway construction, but lesser amounts were provided for hospital and other construction projects. In view of the practical impossibility of distinguishing the effects of Federal financing in such cases, and because the final expenditures are made by State and local governments, these projects are treated as wholly State or local in the expenditure and employment figures here presented.

The employment significance of the Federal grants-in-aid program should not be ignored, however. Through their effect in stimulating additional expenditures by other levels of government, which is usually one of the legislative conditions for a grant, their impact on employment is greater than would be suggested by the amount of the Federal disbursement alone.

Under the Public Works Acceleration Act of 1962, for example, Federal assistance was provided to projects which could be launched speedily and completed in a reasonable period, and which would create employment in redevelopment areas and others with severe unemployment problems. By the end of 1963, the total value of approved projects was \$1.6 billion, with the Federal Government providing over half. The value of construction already put in place was estimated at about \$575 million. It is expected that over 100,000 man-years of on-site employment will be generated over the estimated 2½-year span of the \$1.7 billion program, and there were about 40,000 employed on projects underway by the end of the year.

Types of Construction Programs. The largest program of public construction is the building of the Nation's highways and road systems through the combined efforts of government agencies at all levels. In 1962, \$6.3 billion was spent for such construction. The resulting employment totaled nearly 0.7 million—including some 0.3 million workers in the construction industry and almost 0.4 million in other industries.

Most highway construction is actually carried out under the direction of State and local governments, which financed over half of the overall 1962 cost through their own resources. The largest program in which the Federal Government participates is the Interstate Highway System, to which it contributes 90 percent of the cost. In 1962, the Federal share in this program amounted to \$1.7 billion. Other federally assisted highway programs cost about \$1.5 billion, of which the Federal share was about half. Certain local and State roads have been and still are the total responsibility of non-Federal agencies of government.

The construction of public educational buildings is second only to highway construction in both the magnitude of expenditures involved and the employment created. Close to \$3 billion was spent for new public construction of this type in 1962. The associated employment is estimated at over 0.3 million, with somewhat less than half in construction jobs and the remainder in other industries.

Public construction of educational facilities has been traditionally an area of local responsibility, and the bulk of public expenditures for this purpose continues to be made by State and local governments. Nevertheless, the Federal Government provided grants and loans exceeding \$500 million in fiscal year 1962 to aid State and local governments in meeting specific educational needs. The largest programs of Federal aid were for assistance to schools in federally impacted areas and for loans for college dormitory construction.

Federal aid in educational building will be expanded in the 1964 fiscal year and thereafter by the Higher Education Facilities Act of 1963, which authorized \$835 million in grants and \$360 million in loans over a 3-year period for the construction of facilities at community colleges and technical institutes, other institutions for undergraduate education, and graduate schools.

Industries and Occupations Most Affected. The ratio of employment generated in supplying industries to that required in the construction industry is estimated at roughly 120 percent, for both Federal and State and local government programs as a whole.

In general, about one-third of the employment resulting from construction projects is in manufacturing industries. In highway construction (which accounts for about one-third of all employment generated by public construction), the manufacturing industries principally involved are structural metal products, construction machinery, cement and its products, and bituminous paving materials. Highway projects also have a sizable effect on employment in the mining industries producing crushed rock, sand, and gravel, and in transportation and trade. In school and hospital construction, the impact on mining is negligible, and the effect on transportation less than that resulting from highway projects. But the range of manufacturing industries affected is considerably wider.

In the construction industry itself, manpower requirements are uniquely concentrated in the skilled trades. Close to half of all construction workers are craftsmen, foremen, and kindred workers, and more than one-fourth of all such workers in the United States are employed in construction.

Requirements for professional and technical personnel in construction are relatively limited. Civil engineers and other professional and technical workers represented only about 5 percent of the industry's work force in 1960, less than half the proportion in the labor force generally. However, the proportion of managers and proprietors is unusually high (10 percent in 1960) and many of these men undoubtedly have an engineering background.

In most types of construction projects, carpenters are the largest group of skilled workers, with electricians, plumbers, and painters following next in order. But the industry also requires workers in a variety of other skilled crafts; there are at least two dozen specialized types of skilled work in construction, a much larger number than in any other industry.

In highway construction—an area of special importance in gaging the effect of public outlays on

construction manpower requirements—the occupational distribution of employment differs considerably from the general pattern mentioned earlier for the industry. In contrast with almost 50 percent in all construction, only about 40 percent of the workers on highway projects are skilled workers, including operators of complex, heavy construction machinery. And there is a substantially higher proportion of lesser skilled workers in highway construction than in most other types.

Some Implications. Total employment in contract construction has been about 3 million or less between 1956 and 1963. This may indicate that the growth in total real construction activity, both public and private (about 20 percent between 1956 and 1963) has been barely sufficient to offset productivity gains in the industry.

The average unemployment rate for construction workers was 11.9 percent in 1963, as against 5.5 percent for all experienced workers. While much of the difference between these rates can be attributed to the marked seasonal variability in construction employment, the high rate of unemployment for the industry is an indication of unused manpower resources. There is little indication, except possibly in a few crafts in a few limited geographic areas, that the supply of skilled construction workers has been inadequate to meet recent demands.

Government expenditures for construction purposes have made a large contribution to employment in the construction industry in recent years. Moreover, they have in general tended to offset changes in private expenditures during most of the postwar period. Noteworthy in this respect were the increases in government outlays in 1950–53 and 1955–58 when privately financed construction was curtailed. Thus, public construction has had the effect of reducing cyclical variations in construction employment, and has prevented even greater unemployment for construction workers and those in supporting industries.

Science and Engineering

Of all the major occupational categories of employment, the one most affected by Federal programs is science and engineering. More than 120,000 scientists and engineers are Federal civilian employees. In addition, perhaps half as many

members of these professions are in State and local government positions (excluding colleges and universities). And a much larger number—probably more than 300,000—are working on federally financed programs in private industry, colleges and universities, and other nonprofit organizations. Altogether, nearly 2 of every 5 of the 1.3 million scientists and engineers in the country are working either directly for government agencies, chiefly Federal, or on projects supported by them.

The tremendous buildup of federally sponsored research and development has been the main factor in these heavy government requirements for scientific and engineering personnel. In 1953–54, the national expenditure for research and development (R&D) was \$5.2 billion, of which a little over half was government financed. By 1961–62, the country's total R&D expenditure had risen to \$14.7 billion, and the proportion that was government-sponsored had gone up to two-thirds (\$9.7 billion). Preliminary data for 1962–63 show a further rise in the national R&D expenditure—to \$16.4 billion—with the Federal share remaining about two-thirds of the total.

Research and Development Programs. A fact about the R&D programs financed by the Federal Government which is of great importance from the manpower point of view is the extent to which they are concentrated in private industry. Of the \$9.7 billion in Federal funds expended on research and development in 1961–62, two-thirds (\$6.3 billion) went for R&D work performed by private industry. Another \$1.2 billion was accounted for by projects carried out by colleges and universities and other nonprofit institutions. Expenditures for R&D projects conducted within the Government amounted to about \$2.1 billion, little more than one-fifth of the total Federal expenditure for research and development.

The Government financed 90 percent of the R&D work done by the aircraft and missiles industry in 1962; two-thirds of that performed by electrical and communications equipment manufacturers; half of that done in the professional and scientific instruments industry; and smaller proportions in many other industries.

The great manpower importance of the R&D programs of the Department of Defense is also evident from expenditure data. In their overall effect on personnel requirements, these programs

outweigh those of all other Federal agencies put together.

Requirements of the Space Program. The requirements for scientific and engineering manpower resulting from the program of the National Aeronautics and Space Administration [NASA] are not very large relative to total national requirements for scientists and engineers. However, the sudden buildup of the space program, at a time when the flow of new entrants into these fields was rising only slightly, has contributed substantially to the tight personnel situation in many specialties. The number of scientists and engineers on NASA's own staff has risen fairly sharply—from somewhat over 3,000 at the beginning of 1960 to 9,200 in January 1963. But the increase in employment of scientists and engineers on NASA contracts in private industry has been much greater—from approximately 5,000 at the beginning of 1960 to 34,000 3 years later. Altogether, the number of scientists and engineers working on NASA programs grew from 8,400 (or less than 1 percent of the estimated 1.2 million in the country) in 1960 to 43,000 (or about 3 percent of the total) by 1963.

More than 4 of every 5 scientists and engineers employed on NASA programs in 1963 were engaged in R&D work. And from 1960 to 1963, the number of R&D scientists and engineers estimated to be working either directly for NASA or on NASA contracts increased from 7,500 to 36,000—an increase which accounted for more than one-fourth of the estimated total national rise in employment of R&D scientists and engineers over this period.

NASA has estimated that its requirements for scientists and engineers will rise from an estimated 74,000 (including 62,000 working for contractors) on January 1, 1964, to between 90,000 and 100,000 6 years later. Of this total, an estimated 75,000 to 84,000 would be contractor personnel.

This would mean that by 1970, NASA requirements would represent a higher percentage of the total national need for scientists and engineers than they do at present—probably at least 5 percent—[and] a still higher proportion of the total national need for R&D scientists and engineers. But the problems involved in meeting NASA re-

quirements and their impact on the national demand-and-supply situation in science and engineering should tend to diminish as the decade proceeds. The buildup will be very much slower, both in absolute numbers and relative to total employment of scientists and engineers, than it has been in the past few years. And the fairly rapid rise in science graduations anticipated after 1967 should help to ease the personnel situation nationally.

The program of grants for predoctoral training of scientists and engineers initiated by NASA 2 years ago will also contribute greatly to meeting the agency's needs for highly trained personnel.

Manpower Effects of Atomic Energy Program. The number of workers in the atomic energy field is now somewhere in the range of 180,000 to 200,000.²

Scientists and engineers represent about 1 out of every 5 atomic energy workers. In 1961-62, when the general level of employment in the field was much the same as at present, they numbered roughly 43,000. This high proportion of scientists and engineers is an important aspect of the manpower situation in the atomic energy field. Because of the scientific complexity of the field, the relative requirements for professional personnel—and also for technicians and skilled workers—are far above the average for the economy generally.

Although most atomic energy workers are engaged on projects supported by the Federal Government, the proportion who are Government employees is small. In 1962, about 8,000 workers in all occupations (less than 5 percent of the total number in the field) and only 2,000 of the scientists and engineers were on the payrolls of Federal agencies, chiefly the Atomic Energy Commission (AEC). By far the largest group—21,000 scientists and engineers and about 80,000 other workers—were employed in Government-owned but company-operated facilities. The others were in privately owned facilities—many of them working on Government contracts but a sizable number engaged in privately financed work.

² These workers are in a wide variety of activities—mining, weapon and nuclear power production, research and development, and many others. But they do not include those in supporting activities, such as the fabrication and delivery of procured items, which are not directly identified with the nuclear field.

The growth of the nuclear power program, as of the entire atomic energy field, has been made possible largely by personnel developed and trained through the Government's atomic energy program. From the start of this undertaking, the Federal Government has been engaged in large-scale training, directly and by grants. Large numbers of engineers and scientists who received their training within the atomic energy program have become key personnel in the private atomic energy industry.

In fiscal year 1962, the [Atomic Energy] Commission provided support for 500 students, research participation at Oak Ridge, cooperative programs at various AEC sites, [and] university research and conducted various other programs designed to further scientific education.

The importance of such programs is underlined by the Commission's expectation of a further increase in the demand for technically trained personnel for AEC-sponsored R&D programs. It also anticipates an increase in personnel needs in the expanding private nuclear energy industry, including both private power and private isotope use.

Medical Research Programs. According to the National Institutes of Health, scientific and professional personnel engaged in medical and health-related research (including both full- and part-time workers) increased from 19,000 in 1954 to 40,000 in 1960—an employment growth of 107 percent.

Total expenditures for the performance of medical and health-related research rose by about 250 percent during this period—from about \$240 million in 1954 to \$845 million in 1960. In 1954, medical expenditures represented 4 percent of the Nation's total R&D effort. By 1960, the proportion had risen to 6 percent.

Federally supported medical and health-related research has become the largest component in the country's medical research effort. Federal expenditures for such research amounted to \$920 million in 1963, accounting for 63 percent of the national total (\$1.5 billion).

The Federal Government's share in the support of medical research doubled between 1947 and 1963 (rising from 31 to 63 percent). In dollar magnitude, the increase in Federal support was even more rapid—at the very high average rate of 25 percent per year over the 1947-63 period.

The resources of the entire medical-research community are called upon for participation in federally supported medical and health-related research. In 1963, over 70 percent of the Federal funds for such research went to scientists in educational institutions, other nonprofit organizations, and private industry. Slightly over one-fourth of the total was spent in Federal laboratories and hospitals and the remainder (3 percent) in research organizations in foreign countries.

A national expenditure of about \$3 billion for medical and health-related research is used by the National Institutes of Health as a basis for estimating research manpower needs in 1970. This figure, which is in 1958 dollars, would represent a tripling of expenditures between 1960 and 1970.

About 40,000 professional workers were engaged in medical and health-related research in 1960. The National Institutes of Health estimates that 77,000 professional workers would be needed to carry out the medical research effort projected for 1970.

According to the National Institutes of Health, the requirement for additional scientific and professional workers between 1961 and 1970 can be met, given the needed national effort to increase graduate education. To achieve this objective, it will be necessary to substantially enlarge both research and teaching facilities for medical and graduate education, including postdoctoral training; increase both the output of M.D.'s and their participation in research and teaching at all levels; and also increase the numbers of Ph. D.'s especially in biological sciences, and their involvement in medical research. Achievement of these objectives will, in turn, require increased financial support for graduate education, reduced attrition from and no unnecessary prolongment of Ph. D. programs, and enhancement of the attraction of careers and salaries in medical and health-related research.

1962-63 Operations of the National Labor Relations Board

EDITOR'S NOTE.—*The following article was excerpted from the Twenty-Eighth Annual Report of the National Labor Relations Board for the Fiscal Year Ended June 30, 1963. Minor changes in wording and syntax have been made, and signs to denote elisions have not been employed. Where applicable, footnote references to earlier Review coverage have been added.*

ACCELERATED NLRB CASE ACTIVITY of recent years, producing record workloads and production, was again repeated in fiscal 1963, resulting in new all-time high levels in a number of areas. Some of these new records were:

- A total intake of 25,371 cases of all kinds, including 14,166 unfair labor practice charges, also a new high.

- A total of 13,605 unfair labor practice cases closed at all levels, an increase of 286 over fiscal 1962's previous high.

- Issuance by the Office of the General Counsel of 1,588 formal complaints, involving 2,043 unfair labor practice cases, an increase of 119 complaints over the previous high of fiscal 1962.

- Reduction to 378 in the number of cases awaiting five-member Board decision, compared to the 488 of fiscal 1962.

- Significant increases in types of unfair labor practice charges filed, for example: charges of employer refusal to bargain rose to 2,584, as against 2,294 in fiscal 1962; charges of union restraint and coercion of employees went up to 2,399, compared to 2,012 of the prior year.

- A total of \$2,749,151 collected in backpay for 6,965 employees discriminated against by employers, unions, or both. Job reinstatement was offered to 3,478 employees. This was a new alltime high in backpay for a single year, an increase of 57 percent over the \$1,751,910 which in fiscal 1962 went to employees to reimburse them for lost wages due to illegal discrimination.

The disposition pattern for unfair labor practice cases filed with the agency in fiscal 1963 showed only slight changes in the percentages of dismissals and withdrawals, but there was movement upward in settlements (chart 1).

Case closings increased, but along with the greater inflow of cases during the year there also was a greater number of formal complaints issued,

putting more cases into the litigation mill. Another development was in the meaningful numerical shifts in types of unfair labor practice charges. Employee representation cases during the year, fewer than in the prior year, produced new and complex issues.

Case Intake and Disposition

In fiscal 1963, a total of 14,166 new charges of unfair practices were filed. This was the greatest number received in 1 year, an increase of 5 percent over last year. The numerical preponderance of unfair practice charges over election cases continued a trend started in 1958 (chart 2).

A total of 11,205 petitions for employee representation elections and union-shop deauthorization polls also were filed, the second highest total in NLRB history and only 1 percent below last year's alltime high.

During the year, the NLRB disposed of a total of 24,678 cases of all types, at all agency levels. Of these, 13,605 were unfair labor practice charges, a new record. There were 7,397 cases pending at all agency levels at the end of the fiscal year, 693 more than the prior year. Of these, 5,185 were unfair labor practice cases; 2,195 were representation cases; and 17 were union-shop deauthorization situations.

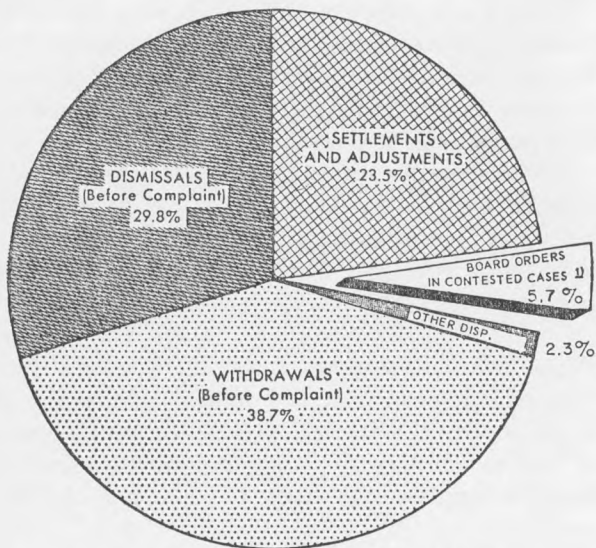
Unfair Labor Practice Cases

Unions, individuals, and employers are the sources of unfair labor practice charges, and take numerical precedence in that order, as follows:

ULP charges filed by—	ULP charges filed against—			
	Employers	Unions	Employer and union	Total
Total.....	9, 550	4, 553	63	14, 166
Unions.....	6, 134	197	15	6, 346
Individuals.....	3, 393	2, 095	7	5, 495
Employers.....	23	2, 261	41	2, 325

The charges filed against employers in fiscal 1963 amounted to an increase of 3.5 percent above the number for fiscal 1962, while charges against unions represented an increase of 8.5 percent. In charges against employers and against unions, individuals submitted a higher percentage of allegations against unions than against employers, and these were only 4 percent below the level of employer charges against unions.

Chart 1. Disposition Pattern for Unfair Labor Practice Cases



¹ Contested cases reaching Board members for decisions.

In the pattern of charges against employers during fiscal 1963 there were some slight but notable shifts in numbers and percentages. Charges of refusal to bargain, for instance, rose to 2,584 and amounted to 27 percent of the total allegations against employers. In fiscal 1962, such charges amounted to 25 percent of the total; in 1959, only 16 percent. Illegal discharge, or other forms of discrimination against employees, continued to be the dominant charge against employers, accounting for 6,840. This represented 72 percent of the total, a drop from the 75 percent of fiscal 1962.

Pattern changes in charges against unions were of a more pronounced nature. Restraint or coercion of employees in exercising their rights to join, or refrain from, union activity accounted for 53 percent of the charges against unions; 39 percent alleged illegal discrimination against employees; 32 percent charged secondary boycott violations or jurisdictional disputes; and 8 percent alleged illegal picketing. (The percentages total more than 100 since more than one allegation may be contained in a single charge.)

Significant increases were shown in the fiscal 1963 charges above. Restraint and coercion allegations against unions totaled 2,399, or 19 percent over the number for fiscal 1962. Discrimination charges rose to 1,785, or 7 percent over the num-

ber filed in the prior year. However, charges of illegal picketing against unions declined to 354, a drop of 12 percent below fiscal 1962. Allegations of illegal secondary boycotts showed a slight increase. A sharper rise was in the 63 charges of hot-cargo violations against unions and employers jointly, a 26-percent increase above the 50 charges of fiscal 1962.

Industrial distribution of unfair labor practice charges showed that almost half arose in the manufacturing industries, an increase of 8 percent over fiscal 1962. The greater increase was in the service industries, registering in the 288 cases from that source a 42-percent boost over fiscal 1962 filings. In the retail industry, charge filings fell off by 9 percent, while charges in the construction, wholesale, transportation, and communication industries were relatively unchanged.

Representation Cases

In its second full year of experience with delegation by the five-member Board of authority in handling contested representation cases to the NLRB's regional directors, the agency closed 10,981 cases, 653 fewer than the alltime high of fiscal 1962. Of the cases closed in fiscal 1963, 10,333 were petitions for collective bargaining elections, and 648 were petitions for decertification of incumbent unions.

Elections

Voluntarism, as a principle of settlement of a large number of unfair labor practice cases, also prevails as a substantial factor in the holding of employee representation elections under the statute.

In fiscal 1963, out of a total of 6,871 collective-bargaining elections conducted by the NLRB, nearly three-fourths were held by voluntary agreement of the parties. The agreements were a gain over the 71 percent of settlements of the prior year. The number of elections conducted was below the record 7,355 of fiscal 1962; however, it was 8 percent above the number for fiscal 1961.

In fiscal 1963, employees selected bargaining agents in 4,052 elections, or 59 percent of the total. Of these, AFL-CIO affiliated unions won 2,565, or 63 percent, while unaffiliated unions won 1,487, or 37 percent.

Small bargaining units were predominant in the elections. About 75 percent involved units of 59 or fewer employees. About 25 percent of the total elections were conducted in units of nine or fewer employees.

There were 489,365 employees eligible to vote in the total collective bargaining elections, of whom 90 percent cast valid ballots. Of 441,969 employees balloting, 60 percent voted for representation. Bargaining agents were chosen to represent units including 54 percent of those eligible to vote, compared with 57 percent in fiscal 1962 and 51 percent in fiscal 1961.

Decertification elections—in which employees decide whether they wish to retain their bargaining agents—totaled 225. The right to represent 13,256 employees was at stake. About 88 percent of those eligible cast valid ballots, with the following results: In 165 elections, involving 8,033 employees, the incumbent unions previously certified or currently recognized as bargaining agents lost their bargaining rights and were decertified. On the other hand, in 60 elections involving 5,223 employees, unions were retained as bargaining agents.

Decisions and Court Litigation

The NLRB during fiscal 1963 issued 3,340 decisions in 3,964 cases of all types. Of this total, 2,034 decisions involving 2,162 representation cases came from the regional directors.

Violations were found by the Board in 722 of the 905 contested unfair practice cases, or 80 per-

cent as compared with the 79 percent found in fiscal 1962.

There was a percentage drop, however, in Board findings against employers. In 79 percent of the 700 cases against employers, the Board found violations, whereas in fiscal 1962, findings amounted to 84 percent of 783 cases.

In cases against unions, the percentage of violations found was the highest in the last 5 years. In 205 cases against unions, the Board found violations in 83 percent, a 13-percent increase over the 70 percent of fiscal 1962.

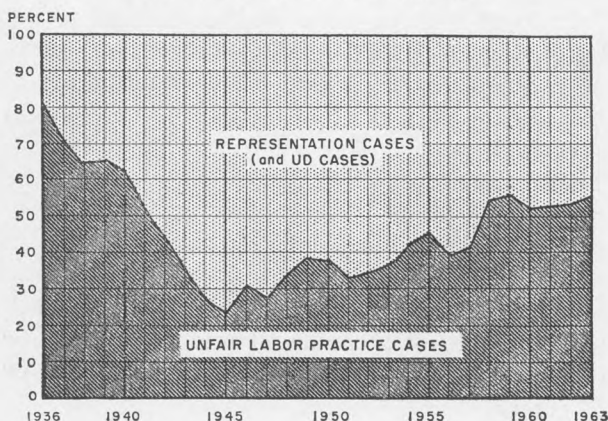
Decisional Highlights. In two decisions, the Board made clear that it would give “hospitable acceptance to the arbitral process” in furtherance of the national labor policy favoring the settlement of disputes by a method agreed upon by the parties.^{1 2}

The Board in one case announced that contracts which differentiate between groups of employees on racial lines will not operate as a bar to an election,³ and in another established criteria under which campaign propaganda calculated to over-stress and exacerbate racial feelings by irrelevant, inflammatory appeals could be a basis for setting aside an election.⁴

“[H]eeding the appeals” of “the overwhelming majority of labor and management representatives,” the Board adapted another of its contract bar rules to “the totality of the modern-day labor scene” when it announced that long-term labor agreements, otherwise qualified, would constitute a bar to a petition for an election for the first 3 years of the contract term.⁵

In the *Dal-Tex Optical* case,⁶ the Board announced that not only would any conduct which constitutes interference, restraint, or coercion violative of section 8(a)(1) be viewed, a fortiori, as conduct interfering with an election warranting setting it aside, but that an election would be set aside whenever, upon consideration of “all the

Chart 2. Comparison of Filings of Unfair Practice Cases and Representation Cases



¹ *International Harvester Co. and Thomas D. Ramsey*, 138 NLRB No. 88; see *Monthly Labor Review*, December 1962, p. 1393.

² *Raley's Inc.*, 143 NLRB No. 40.

³ *Pioneer Bus Co. and Transport Workers*, 140 NLRB No. 18; see *Monthly Labor Review*, February 1963, p. 175.

⁴ *Sewell Manufacturing Co.*, 138 NLRB No. 66; see *Monthly Labor Review*, October 1962, p. 1145.

⁵ *General Cable Corp.*, 139 NLRB 1123.

⁶ 137 NLRB 1782; see *Monthly Labor Review*, October 1962, p. 1148.

surrounding circumstances," statements, regardless of form, have resulted in substantial interference with the election. The Board also established the date of the filing of the petition as the cutoff date for filing objections to elections held pursuant to voluntary agreements, thus conforming the procedure in consent elections to the previously announced cutoff date for objections to formally directed elections in contested cases.⁷ A similar uniformity was established by the Board's holding that the unit placement of dual-function employees was to be determined by the same standard as that applied for part-time employees—namely, regular work in the unit for periods of time sufficient to establish a substantial interest in the working conditions of the unit.⁸

The Board held that an employer's decision to subcontract work theretofore performed by its employees is a mandatory subject of bargaining,⁹ concerning which the employer was required to confer and bargain with the representative of its employees. Although this was the first finding of a violation of the act where the change was not motivated by antiunion considerations, the Board expressed its conviction that "[t]he present decision does not innovate; it merely recognizes the facts of life created by the customs and practices of employers and unions."

In another case, the Board held that a proposed contract provision requiring that all hiring of construction workers should be done through a non-

discriminatory union-operated hiring hall is a mandatory subject of bargaining.¹⁰

In the *Miranda Fue* case,¹¹ reconsidered by the Board after remand from the Supreme Court, the Board reaffirmed its initial determination, which has been sustained by the Court of Appeals for the Second Circuit, that a union violated the act in obtaining an employee's reduction in seniority for reasons "against and not under the agreement."¹¹

In other significant decisions, the Board passed on the validity of certain "hot-cargo" provisions,¹² and for the first time determined the limitations placed on informational picketing.¹³

Supreme Court Rulings. During fiscal year 1963, the Supreme Court decided several cases involving questions concerning the administration and interpretation of the National Labor Relations Act. Two cases dealt with the scope of the Board's jurisdiction. In *Reliance Fuel*,¹⁴ the Supreme Court held that the Board correctly asserted jurisdiction over an employer engaged solely in intrastate commerce, on the basis of his purchases within the State of a "substantial amount" of goods from a supplier engaged in interstate commerce. The Court noted that, "in passing the National Labor Relations Act, the Congress intended to and did vest in the Board the fullest jurisdictional breadth constitutionally permissible under the Commerce Clause." In the *Sociedad* case,¹⁵ the Supreme Court, reversing the Board, held that the act's coverage did not extend to alien seamen serving on foreign-flag ships, even though the ships were beneficially owned and operated by an American corporation through a foreign subsidiary.

In *Erie Resistor*,¹⁶ the Supreme Court upheld the Board's ruling that an employer violated section 8(a) (1) and (3) of the act by granting superseniority to replacements for strikers and strikers who returned to work during the strike. The Court concluded that "in view of the deference paid the strike weapon by the Federal labor laws and the devastating consequences upon it which the Board found was and would be precipitated by respondent's inherently discriminatory superseniority plan," the Board was reasonable in holding that the employer's asserted business purpose did not outweigh the invasion of employee

⁷ *Goodyear Tire and Rubber Co.*, 138 NLRB 453.

⁸ *Berea Publishing Co.*, 140 NLRB 416.

⁹ *Fibreboard Paper Products Corp.*, 138 NLRB 550; see *Monthly Labor Review*, September 1963, p. 1073.

¹⁰ *Houston Chapter AGC*, 143 NLRB No. 43; see *Monthly Labor Review*, September 1963, pp. 1072-1073.

¹¹ 125 NLRB 454. In December 1963, the New York U.S. appeals court denied enforcement of this second NLRB decision, rejecting the Board's holding that the reduction of seniority violated employee rights to be protected from invidious treatment by their bargaining agent. See *Monthly Labor Review*, March 1963, p. 305, and February 1964, p. 187.

¹² *Local 413, Teamsters Union and Patton Warehouse, Inc.*, 140 NLRB No. 136; see *Monthly Labor Review*, May 1963, pp. 548-549, and *Construction, Production & Maintenance Laborers' Union, Local 383, v. NLRB* (C.A. 9, Sept. 26, 1963); see *Monthly Labor Review*, December 1963, p. 1444.

¹³ *Retail Clerks Union Local 324 (Baker Bros. Corp. and Golds, Inc.)*, 138 NLRB 478; see *Monthly Labor Review*, November 1962, pp. 1274-1275.

¹⁴ 371 U.S. 224; see *Monthly Labor Review*, March 1963, p. 307.

¹⁵ 372 U.S. 10; see *Monthly Labor Review*, April 1963, pp. 421-422.

¹⁶ 373 U.S. 221; see *Monthly Labor Review*, July 1963, p. 824.

rights; "[b]ecause the employer's interest must be deemed to outweigh the damage to concerted activities caused by permanently replacing strikers does not mean it also outweighs the far greater encroachment resulting from superseniority in addition to permanent replacement."

In the *General Motors* case,¹⁷ the Supreme Court held that an "agency shop" arrangement does not constitute an unfair labor practice under section 8(a) (3) of the act, where it is not unlawful under State law, and therefore an employer's refusal to bargain with a union about its inclusion in a collective bargaining agreement is an unfair labor practice under section 8(a) (5) of the act. Examining the legislative history, the Court found nothing to indicate that Congress intended the 1947 amendments "to validate only the union shop and simultaneously to abolish, in addition to the

closed shop, all other union-security arrangements permissible under State law."

In the *Doyle Smith* case,¹⁸ the Supreme Court held that the State court had jurisdiction under section 301 of the Labor Management Relations Act to remedy an alleged breach of a collective bargaining agreement notwithstanding that the conduct involved would also constitute an unfair labor practice under the National Labor Relations Act.

¹⁷ 373 U.S. 734; see *Monthly Labor Review*, August 1963, p. 953. At the time of this decision, the Court reserved for further ruling the issue of jurisdiction in enforcing such agreements. After reargument of one of the cases involved on this specific question, the Court decided that State courts rather than solely the NLRB have power to enforce a State's ban on agency-shop arrangements; see *Monthly Labor Review*, January 1964, p. 65.

¹⁸ 371 U.S. 195; see *Monthly Labor Review*, February 1963, p. 174, and February 1964, p. 188.

Earnings in Laundries and Cleaning Services, June 1963

STRAIGHT-TIME EARNINGS of nonsupervisory workers, except routemen, in laundries and cleaning services establishments averaged \$1.26 an hour in June 1963, according to a study conducted by the Bureau of Labor Statistics.¹ Inside plant workers, comprising 95 percent of the 418,883 workers covered by the study, averaged \$1.25 an hour, compared with \$1.54 for office workers. Women constituted about three-fourths of the inside plant workers and averaged \$1.13; men averaged \$1.61.

Approximately a fourth of the plant workers² earned less than \$1, about two-fifths earned less than \$1.15, and slightly more than half earned less than \$1.25 an hour. Three-fifths of the workers in the South³ earned less than \$1 an hour.

Earnings data for workers in selected occupations are presented separately for 24 large metropolitan areas.⁴ The study also provides information on hours of work and selected supplementary wage provisions, including paid holidays, paid vacations, and various types of health and insurance plans.

Collective bargaining agreements covering a majority of the plant workers were in effect in establishments employing slightly more than one-third of all such workers in the industry. By region, the proportions were nearly three-fifths in the West, one-half in the North Central region, about two-fifths in the Northeast, and an eighth in the South. In each region, contract coverage was considerably more extensive in metropolitan areas than in the smaller communities; nationally, the proportions were 45 and 10 percent, respectively.

Earnings

Earnings of plant workers in the South averaged 94 cents an hour, compared with \$1.30 in the North Central region, \$1.44 in the Northeast, and \$1.61 in the West (table 1). Among these regions, averages in metropolitan areas exceeded those in smaller communities by amounts ranging from 11 cents an hour in the Northeast to 28 cents in the West.

Average hourly earnings of plant workers in the 24 areas studied separately ranged from less than \$1 in Atlanta, Memphis, and New Orleans to \$1.95 in San Francisco-Oakland (table 2).

Earnings of individual plant workers ranged widely, with 10 percent receiving less than 75 cents an hour and nearly 8 percent earning \$2 or more. In the earnings array, the middle half of the workers earned between 96 cents and \$1.47. Ap-

¹ National and regional tabulations include data for establishments employing 4 workers or more and primarily engaged in operating mechanical laundries with steam or other power; furnishing laundry service, except power laundries; supplying laundered linens, work clothing, or uniforms on a contract basis; supplying diapers and other baby linens to homes, usually on a contract basis; renting home type laundry equipment for use on the premises; dry cleaning or dyeing apparel and household fabrics other than rugs; and cleaning or repairing rugs (industry group 721 as defined in the 1957 edition of the *Standard Industrial Classification Manual*, prepared by the U.S. Bureau of the Budget). Power laundries and cleaning and dyeing establishments each accounted for approximately two-fifths of the workers; linen supply establishments, for a seventh; and the other establishments, combined, accounted for about 3 percent.

A more comprehensive account of the survey will be presented in forthcoming BLS Bulletin 1401, *Industry Wage Survey: Laundries and Cleaning Services, June 1963*.

The survey was conducted at the request of the U.S. Department of Labor's Wage and Hour and Public Contracts Divisions to facilitate the preparation of a report requested by Congress. The report of the WHPC Divisions, *Laundry and Cleaning Services* issued in January 1964, was submitted to Congress by the Secretary of Labor and is primarily concerned with the distribution of nonsupervisory employees by average hourly earnings and weekly hours of work. Data are tabulated by region, community size, and enterprise and establishment sales-size groups.

The straight-time average hourly earnings presented in this article differ in concept from the gross average earnings published in the Bureau's monthly hours and earnings series. Unlike the latter, the averages presented here exclude premium pay for overtime and for work on weekends, holidays, and late shifts, and are calculated by summing individual hourly earnings and dividing by the number of individuals. In the monthly series, the sum of the man-hour totals reported by establishments in the industry is divided into the reported payroll totals.

² The term "plant workers" used in this and subsequent statements refers to inside plant workers. Retail receiving clerks are included in this category, but routemen and office workers are excluded.

³ For definition of the regions in this study, see footnote 2, table 1.

⁴ To facilitate comparisons with data obtained in a similar study conducted in 1961 (see "Earnings in Power Laundries and Cleaning Services, June 1961," *Monthly Labor Review*, May 1962, pp. 520-521), overall tabulations for the 24 selected metropolitan areas were limited to establishments employing 20 workers or more and primarily engaged in operating mechanical laundries with steam or other power (industry 7211); supplying laundered linens, work clothing, or uniforms on a contract basis (industry 7213); dry cleaning or dyeing apparel and household fabrics, other than rugs (industry 7216); and cleaning or repairing rugs (industry 7217).

However, occupational data in these areas in the current study were further limited by the exclusion of establishments primarily engaged in cleaning or repairing rugs (industry 7217).

proximately one-fourth of the plant workers earned less than \$1 an hour, about two-fifths earned less than \$1.15, and slightly more than one-half of the workers earned less than \$1.25. As indicated in the following tabulation, the proportions earning less than \$1 an hour ranged from 61 percent in the South to less than 1 percent in the Northeast region.

	Percent of plant workers earning—				
	Less than \$1	\$1 and under \$1.15	\$1.15 and under \$1.25	\$1.25 and under \$1.50	\$1.50 and over
United States...	26.5	16.4	11.3	22.2	23.5
Metropolitan areas...	20.7	15.4	11.8	24.9	27.3
Nonmetropolitan areas.....	40.3	19.5	10.0	14.2	11.6
Northeast.....	.5	11.5	23.8	34.0	31.0
Metropolitan areas...	.5	10.3	22.1	35.5	31.7
Nonmetropolitan areas.....	.6	15.0	35.6	23.3	25.5
South.....	61.1	18.4	4.8	9.1	6.7
Metropolitan areas...	56.3	18.1	5.5	11.6	8.5
Nonmetropolitan areas.....	69.6	18.9	3.4	4.7	2.9
North Central...	17.2	23.3	11.5	22.5	25.5
Metropolitan areas...	11.4	22.6	11.5	25.7	29.2
Nonmetropolitan areas.....	35.5	25.7	11.6	13.0	14.3
West.....	2.9	7.2	4.0	34.2	51.7
Metropolitan areas...	2.1	5.7	3.7	30.2	58.3
Nonmetropolitan areas.....	6.0	12.6	5.1	49.3	27.1

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

Approximately two-thirds of the plant workers in Atlanta and New Orleans and more than four-fifths of those in Memphis earned less than \$1 an hour in June 1963. In contrast, virtually all of the workers in San Francisco-Oakland and seven-tenths of the workers in Portland (Oreg.) earned \$1.50 or more.

Incentive wage systems applied to a sixth of the plant workers covered by the study. By region, the proportions were a fifth in the Northeast, a

sixth each in the South and the North Central region, and less than a tenth in the West.

In addition to hourly earnings of all plant workers in the 24 large metropolitan areas, table 2 provides information on earnings of workers in several of the occupations studied separately.⁵

Flatwork finishers, predominantly women and numerically most important, were lowest paid among all the occupational groups studied separately in half of the areas. Their average hourly earnings ranged from 67 and 68 cents, respectively, in Memphis and New Orleans to \$1.62 in San Francisco-Oakland. Dry cleaners (predominantly men) were among the higher paid workers and averaged \$2 or more an hour in 7 areas and between \$1.50 and \$2 in 14 others. Atlanta (\$1.18), Memphis (\$1.14), and Miami (\$1.43) were the only areas in which dry cleaners averaged less than \$1.50 an hour.

Operators of shirt-pressing machines (predominantly women) averaged more than flatwork finishers in all areas except Minneapolis-St. Paul, where the averages were identical (\$1.46 an hour), with differences ranging from 4 cents an hour in Pittsburgh to 38 cents in Miami; in 11 of the areas, the differences ranged from 21 to 30 cents an hour inclusive. Average earnings of wearing apparel pressers (machine) were usually between those of flatwork finishers and shirt pressers.

Establishment Practices⁶

Regular work schedules of 40 hours a week applied to the majority of the plant workers in establishments employing slightly more than half of such workers in the industry. However, less than a fourth worked exactly 40 hours during the survey week;⁷ fully a third worked less than this, and two-fifths worked more. The proportions

⁵ In the BLS bulletin, occupations for which data are provided accounted for seven-tenths of the 99,000 plant workers covered in this segment of the study. Where possible, data are provided separately for men and women and by method of wage payment.

⁶ Establishment practices are briefly summarized in this article. Additional detail, including data for workers in the 24 areas studied separately, will be presented in the BLS bulletin.

⁷ Information on hours actually worked include data for office workers (5 percent of the employment covered by the study). Exclusion of these workers would not change the reported proportions significantly.

Additional information on weekly hours worked is available in the WHPC report, *Laundry and Cleaning Services*, *op cit*.

working more than 40 hours ranged from about three-tenths in the Northeast and West to more than half in the South; about a sixth of the employees in the South worked 48 hours or more. Nationwide, the proportion of employees working more than 40 hours a week was 5 percent greater in nonmetropolitan areas than in metropolitan areas, while the proportions working less than 40 hours were virtually the same in the two community sizes.

Paid holidays were provided by establishments employing nearly four-fifths of the plant workers. Six holidays a year—the most common provision—applied to two-fifths of all workers. Provisions were most liberal in the Northeast and West, where a third or more of the workers received at least 7 days a year; workers in the South most commonly received 5 paid holidays. In each region, paid holidays were provided to substantially

larger proportions of workers in metropolitan areas than in smaller communities.

Paid vacations, after qualifying periods of service, were provided by establishments employing 85 percent of the plant workers. A large majority of the workers received 1 week of vacation pay after 1 year of service, and half received 2 weeks or more after 5 years. Only about a fifth of the workers were in establishments providing 3 weeks or more. Seven-tenths of the workers in the South received paid vacations, compared with nine-tenths or more in the other three regions. In each region, vacation provisions were more common in metropolitan areas than in the smaller communities.

Life, hospitalization, and surgical insurance, for which employers paid at least part of the cost, were provided by establishments employing about half the plant workers; medical and sickness and

TABLE 1. NUMBER AND AVERAGE STRAIGHT-TIME HOURLY EARNINGS¹ OF NONSUPERVISORY WORKERS, EXCEPT ROUTEMEN, IN LAUNDRY AND CLEANING SERVICES ESTABLISHMENTS, BY SELECTED CHARACTERISTICS, UNITED STATES AND REGIONS,² JUNE 1963

Characteristic	United States		Northeast		South		North Central		West	
	Workers	Earnings ¹	Workers	Earnings ¹	Workers	Earnings ¹	Workers	Earnings ¹	Workers	Earnings ¹
ALL AREAS										
Nonsupervisory workers, except routemen.....	418,883	\$1.26	109,093	\$1.45	145,619	\$0.95	111,594	\$1.31	52,577	\$1.62
Men.....	96,744	1.62	30,503	1.73	29,525	1.27	23,910	1.69	12,806	2.02
Women.....	322,139	1.16	78,590	1.34	116,094	.87	87,684	1.21	39,771	1.49
Inside plant workers.....	398,815	1.25	102,603	1.44	140,862	.94	105,983	1.30	49,367	1.61
Men.....	95,332	1.61	29,920	1.72	29,149	1.27	23,569	1.68	12,694	2.02
Women.....	303,483	1.13	72,683	1.32	111,713	.86	82,414	1.19	36,673	1.47
Office workers.....	20,068	1.54	6,490	1.67	4,757	1.28	5,611	1.49	3,210	1.76
Men.....	1,412	1.90	583	2.08	376	1.44	341	1.92	112	2.48
Women.....	18,656	1.52	5,907	1.63	4,381	1.27	5,270	1.46	3,098	1.74
METROPOLITAN AREAS ³										
Nonsupervisory workers, except routemen.....	315,607	1.33	95,231	1.47	94,993	1.01	84,046	1.37	41,337	1.68
Men.....	76,387	1.68	27,122	1.74	19,910	1.34	18,389	1.73	10,966	2.07
Women.....	239,220	1.22	68,109	1.36	75,083	.93	65,657	1.27	30,371	1.54
Inside plant workers.....	299,603	1.32	89,661	1.45	91,507	1.00	79,778	1.36	38,657	1.67
Men.....	75,263	1.67	26,639	1.73	19,602	1.34	18,158	1.72	10,864	2.06
Women.....	224,340	1.20	63,022	1.33	71,905	.91	61,620	1.26	27,793	1.52
Office workers.....	16,004	1.61	5,570	1.70	3,486	1.34	4,268	1.57	2,680	1.81
Men.....	1,124	1.92	483	2.10	308	1.46	231	1.87	102	2.54
Women.....	14,880	1.58	5,087	1.67	3,178	1.32	4,037	1.55	2,578	1.78
NONMETROPOLITAN AREAS										
Nonsupervisory workers, except routemen.....	103,276	1.05	13,862	1.35	50,626	.84	27,548	1.13	11,240	1.39
Men.....	20,357	1.39	3,381	1.63	9,615	1.13	5,521	1.56	1,840	1.76
Women.....	82,919	.97	10,481	1.26	41,011	.78	22,027	1.03	9,400	1.32
Inside plant workers.....	99,212	1.04	12,942	1.34	49,355	.84	26,205	1.13	10,710	1.39
Men.....	20,069	1.38	3,281	1.62	9,547	1.13	5,411	1.55	1,830	1.76
Women.....	79,143	.95	9,661	1.25	39,808	.77	20,794	1.02	8,880	1.31
Office workers.....	4,064	1.30	920	1.49	1,271	1.13	1,343	1.24	530	1.55
Men.....	288	1.86	100	2.00	68	1.39	110	2.02	10	1.89
Women.....	3,776	1.26	820	1.43	1,203	1.12	1,233	1.18	520	1.54

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

² The regions in this study include: *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. Alaska and Hawaii were not included in the study.

³ Standard Metropolitan Statistical Areas as defined by the U.S. Bureau of the Budget in 1961.

TABLE 2. AVERAGE STRAIGHT-TIME HOURLY EARNINGS¹ OF INSIDE PLANT WORKERS IN SELECTED OCCUPATIONS² IN POWER LAUNDRY, LINEN SUPPLY, AND CLEANING ESTABLISHMENTS IN 24 AREAS,³ JUNE 1963

Area ³	All inside plant workers ⁴		Earnings ¹ for selected occupations ²									
	Number	Earnings ¹	Assemblers ⁵	Clerks, retail receiving ⁶	Dry cleaners ⁶	Extractor operators (laundry) ⁶	Finishers, flatwork, machine ⁶	Pressers, machine, drycleaning ⁷	Pressers, machine, shirts ⁸	Pressers, machine, wearing apparel (laundry) ⁸	Washers, machine ⁸	Wrappers, bundle ⁸
NORTHEAST												
Boston.....	3,796	\$1.49	\$1.36	\$1.27	\$2.18	\$1.66	\$1.28	\$1.82	\$1.64	\$1.41	\$1.74	\$1.35
Buffalo.....	1,608	1.43	1.35	1.22	1.74	1.61	1.29	1.95	1.43	1.37	1.88	1.25
New York City.....	15,173	1.51	1.36	1.24	1.82	1.52	1.31	1.61	1.49	1.53	1.64	1.41
Newark and Jersey City.....	5,573	1.48	1.33	1.22	1.92	1.47	1.34	1.70	1.43	1.38	1.66	1.33
Philadelphia.....	6,252	1.44	1.28	1.15	1.70	1.49	1.18	2.17	1.41	1.43	1.51	1.20
Pittsburgh.....	3,021	1.27	1.19	1.04	1.80	1.43	1.18	1.41	1.22	1.37	1.46	1.17
SOUTH												
Atlanta.....	2,812	.94	.85	.94	1.18	1.09	.73	1.00	.94	.86	1.05	.75
Baltimore.....	3,123	1.17	1.04	1.04	1.51	1.21	.92	1.35	1.14	1.09	1.40	1.08
Memphis.....	1,700	.83	.68	.92	1.14	.96	.67	1.00	.74	.75	.95	.58
Miami.....	2,555	1.13	1.00	1.01	1.43	1.12	.85	1.77	1.23	1.09	1.36	.88
New Orleans.....	1,207	.98	.87	.94	1.52	1.07	.68	1.32	.90	1.06	1.14	-----
NORTH CENTRAL												
Chicago.....	14,014	1.48	1.29	1.31	2.18	1.50	1.19	2.17	1.51	1.35	1.67	1.24
Cincinnati.....	1,602	1.45	1.35	1.17	1.92	1.50	1.31	1.90	1.55	1.59	1.65	1.33
Cleveland.....	3,400	1.32	1.21	1.08	1.92	1.36	1.06	1.82	1.34	1.27	1.55	1.15
Detroit.....	6,184	1.44	1.24	1.11	1.97	1.46	1.23	2.08	1.60	1.46	1.62	1.20
Indianapolis.....	1,940	1.23	1.15	1.07	1.90	1.22	.99	1.85	1.26	1.18	1.36	1.06
Kansas City.....	1,856	1.28	1.15	1.42	1.90	1.16	.95	1.97	1.27	1.12	1.45	1.00
Milwaukee.....	2,286	1.34	1.20	1.14	1.71	1.60	1.16	1.90	1.37	1.40	1.83	1.25
Minneapolis-St. Paul.....	2,230	1.60	1.55	1.46	2.03	1.77	1.46	1.88	1.46	1.51	1.90	1.50
St. Louis.....	3,407	1.23	1.12	1.20	1.57	1.23	.97	1.62	1.23	1.15	1.39	1.07
WEST												
Denver.....	1,640	1.32	1.27	1.29	2.04	1.59	1.09	1.67	1.30	1.24	1.59	1.20
Los Angeles-Long Beach.....	10,028	1.58	1.44	1.55	2.25	1.60	1.31	2.11	1.61	1.53	1.93	1.41
Portland.....	1,081	1.65	1.56	1.59	2.09	2.10	1.46	1.84	1.51	1.54	2.23	1.48
San Francisco-Oakland.....	3,926	1.95	1.86	2.05	2.70	2.28	1.62	2.47	1.71	1.67	2.32	1.73

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

² Data for the selected occupations are limited to power laundry, linen supply, and dry cleaning or dyeing establishments employing 20 workers or more; whereas, data for all inside plant workers also include rug cleaning establishments. Rug cleaning establishments accounted for 5 percent of the inside plant workers in Baltimore; 4 percent in New York City; 3 percent in Atlanta; 2 percent in Chicago, Cincinnati, Kansas City and New Orleans; 1 percent in Philadelphia; and in the remaining 16 areas, rug cleaning establishments were not among establishments in the Bureau's sample.

³ Standard Metropolitan Statistical Areas as defined by the U.S. Bureau of the Budget in 1961, except Chicago (Cook County), New York City (the

5 boroughs), Newark and Jersey City (Essex, Hudson, Morris, and Union Counties), and Philadelphia (Philadelphia and Delaware Counties, Pa. and Camden County, N.J.).

⁴ Nonsupervisory plant workers except routemen.

⁵ All or predominantly women.

⁶ All or predominantly men.

⁷ Predominantly women, except in Detroit, Kansas City, Miami, and New York City.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

accident insurance were available to about two-fifths of the workers; and accidental death and dismemberment insurance, to nearly three-tenths. These benefits, except sickness and accident insurance, were considerably less common in the South than in the other regions. By region, all of the above mentioned benefits were less common in nonmetropolitan areas than in metropolitan areas.

Retirement pension benefits (in addition to those available under Federal old-age, survivors, and disability insurance) were reported by establishments employing an eighth of the plant workers. Such plans were most common in the Northeast region, where a third of the workers were covered.

—CHARLES M. O'CONNOR
Division of Occupational Pay

Wage Chronology: Berkshire Hathaway Inc.¹

Supplement No. 3—1953-64²

EDITOR'S NOTE.—*Since the Fall River-New Bedford Textile Manufacturers' Negotiating Group was disbanded on April 14, 1955, the Bureau of Labor Statistics is continuing the wage chronology for this industry with changes in wages and related benefits provided in collective bargaining agreements negotiated by Berkshire Hathaway Inc.³ and the Textile Workers Union of America. Berkshire Hathaway, a former member of the Fall River Textile Manufacturers' Association and the New Bedford Cotton Manufacturers' Association, has been a frequent leader in industry wage negotiations and is one of the largest employers in the New England cotton-rayon industry.*

THE BARGAINING AGREEMENT between the Textile Workers Union and the Fall River-New Bedford Textile Manufacturers' Negotiating Group⁴ (including Berkshire Fine Spinning Associates) that expired March 15, 1953, was extended, effective April 15, for 2 years, with the only change a wage reopener in April 1954.

The union announced that, because of depressed economic conditions in the industry, it would not exercise its reopening right in 1954. The company indicated that it would withhold demands for wage reductions at that time.

In February 1955, Berkshire Hathaway, with a group of other New England mills, announced that current agreements would not be renewed and proposed benefit changes that would have reduced employment costs by 10 cents an hour. Although no wage changes were suggested, the escalator clause and the current 4-cent-an-hour cost-of-living allowance were to be discontinued and paid holidays reduced from 6 to 1 annually. The union rejected these proposals, voted to extend the expiring contracts without change, and called a strike against the company⁵ when contracts expired on April 15.

Tentative agreement was reached by the parties on July 13, after Federal mediators had entered

negotiations; work was resumed on July 18, following a 13-week strike. Terms of the new 2-year contract included revocation of the escalator clause, although the 3-cent allowance in effect was to be retained;⁶ continuation of 6 paid holidays for which a premium was paid for hours worked; and elimination of a number of local holidays for which workers received premium pay if worked, but no pay if not worked. The new contract, effective July 18, 1955, included provision for reopening on wages and other benefits in 1 year.

On February 13, 1956, the union announced its intention to reopen the contract and a month later demanded a 10-percent general wage increase and changes in other benefits. The company rejected the demands.

Bargaining sessions opened in March; agreement was reached in early April on a contract to be effective for 2 years from April 16, 1956, with a reopening in 1957. The agreement called for a 6½-percent increase in basic hourly rates (exclusive of the 3-cent cost-of-living add-on)⁷ and restoration of premium pay for work on the local holidays.

In February 1957, the union reopened the contract with demands for improved wage rates and unspecified other benefits. The company rejected the demands and proposed the wage rates be continued without change. Meetings between the parties, begun in early March, brought quick agreement on maintenance of wage rates, improved hospitalization benefits, and a reduced retirement age for women; the contract expiring in April 1958 was renewed for 1 year without change.

¹ Formerly Northern Cotton Textile Associations.

² For basic chronology and supplements 1 and 2, see *Monthly Labor Review*, January 1949, pp. 30-35; and February 1953, pp. 148-150.

³ One of the largest manufacturers of cotton textiles in the United States was incorporated as the Berkshire Cotton Manufacturing Co. in 1889. The name was changed to Berkshire Fine Spinning Associates in 1929, after merger with several other mills. Additional mills were acquired in 1930, 1955, and 1956; the present name was adopted in 1955 after merger of Berkshire's mills with Hathaway Manufacturing Co.'s mill.

⁴ The group, formed on Dec. 22, 1952, negotiated bargaining agreements for members of the Fall River Textile Manufacturers' Association and the New Bedford Cotton Manufacturers' Association.

⁵ The negotiating group had been disbanded on April 14.

⁶ Between the start of negotiations and the contract settlement, the Consumer Price Index declined, thus reducing the cost-of-living allowance by 1 cent an hour.

⁷ This increase, averaging 8½ cents an hour, restored basic hourly rates to levels in effect before an arbitration decision of July 15, 1952.

Before the 1959 expiration date, agreement had been reached on a new 3-year contract with provision for wage reopening and inequity adjustments at annual intervals. The union had proposed a 10-percent increase in wage rates; agreement was reached on a 7-percent increase exclusive of the existing 3-cent cost-of-living add-on which was incorporated into basic hourly rates. No other contract changes were made at that time.

When 1960 negotiations began in March under the reopening provisions, the union sought a general wage increase of 10 cents an hour plus an additional 1 cent for correction of inequities in some classifications. The final agreement, reached in early April, provided a 5-percent increase (7.5 cents an hour) in wage rates.

Union delegates to a regional conference recommended, in February 1961, that the contract not be reopened that year. Some locals disagree, but

the majority ratified the recommendation and the contract was not reopened.

Negotiations in 1962 opened in March; agreement was reached early in April on a 2-year contract calling for a 3¼-percent increase in hourly wages and correction of inequities in some job classifications. Hospitalization benefits were liberalized, the eligibility age for retirement-severance pay for men was reduced to 62, and provision was made for payment of accrued vacation benefits to those eligible for retirement-severance pay upon termination of employment. The contract permitted a reopening on wages in April 1963, but in February, the union voted against the reopening.

The tables bring the wage changes at Berkshire Hathaway Inc. up to date through April 15, 1964, and take into account revisions in supplementary benefits and other changes provided in agreements negotiated from 1953 through 1963.

A—General Wage Changes

Effective date	Provision	Applications, exceptions, and other related matters
Dec. 31, 1952 (agreement dated Mar. 15, 1951).	1 cent an hour <i>decrease</i>	Quarterly adjustment of cost-of-living allowance.
Apr. 6, 1953.....	2 cents an hour <i>decrease</i>	Do.
July 1, 1953.....	No change.....	Quarterly review of cost-of-living allowance.
Oct. 1, 1953 (agreement dated Apr. 15, 1953).	1 cent an hour <i>increase</i>	Quarterly adjustment of cost-of-living allowance. The new agreement provided for quarterly adjustments of the cost-of-living allowance in accordance with the movement of the revised BLS Consumer Price Index (1947-49=100). If the CPI fell below 111.9, the cost-of-living allowance would be zero. ¹ Wage rates were not to be reduced below those in effect Sept. 18, 1950.
Jan. 1, 1954.....	No change.....	Quarterly review of cost-of-living allowance.
Apr. 1, 1954.....	do.....	Do.
July 1, 1954.....	do.....	Do.
Oct. 1, 1954.....	do.....	Do.
Jan. 1, 1955.....	do.....	Do.
Apr. 1, 1955.....	1 cent an hour <i>decrease</i>	Quarterly adjustment of cost-of-living allowance.
July 18, 1955 (agreement of same date).	Eliminated: Cost-of-living escalator clause. Existing 3-cent cost-of-living allowance continued but not incorporated into basic hourly rates.
Apr. 16, 1956 (agreement of same date).	6.5-percent increase, averaging 8.5 cents an hour. ²	Applicable to basic hourly and piece rates excluding 3-cent-an-hour cost-of-living allowance.
Apr. 20, 1959 (agreement dated Apr. 16, 1959).	7.0-percent increase, averaging 10.2 cents an hour.	Excludes 3-cent-an-hour cost-of-living allowance which was incorporated into basic hourly rates.
Apr. 18, 1960 (agreement dated Apr. 9, 1960).	5.0-percent increase, averaging 7.5 cents an hour.	
Apr. 16, 1962 (agreement of same date).	3.25-percent increase, averaging 5 cents an hour.	

¹ The agreement provided that quarterly cost-of-living adjustments, effective April, July, October, and January, were to be based on the Bureau of Labor Statistics revised Consumer Price Index for the months of February, May, August, and November as follows:

Consumer Price Index (revised, 1947-49=100)	Cost-of-living allowance	Consumer Price Index (revised, 1947-49=100)	Cost-of-living allowance
111.2 to 111.9.....	None.	115.2 to 115.9.....	5 cents.
112.0 to 112.7.....	1 cent.	116.0 to 116.7.....	6 cents.
112.8 to 113.5.....	2 cents.		
113.6 to 114.3.....	3 cents.		
114.4 to 115.1.....	4 cents.		

and so forth, with a 1-cent adjustment for each 0.8-point change in the index.

² See text, footnote 7.

B—Minimum Plant Wage Rates¹

Effective date	Provision	Applications, exceptions, and other related matters
July 19, 1952-----	\$1.065.	Plus 3-cent-an-hour cost-of-living allowance. Do. Includes cost-of-living allowance incorporated into basic hourly rates.
July 18, 1955-----	1.065-----	
Apr. 16, 1956-----	1.135-----	
Apr. 20, 1959-----	1.25-----	
Apr. 18, 1960-----	1.315.	
Apr. 16, 1962-----	1.36.	

¹ Minimum plant rates do not apply to learners or handicapped workers. See table A for adjustments in the cost-of-living allowance between December 1952 and April 1955. While not changing minimum rates, the allowance did affect employee earnings.

C—Related Wage Practices

Effective date	Provision	Applications, exceptions, and other related matters
<i>Holiday Pay</i>		
July 18, 1955 (agreement of same date).	Reduced: Number of holidays for which employees received time and one-half for hours worked but no pay if not worked reduced to 1. Was 4 in Massachusetts and Vermont, 3 in Rhode Island.	Holiday continued was Independence Day. ¹ In effect and continued: 6 paid holidays (with time and one-half for hours worked in addition to holiday pay); holidays were New Year's Day, Washington's Birthday, Memorial Day, Labor Day, Thanksgiving Day, and Christmas Day. In Rhode Island, Columbus Day was substituted for Washington's Birthday. Holiday that fell on Sunday to be observed on Monday. To be eligible for holiday pay, employee must have (a) worked a full shift on the days immediately preceding and following the holiday (employee on layoff or leave of absence must have worked within the 30 days immediately preceding the holiday) and (b) completed 30 days of the 60-day probationary period.
Apr. 16, 1956 (agreement of same date).	Added: Massachusetts and Vermont mills—3 holidays (total 4) for which employee received time and one-half for hours worked, no pay if not worked; Rhode Island mills—2 holidays (total 3).	Holidays were: Massachusetts—Patriots' Day (April 19), Columbus Day, and Armistice Day; Vermont—Bennington Day (August 16), Columbus Day, and Armistice Day; Rhode Island—V-J Day (August 14) and Armistice Day.
<i>Jury-Duty Pay</i>		
Apr. 15, 1953 (agreement of same date).	In effect and continued; Employee on jury duty to receive difference between average daily straight-time earnings and daily payment for jury service.	

See footnote at end of table.

C—Related Wage Practices—Continued

Effective date	Provision	Applications, exceptions, and other related matters
<i>Health and Welfare Benefits</i> ²		
Apr. 16, 1959 (agreement of same date).	<p>In effect at Massachusetts mills:³ <i>Life insurance</i>—\$500. <i>Accidental death</i>—\$500 in addition to life insurance.</p> <p><i>Accidental dismemberment</i>—\$250 for each loss; \$1,000 if more than one member was lost in the same accident.</p> <p><i>Accident and sickness benefits</i>—\$25 (was \$22.50) a week for maximum of 13 weeks;⁴ benefits payable from 8th day of sickness, 1st day of accident; up to 6 weeks for pregnancy.</p> <p><i>Hospitalization:</i> <i>Room and board</i>—\$12 (was \$8) a day for maximum of 31 days.⁴ <i>Hospital extras</i>—Actual charges, up to \$120 (was \$80).⁴ <i>Maternity</i>—\$12 a day for maximum of 14 days, plus up to \$120 for extras.</p> <p><i>Surgical benefits:</i> <i>Surgical schedule</i>—Up to \$200 per procedure.</p> <p><i>Obstetrical</i>—\$50 for normal delivery, \$25 for miscarriage, \$100 for Caesarean section, and other procedures.</p> <p><i>Medical benefits:</i> <i>Doctor's services</i>—Up to \$2 for each office visit, \$3 for home or hospital call, maximum \$150 per disability.</p>	<p>Entire cost of benefits borne by company. Life and accidental death and dismemberment insurance for employee under age 60 extended during period of total disability (of 9 months or more) until return to work or termination of employment; continued for a maximum of 2 months for employee on temporary layoff, or during unauthorized work stoppage. Maximum for all losses sustained in one accident, \$1,000.</p> <p>Payable for nonoccupational disabilities.</p> <p>Payable only if employee was hospitalized for 18 hours or more.</p> <p>Benefits available 6 months after effective date of policy and continued for 9 months from date insurance was terminated.</p> <p>Payable for nonoccupational disabilities. Benefits available for 3 months after termination of insurance for total disability that began while employee was insured.</p> <p>Benefits available 6 months after effective date of policy and continued for 9 months from date insurance was terminated.</p> <p>Benefits limited to one visit per calendar day, beginning with the first visit for accident, second visit for sickness. Not available for pregnancy, dental work, eye examinations, X-rays, dressings, drugs, medicines, surgical operations, or postoperative care, except for attendance by physician other than surgeon.</p> <p>Medical benefits—insurance extended for maximum of 3 months if policy terminated while employee was totally disabled.</p> <p>All benefits continued—for period determined by company for employee absent because of sickness or injury; for 31 days for employee on leave of absence or temporary layoff; for maximum of 2 months during unauthorized work stoppage.</p>
Apr. 16, 1962 (agreement of same date).	<p>Increased:</p> <p><i>Massachusetts—Accident and sickness benefits</i>—Maximum to \$27.50 a week.</p> <p><i>Hospitalization:</i> <i>Room and board</i>—Maximum to \$18 a day. <i>Hospital extras</i>—Maximum to \$180.</p>	

See footnotes at end of table.

C—Related Wage Practices—Continued

Effective date	Provision	Applications, exceptions, and other related matters
<i>Retirement Separation Pay</i>		
Apr. 15, 1957 (agreement of same date).	Changed: Eligibility age reduced to 62 for women.	
Apr. 16, 1962 (agreement of same date).	Changed: Eligibility age reduced to 62 for all employees.	

¹ Holidays eliminated in Massachusetts were Patriots' Day (April 19), Columbus Day, and Armistice Day. Prior to 1955, employees in Vermont mills received time and one-half for hours worked on New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Bennington Day (August 16), Columbus Day, Armistice Day, Thanksgiving and Christmas; in Rhode Island mills, New Year's Day, Memorial Day, Independence Day, V-J Day (August 14), Labor Day, Columbus Day, Armistice Day, Thanksgiving, and Christmas.

² The original chronology and previous supplements did not cover Rhode Island mills. Sickness and accident benefits in that State are provided by statute and, therefore, are not subject to negotiation. They were financed by an employee tax of 1 percent of wages up to \$3,000 a year through 1959. On Jan. 1, 1960, the tax base was raised to \$3,600. The company and the union, therefore, agreed to other benefits equal in cost to sickness and accident benefits provided workers in Massachusetts.

Health and welfare benefits in Rhode Island mills were the same as those in other mills except in the following respects:

In effect Apr. 15, 1953:

Life insurance—\$1,000.

Hospitalization—Rhode Island Blue Cross.

Sickness and accident benefits—Provided by Rhode Island State Temporary Disability Insurance program.

In effect Apr. 16, 1959:

Life insurance—\$1,000.

Accident and sickness benefits—\$10 to \$36 a week plus up to \$8 dependents' benefits for maximum of 26 weeks starting on 8th day of disability; up to 12 weeks for pregnancy. Dependents' benefits and \$36 maximum effective Nov. 18, 1958.

Hospitalization (Blue Cross):

Room and board—\$12 a day for maximum of 75 days in hospital acceptable to insurer or classified as general hospital by American Hospital Association; up to 45 days in other hospitals. Coverage continued for 30 days if employee left company.

Hospital extras—Actual charges in member hospital, 90 percent of usual charges in nonmember hospital. Covered use of operating room, medical and surgical supplies, drugs and medications, laboratory examinations, basal metabolism tests, oxygen therapy, and physical therapy.

Maternity—Up to \$75 for room and board and hospital extras. Patient and husband must have been covered for 7 months immediately preceding hospital admission.

Out-patient services—Up to \$7.50 for services provided within 24 hours of accident. Included routine and special services and use of operating and accident rooms.

Surgical-medical—Benefits only continued for period determined by company for employee absent because of sickness or injury; for 31 days for employee on leave of absence or temporary layoff; for maximum of 2 months during unauthorized work stoppage.

Effective Apr. 16, 1962:

Accident and sickness benefits—No change.

Hospital extras—No change.

³ The benefits listed constitute the entire plan (including some benefits not previously reported) in effect on Apr. 16, 1959. Some of the increases noted became effective before 1959.

⁴ Effective Apr. 15, 1957.

D—Occupational Base Rates,¹ 1952–62²

Department and occupation	July 19, 1952	July 18, 1955	Apr. 16, 1956	Apr. 20, 1959 ¹	Apr. 18, 1960	Apr. 16, 1962	Department and occupation	July 19, 1952	July 18, 1955	Apr. 16, 1956	Apr. 20, 1959 ¹	Apr. 18, 1960	Apr. 16, 1962
CARDING DEPARTMENT							SPINNING AND TWISTING DEPARTMENT—Continued						
Opener tenders.....	\$1.150	\$1.150	\$1.225	\$1.345	\$1.410	\$1.455	Ring twisters, wet and dry....	\$1.375	\$1.375	\$1.465	\$1.600	\$1.680	\$1.735
Picker tenders.....	1.150	1.150	1.225	1.345	1.410	1.455	Ring twisters changers.....	1.150	1.150	1.225	1.345	1.410	1.455
Picker bosses and fixers.....	1.405	1.405	1.495	1.630	1.710	1.765	Ring twisters doffers.....	1.150	1.150	1.225	1.345	1.410	1.455
Card tenders.....	1.150	1.150	1.225	1.345	1.410	1.455	Up twisters.....	1.200	1.200	1.280	1.400	1.470	1.520
Card strippers.....	1.150	1.150	1.225	1.345	1.410	1.455	Redrawing machine tenders....	1.150	1.150	1.225	1.345	1.410	1.455
Card grinders.....	³ 1.405	³ 1.405	³ 1.495	1.630	1.710	1.765	Band boys.....	1.090	1.090	1.160	1.275	1.340	1.385
Grinder helpers.....	1.220	1.220	1.300	1.425	1.495	1.545	WARP AND FILLING PREPARATION						
Silver lap tenders.....	1.150	1.150	1.225	1.345	1.410	1.455	Spooler tenders:						
Ribbon lap tenders.....	1.150	1.150	1.225	1.345	1.410	1.455	Nonauto.....	1.150	1.150	1.225	1.345	1.410	1.455
Comber tenders.....	1.250	1.250	1.330	1.455	1.530	1.580	Auto.....	1.210	1.210	1.290	1.410	1.480	1.530
Can boys.....	1.065	1.065	1.135	1.250	1.315	1.360	Tie-in girls.....	1.150	1.150	1.225	1.345	1.410	1.455
Lap carriers.....	1.065	1.065	1.135	1.250	1.315	1.360	Warper tenders.....	1.195	1.195	1.275	1.395	1.465	1.515
Drawing tenders.....	1.150	1.150	1.225	1.345	1.410	1.455	High speed warpers:						
Slubber tenders.....	1.355	1.355	1.445	1.580	1.660	1.715	Cotton.....	1.210	1.210	1.290	1.410	1.480	1.530
Intermediate tenders.....	1.270	1.270	1.355	1.480	1.555	1.605	Rayon.....	1.355	1.355	1.445	1.580	1.660	1.715
Fine frame tenders.....	1.230	1.230	1.310	1.435	1.505	1.555	Sipp warpers.....	1.355	1.355	1.445	1.580	1.660	1.715
Jack frame tenders.....	1.195	1.195	1.275	1.395	1.465	1.515	Long chain beamers.....	1.460	1.460	1.555	1.695	1.780	1.840
Roving doffers.....	1.065	1.065	1.135	1.250	1.315	1.360	Long chain quillers.....	1.460	1.460	1.555	1.695	1.780	1.840
Roving hoisters, roving men.....	1.090	1.090	1.160	1.275	1.340	1.385	Skein winders:						
Interdrafts and superdrafts....	1.355	1.355	1.445	1.580	1.660	1.715	Cotton.....	1.150	1.150	1.225	1.345	1.410	1.455
Section men.....	1.405	1.405	1.495	1.630	1.710	1.765	Rayon.....	1.195	1.195	1.275	1.395	1.465	1.515
SPINNING AND TWISTING DEPARTMENT							Spinning winders, nonauto.....	1.150	1.150	1.225	1.345	1.410	1.455
Ring spinners.....	1.170	1.170	1.245	1.365	1.435	1.535	Auto winders.....	1.210	1.210	1.290	1.410	1.480	1.530
Roll cleaners.....	1.065	1.065	1.135	1.250	1.315	1.360	Cone winders:						
Spinner doffers.....	1.250	1.250	1.330	1.455	1.530	1.580	Nonauto.....	1.150	1.150	1.225	1.345	1.410	1.455
Spindle setters.....	1.435	1.435	1.530	1.670	1.755	1.810	Nonauto high speed.....	1.190	1.190	1.265	1.385	1.455	1.500
Section men.....	1.405	1.405	1.495	1.630	1.710	1.765							

See footnotes at end of table.

D—Occupational Base Rates,¹ 1952–62²—Continued

Department and occupation	July 19, 1952	July 18, 1955	Apr. 16, 1956	Apr. 20, 1959 ¹	Apr. 18, 1960	Apr. 16, 1962	Department and occupation	July 19, 1952	July 18, 1955	Apr. 16, 1956	Apr. 20, 1959 ¹	Apr. 18, 1960	Apr. 16, 1962
WARP AND FILLING PREPARATION—Continued							WEAVING—Continued						
Tailing machine operators.....	\$1.150	\$1.150	\$1.225	\$1.345	\$1.410	\$1.455	Battery hands.....	\$1.100	\$1.100	\$1.170	\$1.285	\$1.350	\$1.395
Yarn conditioners.....	1.090	1.090	1.160	1.275	1.340	1.385	Loom fixers.....	⁴ 1.610	1.610	1.715	1.865	1.960	2.025
Slasher tenders plain.....	⁴ 1.440	1.440	1.535	1.675	1.760	1.815	Loom fixers-auto box.....	⁴ 1.700	1.700	1.810	1.970	2.070	2.135
Light shades.....	⁴ 1.440	1.440	1.535	1.675	1.760	1.815	Changers.....	⁴ 1.485	1.485	1.580	1.725	1.810	1.870
Colored (as defined).....	⁴ 1.525	1.525	1.625	1.770	1.860	1.920	CLOTH ROOM						
Pattern (as defined).....	⁴ 1.525	1.525	1.625	1.770	1.860	1.920	Spot shearer tenders:						
Spun rayon.....	⁴ 1.525	1.525	1.625	1.770	1.860	1.920	Single.....	1.340	1.340	1.425	1.555	1.635	1.690
Filament rayon.....	⁴ 1.610	1.610	1.715	1.865	1.960	2.025	Double.....	1.370	1.370	1.460	1.595	1.675	1.730
Helpers.....	⁴ 1.195	1.195	1.275	1.395	1.465	1.515	Loop cutters.....	1.105	1.105	1.175	1.290	1.355	1.400
Drawers-in, hand:							Flat brushers.....	1.185	1.185	1.260	1.380	1.450	1.495
Plain.....	1.220	1.220	1.300	1.425	1.495	1.545	Inspectors.....	1.120	1.120	1.195	1.310	1.375	1.420
Fancy and Leno.....	1.395	1.395	1.485	1.620	1.700	1.755	Balers.....	1.120	1.120	1.195	1.310	1.375	1.420
Machine drawing-in operators.....	1.150	1.150	1.225	1.345	1.410	1.455	Folders.....	1.150	1.150	1.225	1.345	1.410	1.455
BC drawing-in machine (new type):							Bale sewers.....	1.095	1.095	1.165	1.280	1.345	1.390
Operator.....	⁴ 1.485	1.485	1.580	1.725	1.810	1.870	MAINTENANCE						
Helper.....	⁴ 1.210	1.210	1.290	1.410	1.480	1.530	Carpenters, machinists, electricians, pipers, millwrights, blacksmiths, and plumbers:						
BC and LS knotting machine operators, stationary and portable.....	⁴ 1.485	1.485	1.580	1.725	1.810	1.870	First class.....	1.545	1.545	1.645	1.790	1.880	1.940
BC knotting machine helpers.....	⁴ 1.210	1.210	1.290	1.410	1.480	1.530	Second class.....	1.435	1.435	1.530	1.670	1.755	1.810
Twisters-in, hand.....	1.525	1.525	1.625	1.770	1.860	1.920	Helpers.....	1.315	1.315	1.400	1.530	1.605	1.655
Section men:							Apprentices.....	1.220	1.220	1.300	1.425	1.495	1.545
Winding, auto.....	1.375	1.375	1.465	1.600	1.680	1.735	Painters:						
Winding, nonauto.....	1.340	1.340	1.425	1.555	1.635	1.690	First class.....	1.435	1.435	1.530	1.670	1.755	1.810
Section spoolers and warpers:							Second class.....	1.315	1.315	1.400	1.530	1.605	1.655
Auto.....	1.375	1.375	1.465	1.600	1.680	1.735	Firemen:						
Nonauto.....	1.340	1.340	1.425	1.555	1.635	1.690	Power.....	1.630	1.630	1.735	1.890	1.985	2.050
WEAVING							Nonpower.....	1.460	1.460	1.555	1.695	1.780	1.840
Weavers:							Coal wheelers.....	1.270	1.270	1.355	1.480	1.555	1.605
Plain auto.....	1.280	1.280	1.365	1.495	1.570	1.620	Truckdrivers.....	⁵ 1.340	1.340	1.425	1.555	1.635	1.685
Dobby auto.....	1.315	1.315	1.400	1.530	1.605	1.655	Trailer truckdrivers.....	⁵ 1.440	1.440	1.535	1.675	1.760	1.975
Auto box.....	1.440	1.440	1.535	1.675	1.760	1.815	Watchmen and gatemen.....	1.130	1.130	1.205	1.320	1.385	1.430
XK and XD.....	1.355	1.355	1.445	1.580	1.660	⁶ 1.715	Yardmen.....	⁵ 1.220	1.220	1.300	1.425	1.495	1.725
Jacquard.....	1.370	1.370	1.460	1.595	1.675	1.730	MISCELLANEOUS						
Jacquard linemen.....	1.280	1.280	1.365	1.495	1.570	1.620	Scrubbers and sweepers.....	1.065	1.065	1.135	1.250	1.315	1.360
Smash piecers.....	1.280	1.280	1.365	1.495	1.570	1.620	Waste balers.....	1.150	1.150	1.225	1.345	1.410	1.455
Weave room inspectors.....	1.280	1.280	1.365	1.495	1.570	1.620							
Doupmen.....	1.280	1.280	1.365	1.495	1.570	1.620							

¹ Not applicable to learners or handicapped workers. Rates do not include cost-of-living allowance. Rates for Apr. 20, 1959, include 3-cent cost-of-living allowance incorporated into base rates on that date.

² Except as noted, rates for July 19, 1952, applicable to all the Fall River-New Bedford Textile Manufacturers' Negotiating Group.

³ Does not include head or boss grinder.

⁴ Occupation not reported in Fall River in 1952.

⁵ Occupation not reported in New Bedford in 1952.

⁶ Filament.

Prepared in the Division of Wage Economics

Technical Note

Output Per Man-Hour in the Private Economy, 1947-63¹

PRODUCTIVITY (OUTPUT PER MAN-HOUR) in the private economy in the United States rose an average of 2 percent a year from 1909 to 1947. The annual rate of increase since that time (including 1963 preliminary estimates) has risen to 3 percent. The increase for the past 3 years averaged slightly over 3.5 percent. While this is relatively high, the private economy has achieved similar and even higher rates of increase for other 3-year postwar periods, especially in the early postwar years.²

During 1961-63, output and employment also increased. In general, private employment tended to go up more when large increases took place in productivity because these were the same years when output expanded rapidly.

For the postwar period as a whole and in recent years, output increased at a faster rate than productivity. For example, in 1957-63 and in 1947-63, private output went up around 3.5 percent while output per man-hour rose about 3 percent per year during both periods.

¹ BLS publishes two output per man-hour series. In one, man-hours are based primarily on establishment reports to the BLS. In the other, man-hours are based on labor force statistics drawn from household surveys. Output is measured in terms of gross national product in 1954 dollars. The analysis in this article is based on the establishment series except where noted. In general, however, the two series show similar movements historically and over the postwar period.

² Annual productivity measurements fluctuate widely; caution has to be observed in examining changes over a short span of years.

TABLE 1. INDEXES OF OUTPUT PER MAN-HOUR AND RELATED DATA: ¹ ANNUAL AVERAGES, 1947-63 (MAN-HOUR ESTIMATES BASED PRIMARILY ON ESTABLISHMENT DATA)

[1957-59=100]

Item	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963 ²
OUTPUT PER MAN-HOUR																	
Total private.....	70.9	73.4	75.5	80.9	82.9	84.7	88.2	89.8	93.8	93.9	97.2	99.6	103.2	105.2	108.7	112.9	116.8
Agriculture.....	50.2	59.6	56.8	64.7	64.0	69.9	77.8	83.4	86.4	88.3	94.2	103.0	102.8	109.3	115.8	119.7	128.5
Nonagricultural industries...	76.3	77.9	80.8	85.1	86.5	87.6	90.0	91.4	95.3	94.9	97.6	99.4	103.0	104.6	107.6	111.7	115.0
Manufacturing.....	74.8	76.8	78.5	83.7	85.2	86.4	90.6	89.8	96.0	97.1	97.3	99.1	103.7	(3)	(3)	(3)	(3)
Nonmanufacturing.....	76.8	78.2	82.1	85.6	86.8	87.9	89.0	92.0	94.6	93.4	97.6	99.8	102.6	(3)	(3)	(3)	(3)
HOURS PER UNIT OF OUTPUT																	
Total private.....	141.1	136.2	132.5	123.7	120.6	118.0	113.4	111.5	106.6	106.5	102.9	100.4	96.9	95.0	92.0	88.6	85.6
Agriculture.....	199.3	167.9	175.9	154.5	156.3	143.1	128.6	119.9	115.7	113.2	106.2	97.1	97.3	91.5	86.4	83.6	77.8
Nonagricultural industries...	131.0	128.4	123.8	117.5	115.5	114.1	111.1	109.5	105.0	105.4	102.5	100.6	97.1	95.6	92.9	89.6	87.0
Manufacturing.....	133.8	130.2	127.4	119.4	117.4	115.7	110.4	111.4	104.1	103.0	102.9	101.1	96.5	(3)	(3)	(3)	(3)
Nonmanufacturing.....	130.2	127.9	122.0	116.8	115.2	113.9	112.3	108.7	105.8	107.0	102.4	100.3	97.5	(3)	(3)	(3)	(3)
OUTPUT																	
Total private.....	68.4	71.2	70.8	77.3	82.0	84.4	88.6	87.2	95.0	97.0	98.9	97.0	104.1	106.8	108.6	115.3	120.0
Agriculture.....	81.2	92.8	88.0	92.8	87.0	90.4	93.7	97.6	102.9	100.5	99.0	100.5	100.0	104.8	104.3	105.3	107.2
Nonagricultural industries...	67.7	70.0	69.8	76.4	81.7	84.1	88.3	86.6	94.5	96.8	98.9	96.8	104.3	106.9	108.8	115.9	120.7
Manufacturing.....	71.1	72.6	67.6	78.3	85.7	88.4	97.3	88.1	99.5	102.1	100.7	94.2	105.0	(3)	(3)	(3)	(3)
Nonmanufacturing.....	65.9	68.7	71.0	75.5	79.6	81.9	83.7	85.8	92.0	94.1	98.0	98.1	103.9	(3)	(3)	(3)	(3)
EMPLOYMENT																	
Total private.....	90.9	92.1	90.2	91.9	95.2	96.2	97.6	95.2	98.9	101.5	101.3	97.9	100.8	101.9	101.0	102.9	103.8
Agriculture.....	145.0	140.4	142.1	133.5	125.3	120.5	110.8	109.6	113.2	110.5	104.5	97.9	97.6	95.6	91.2	87.9	84.0
Nonagricultural industries...	85.2	87.0	84.7	87.5	92.0	93.6	96.1	93.7	97.4	100.5	101.0	97.9	101.1	102.6	102.1	104.5	105.9
Manufacturing.....	93.8	94.0	87.0	92.0	98.9	100.4	105.8	98.4	101.8	103.9	103.5	96.2	100.3	101.2	98.4	101.6	102.6
Nonmanufacturing.....	81.4	83.9	83.6	85.5	89.0	90.6	91.9	91.6	95.5	99.0	99.9	98.7	101.4	103.2	103.7	105.7	107.4
MAN-HOURS																	
Total private.....	96.5	97.0	93.8	95.6	98.9	99.6	100.5	97.1	101.3	103.3	101.7	97.4	100.9	101.5	99.9	102.1	102.7
Agriculture.....	161.8	155.8	154.8	143.4	136.0	129.4	120.5	117.0	119.1	113.8	105.1	97.6	97.3	95.9	90.1	88.0	83.4
Nonagricultural industries...	88.7	89.9	86.4	89.8	94.4	96.0	98.1	94.7	99.2	102.0	101.3	97.4	101.3	102.2	101.1	103.8	105.0
Manufacturing.....	95.1	94.5	86.1	93.5	100.6	102.3	107.4	98.1	103.6	105.2	103.5	95.1	101.3	101.1	98.5	102.8	103.9
Nonmanufacturing.....	85.8	87.9	86.5	88.2	91.7	93.2	94.0	93.3	97.3	100.7	100.4	98.3	101.3	102.7	104.3	105.6	105.6

¹ Output refers to gross national product in 1954 dollars.

² Preliminary.

³ Department of Commerce will complete revision of output data for recent years early in 1964. In view of these revisions, the U.S. Department of Labor considers it inappropriate to publish interim, revised output per man-

hour indexes for manufacturing (and nonmanufacturing) for the years 1960-63. At the same time, it would be misleading to continue publishing the indexes previously released. Consequently, indexes for the few years will not be published until mid-1964, when all revised production data will be available.

TABLE 2. INDEXES OF OUTPUT PER MAN-HOUR AND RELATED DATA: ¹ ANNUAL AVERAGES, 1947-63 (MAN-HOUR ESTIMATES BASED PRIMARILY ON LABOR FORCE DATA)

[1957-59=100]

Item	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963 ²
OUTPUT PER MAN-HOUR																	
Total private.....	68.5	70.6	72.0	77.5	81.1	83.7	87.5	89.7	94.1	94.4	97.5	99.1	103.4	104.8	107.4	112.1	115.8
Agriculture.....	50.2	59.6	56.4	64.5	63.6	69.4	77.3	83.0	85.9	87.8	94.2	103.1	102.7	109.3	116.3	119.9	128.8
Nonagricultural industries...	73.8	74.5	76.9	81.4	84.7	86.7	89.5	91.5	95.8	95.7	98.0	98.8	103.2	104.1	106.0	110.6	113.5
HOURS PER UNIT OF OUTPUT																	
Total private.....	145.9	141.7	138.8	129.0	123.3	119.4	114.3	111.5	106.3	105.9	102.5	100.9	96.7	95.4	93.1	89.2	86.3
Agriculture.....	199.3	167.7	177.4	155.1	157.2	144.0	129.3	120.5	116.4	113.9	106.2	97.0	97.4	91.5	86.0	83.4	77.6
Nonagricultural industries...	135.5	134.1	130.1	122.9	118.1	155.3	111.8	109.2	104.3	104.5	102.0	101.2	96.9	96.1	94.3	90.4	88.1
OUTPUT																	
Total private.....	68.4	71.2	70.8	77.3	82.0	84.4	88.6	87.2	95.0	97.0	98.9	97.0	104.1	106.8	108.6	115.3	120.0
Agriculture.....	81.2	92.8	88.0	92.8	87.0	90.4	93.7	97.6	102.9	100.5	99.0	100.5	100.0	104.8	104.3	105.3	107.2
Nonagricultural industries...	67.7	70.0	69.8	76.4	81.7	84.1	88.3	86.6	94.5	96.8	98.9	96.8	104.3	106.9	108.8	115.9	120.7
EMPLOYMENT																	
Total private.....	92.4	94.5	93.0	95.1	96.2	96.2	97.0	94.9	98.1	100.6	100.7	98.4	100.9	102.2	102.0	103.5	104.7
Agriculture.....	145.0	140.4	142.1	133.5	125.3	120.5	110.8	109.6	113.2	110.5	104.5	97.9	97.6	95.6	91.2	87.9	84.0
Nonagricultural industries...	86.4	89.2	87.4	90.7	92.8	93.4	95.4	93.3	96.3	99.4	100.3	98.5	101.2	103.0	103.3	105.3	107.1
MAN-HOURS																	
Total private.....	99.8	100.9	98.3	99.7	101.1	100.8	101.3	97.2	101.0	102.7	101.4	97.9	100.7	101.9	101.1	102.9	103.6
Agriculture.....	161.8	155.6	156.1	143.9	136.8	130.2	121.2	117.6	119.8	114.5	105.1	97.5	97.4	95.9	89.7	87.8	83.2
Nonagricultural industries...	91.7	93.9	90.8	93.9	96.5	97.0	98.7	94.6	98.6	101.2	100.9	98.0	101.1	102.7	102.6	104.8	106.3

¹ Output refers to gross national product in 1954 dollars.² Preliminary.

SOURCE: U.S. Bureau of Labor Statistics.

Productivity increases have not been uniform among different parts of the economy. Agriculture, which has highly volatile changes, has made a major contribution to overall productivity gains—an average rate of gain for the last 6 years and the last decade of around 5 percent and 5.7 percent for the entire postwar period.

As expected, the movement of productivity growth during the postwar period in the nonagricultural sector has closely followed that for the total private economy. It averaged a high rate of increase in the early postwar years, dropped off, and then rose again in recent years. The postwar average was about 2½ percent compared with 1.9 percent for 1909-47. The annual average rate of increase since 1957 has been 2.5 percent as measured by labor force data and moderately in excess of that as measured by establishment data

Output and output per man-hour data are not shown on the accompanying tables for the manufacturing and nonmanufacturing sectors for the years 1960-63. The U.S. Department of Commerce is in the process of revising output data for recent years and this revision is expected to be completed sometime during 1964. The revision will affect the output per man-hour indexes for the years 1960-63. Until these revisions are completed, BLS will not publish interim revised output per man-hour indexes for these two sectors. At the same time, it would be misleading to continue publishing the indexes previously released for these years. BLS expects to publish revised indexes sometime in mid-1964.

—SYLVIA B. GOTTLIEB
Office of Productivity and
Technological Developments

Foreign Labor Briefs*

West German Council of Economic Experts

THE PRESIDENT of the Federal Republic of Germany in February appointed as the first members of the Council of Economic Experts, created by legislation enacted August 14, 1963, two professors of economics, the director of an institute for economic research, a retired State Minister now labor director of a large corporation, and a retired State Secretary now a certified public accountant. The new Council—named by President Lueke upon recommendation of the Federal Government—is charged with the responsibility to “analyze periodically the overall economic development of the Federal Republic of Germany and to facilitate the formation of public opinion as well as decision-making in all agencies responsible for economic policies.” According to the law, the five specialists must not be connected with the Government, nor may they represent trade, employers’, or labor organizations. As early as January 1962, then Economics Minister Ludwig Erhard had declared the need for such a council to prevent the growing discrepancy between wage and productivity increases from endangering the competitive position of West German industry.

Council Reports

By November 15 of this and following years, the Council is to submit to the Federal Government a report analyzing the current economic situation and forecasting future trends. It will prepare additional special reports, either on its own motion or at the request of the Government, if developments appear to endanger the achievement of the national economic policy objectives which it

is charged to foster. The Government is required to transmit the Council’s reports to the legislature with comments on the Government’s political and economic conclusions.

In its reports, the Council is required to discuss methods of maintaining price stability, a high employment level, a favorable balance of foreign trade, along with steady and adequate economic growth—all within the framework of a free enterprise system. It must, in particular, point out the causes of existing and potential maladjustments of total demand and supply which may endanger simultaneous achievement of all these objectives, note other undesirable developments, and indicate generally how they can be prevented. The Council has no authority, however, to recommend specific measures.

Powers and Policies

The question of the Council’s power to make recommendations was the main controversy during protracted debates preceding its establishment. At a conference in April 1962, both labor and management had favored a neutral panel of economic experts. The views of the two groups differed, however, as to its functions. The employer representatives held that the panel should publish the economic data collected, draw conclusions, and make policy recommendations. Union spokesmen opposed publication of either analyses or recommendations, for fear that this would enable the Government to influence collective bargaining and otherwise curb union activities.

After promulgation of the law of August 14, the German Federation of Labor (DGB) issued a statement welcoming the compromise solution embodied in the new law and voiced a hope that the Council would contribute to the clarification of the economic debate and a more objective consideration of union wage demands. The Confederation of German Employers’ Associations (BDA) likewise expressed satisfaction with the new law.

*Prepared in the Division of Foreign Labor Conditions, Bureau of Labor Statistics, from Foreign Service reports and other sources.

Israel's Training Program for Modernizing Countries

ISRAEL has trained a substantial number of workers from some 70 countries in Latin America, Africa, and Asia, in a program of technical cooperation which began in 1958 with 150 foreigners and has risen to 10 times that number.¹

Of the institutions in Israel which are active in technical assistance to foreign nations, two were established for the specific purpose of training foreigners: The International Training Center for Community Services, located in Haifa, and the Afro-Asian Institute of the General Federation of Israeli Labour (Histadrut), at Tel Aviv. The International Training Center for Community Services is conducted jointly by the Municipality of Haifa and the Department of International Cooperation in the Ministry of Foreign Affairs. It provides training, mainly in English and French, in the conduct of voluntary organizations and in techniques of community development. Participants are outstanding women community leaders from African, Asian, and Mediterranean countries.

The other institution functioning solely for the training of foreigners, the Afro-Asian Institute for Labour and Cooperative Studies, was founded by the Histadrut in 1960. By the end of 1963, as the Institute prepared for its eighth regular 3- to 5-month session, 686 men and women from 54 countries had participated. Instruction is given in English, French, or Spanish, depending upon the group being trained. Beginning in 1963, the AFL-CIO is sending approximately 25 Latin Americans to the Institute each year.

Of the institutions which are conducted mainly for Israelis but also train foreigners, the two outstanding examples are the Organization for Rehabilitation Through Training (ORT) and the Ruppin Agricultural Institute. ORT was founded in Europe in 1880 to help Jews become artisans or farmers. Its Vocational Education Center at Natanya (about 20 miles north of Tel Aviv) now trains about half of the foreigners receiving vocational training in Israel. This activity began in 1961, when the Government of Israel established a program at Natanya for training students from the developing countries, primarily to qualify

them as teachers of vocational subjects in their native lands.

In 1961-62, about 70 English- and French-speaking Africans were enrolled in courses at Natanya aimed at enabling them to teach carpentry, electrical mechanics, and metal work, after learning these trades themselves. They came from the Central African Republic, both Congos, Ghana, Nigeria, Sierra Leone, and Somali. By December 1962, the number of African students at Natanya had increased to 120 from 18 countries, and an additional course (in agrimechanics) had been added to the curriculum.

In the first year of each ORT course given for foreigners, the language of instruction is English or French, with 1 month devoted to the intensive learning of Hebrew. Those who stay for a second year again spend a period in intensive study of Hebrew; in this year, classroom instruction is given in English or French, and practical instruction in Hebrew.

The Agricultural Institute maintained by the Ruppin Foundation is comparable to the ORT school but specializes in farm technology. It was established about 1949 to provide information on botany, soil chemistry, etc., to immigrants who had been settled in agricultural colonies and who, coming from urban backgrounds, needed technological courses to supplement their year or two of practical experience in the colonies.

The Institute's international activities began in 1954, when the U.N. Food and Agriculture Organization (FAO) subsidized a 4-month course on soil conservation for farmers and farm administrators of Cyprus, Greece, and Spain. Later, the FAO sponsored a short course on irrigation for participants from Jamaica, several Latin American countries, and the Philippines. In the academic year 1962-63, enrollment at the Agricultural Institute included foreigners from 25 countries. Most of the courses for foreigners are given in two parts: A theoretical course of 4 to 6 months at the Institute, and an applied course of the same length in the students' home countries, where they receive on-the-spot guidance from Institute counselors.

¹ This article is based on personal observations of William Gerber, Division of Foreign Labor Conditions, Bureau of Labor Statistics, during a trip to Israel, conferences with Israeli Government authorities and with officials of nongovernmental organizations and institutions, leaflets and curricula published by various training institutions, and reports from the American Embassy at Tel Aviv to the Department of State in Washington.

Other primarily domestic institutions which train foreigners include the Hebrew University-Hadassah Medical School in Jerusalem, which conducts a 6-year medical course in English for students from developing countries, under a scholarship arrangement with the U.N. World Health Organization (WHO); the Israel Institute of Technology, known as Technion, which offers a course in agricultural engineering for English-speaking students; and the Wingate Institute for Physical Education.

Subjects of Instruction

The subjects of training in the various institutions involved in technical cooperation cover a wide field, ranging from all branches of agriculture and agricultural cooperatives (with the largest number of trainees), and vocational training in crafts and industry, to education, social work, public administration, finance, housing, tourist trade, medicine and sanitation, and various academic subjects. Among the subjects offered especially by the Histadrut are theory and practice of cooperatives in housing, port services, transport, and utilities; labor economics; labor history; and trade union organization. Subject-matter instruction is given by the various institutions not only in world languages, such as English, French, and Spanish, but also in "exotic" languages, such as Persian and Turkish.

Upon request, a special program is developed to meet a specific need in a developing country. For example, more than a hundred men, women, and children (families of Burmese ex-soldiers) lived at various settlements throughout the country learning the theory and practice of cooperative farming from experienced Israeli settlers. After a year's training, the group returned to Burma and joined the villages planned and erected with the aid of Israeli experts in the desolated northern regions (the Shan States).

Costs of the Program

The costs of training foreigners in Israel are shared, with Israel paying by far the larger share, including tuition fees and living expenses during the period of study in Israel. The requesting country generally pays only the travel expenses of the students to and from Israel (in a few cases,

the Government of Israel also pays the travel expenses). The estimated cost to the Israeli Government of this technical assistance was \$470,000 in 1962 and \$803,333 in 1963.

The cost of the training is occasionally met by an intergovernmental organization—the United Nations, the International Labor Organization (ILO), or the Organization of American States (OAS). In 1962, for example, the OAS agreed to pay the travel expenses of some 200 Latin Americans to be trained in Israel, and in April 1963, Histadrut courses on agricultural cooperatives for 29 South American trainees opened under the Israel-OAS agreement.

For nongovernmental programs, the Israeli part of the cost is paid by the sponsoring Israeli organization—for example, the Histadrut in the case of courses given at the Afro-Asian Institute—or by an international nongovernmental organization, such as the International Confederation of Free Trade Unions (ICFTU). The Afro-Asian Institute also receives scholarship funds from the AFL-CIO (\$180,000 in 1960-61 and \$120,000 in 1961-62), from affiliates of the AFL-CIO (for example, \$20,000 in 1962-63 from the United Automobile Workers), from the British Trades Union Congress, and from Scandinavian and Netherlands trade union organizations, as well as from the United Nations. Under an agreement which provided for financing by the American Institute for Free Labor Development (AIFLD), the Histadrut opened a course for the training of Latin American trade union leaders in August 1963.

General Technical Assistance

The training provided in Israel is not the whole of the technical cooperation activity. Israel also sends experts to modernizing countries to conduct surveys, to advise, and to engage in "partnership" ventures. In the partnership ventures, for example, the Histadrut's construction cooperative (Solel Boneh) arranged for joint development of ports and other projects in Ghana through the Ghana National Construction Company. This, after a period of joint operation, with a few hundred Israeli technicians serving in Ghana, became a completely Ghanaian operation.

In 1963, W. Averell Harriman, U.S. Under Secretary of State for Political Affairs, paid warm tribute to the work of one Israeli institution en-

gaged in technical cooperation, the Histadrut's Afro-Asian Institute: "I believe that this educational program in Israel for students from the underdeveloped countries is perhaps the most effective of any in the world. There the students see and hear for themselves the manner in which knowledge and scientific developments contribute to improvement in social and economic conditions."

Why do many of the modernizing countries include Israel among the countries to which they turn for training? Competent observers suggest several answers to this question.

Israel herself, of course, fosters these requests with a view to strengthening her international position. Many of the Afro-Asian countries, holding to their position as nonaligned nations, prefer to receive assistance from a country which is not tied by military alliance to either of the major cold war opponents. Perhaps most important, the people of the developing nations, along with their leaders, see many similarities between their situation and that of Israel in its early days: The need to absorb into the economy hundreds of thousands of persons, of diverse cultural levels; the need for significant improvement in consumption levels, coupled with the need to promote

national economic growth, and the political and economic balance which must be maintained between these two demands; the potential usefulness of the cooperative as a form of economic enterprise; and the relatively limited size of the national economy. Moreover, many of the political leaders in the emerging countries come from the national or international trade union movement, and thus are familiar with the work of the Histadrut, the contribution which it has made to Israel's development, and its availability for training labor leaders.

On the basic motives behind Israel's technical assistance program, an Israeli official—Aharon Remez, Director of the Department of International Cooperation in the Ministry of Foreign Affairs—commented as follows:

Observers of Israel's efforts in international cooperation often wonder how a small and newly independent country burdened with the problems of development can continue to be involved in such a large task. It has been suggested that Israel may have commercial benefit in its overseas involvement, but in reality the financial benefits are bound to be meager.

Israel's main benefit, and the one which she values most highly, is the fast friends made among the emerging nations of the world.

Membership estimates provided by the recently released 1963 *Directory of International Confederation of Free Trade Unions*, prepared by the Labor Department's Bureau of International Labor Affairs, reflect the growth of free trade unionism within the less developed areas of the world since the previous publication of the *Directory* in 1958. During the 5 years between publication of the two directories, membership in all ICFTU-affiliated unions increased by about 5 percent, from less than 55 million members to more than 57 million. The largest increase in ICFTU-affiliate membership (1½ million) came from the Latin American and Caribbean area which now accounts for over 12 percent of ICFTU-affiliate members, rather than 10 percent as in 1958. African ICFTU representation doubled within the period; its total of less than 2 million, however, gives it only 3 percent of total affiliate membership. Membership in Asian affiliates increased by approximately 1 million unionists during the period, raising this area's membership share from 12 to 13 percent. Other areas, principally Europe and Australasia, kept pace with the slight overall growth experienced by the ICFTU affiliates as a whole, and maintained their relative representation within the organization; while the United States' representation, made up of the AFL-CIO and the United Mine Workers, dropped from 27 to 23 percent.

Significant Decisions in Labor Cases*

Labor Relations

Survival of Contract Rights. In the much litigated and much discussed case of *Zdanok v. Glidden*,¹ the U.S. Circuit Court of Appeals for the Second Circuit, upon review of the case under Federal law, reaffirmed its previous determination that employees' seniority rights survived the termination of a labor contract and could be exercised when the employer moved its operations to a new plant. The court, however, indicated that it would not follow its decision in construing similar contracts in the future.

Toward the end of 1957, the Glidden Co. closed its plant in Elmhurst, Long Island, after a collective bargaining contract expired and transferred the work previously done there to a new plant in Bethlehem, Pa. The contract provided that employees with over 5 years of seniority would be recalled first for openings occurring within 3 years after layoff, and workers with less than 5 years seniority were entitled to preferential recall for 2 years after layoff. The company agreed to consider Elmhurst employees as applicants for new employment at Bethlehem, but refused to recognize seniority earned at Elmhurst. In a suit on the contract instituted by five employees laid off while the contract was in effect, the court of appeals, deciding the case under State contract law, ruled "that the plaintiffs were entitled to be employed at the defendant's Bethlehem plant, with the seniority and reemployment rights which they had acquired at the Elmhurst plant." The case was remanded for determination of damages.

In this subsequent appeal, the company petitioned the circuit court to reverse its decision because of additional evidence introduced in the *Glidden* and a companion case in the district court, and because new light had been shed by other courts and by legal scholars on the legal principle involved.

The appellate court would not reverse its previous ruling, but only because it felt that in this particular factual situation it was bound by the judicial doctrines of the "law of the case" and "collateral estoppel." The company, it said, had been given a full opportunity to present its case in the first hearing and was precluded, both as to the original and the additional plaintiffs, from introducing new evidence to change the ruling of liability. Although the court had previously decided the case under State contract law, it admitted, in line with subsequent decisions of the U.S. Supreme Court,² that Federal law should govern. However, since Federal law does not necessarily require a different construction, the appellate court refused to reconsider this case, even though a doubt was raised that it would reach the same conclusion in future similar cases.

The court doubted that it would follow its initial *Glidden* decision in the future because the dissent in that case, coupled with a subsequent adverse ruling in *Oddie v. Ross Gear and Tool Company*³ by another court of appeals, and a great amount of critical legal discussion created doubt as to whether the interpretation placed on the *Glidden* contract was correct.

A concurring opinion by Chief Judge Lumbard said that the court's ruling in *Glidden* "is entitled to no precedential value so far as this circuit is concerned." He did agree, however, that the decision bound the parties in that particular fact situation even though the only tenable view of the contract was that the parties did not expect the employees' rights to continue after removal of the Elmhurst plant to a different State.

*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 *Zdanok v. Glidden Co., Durkee Famous Foods Division* (C.A. 2, Jan. 29, 1964). For previous decision, see 288 F. 2d 99 (1961), affirmed on other grounds, 370 U.S. 530 (1962). See also *Monthly Labor Review*, September 1962, p. 1027; and "Labor Relations Aspects of Plant Relocation," *Monthly Labor Review*, April 1963, pp. 415-418.

² *Smith v. Evening News Association*, 371 U.S. 195 (1962). The *Zdanok v. Glidden* case had previously been before the Supreme Court but was denied review, except for a technical matter. The High Court, however, indicated that the case was governed by Federal law.

³ 305 F. 2d 143 (C.A. 6, 1962).

Recognitional Picketing. A U.S. court of appeals held⁴ that a union's picketing of a cafeteria for more than 30 days without filing a representation petition was lawful, even though its object was recognition, since it conveyed truthful information to the public and did not induce stoppage of services and deliveries to the cafeteria. The picketing was protected by the information proviso of the Labor Management Relations Act's recognitional picketing provisions.

When the employer refused to hire employees through the union hiring hall, the union picketed the public entrance of the cafeteria with signs directed to "members of organized labor and their friends," stating that the cafeteria was nonunion and asking them not to patronize it. The time of picketing was adjusted so that deliveries could be made before the pickets arrived each day. The union did not expressly claim to represent the cafeteria's employees, nor did it demand that the employer sign a union contract. It continued the picketing for several months without petitioning for a representation election.

In its first decision⁵ on the case, the National Labor Relations Board ruled that since an ultimate object of the picketing was recognition, an immediate purpose of truthfully advising the public did not render it lawful. Upon reconsideration, however, the Board held⁶ that the picketing was protected by the section 8(b)(7)(C) proviso for informational picketing, despite the fact that the activity had continued for more than 30 days before a representation petition was filed.

The appellate court agreed with the second decision of the Board and its interpretation of section 8(b)(7). That section prohibits picketing to force an employer to recognize a union, unless the union is already the employees' certified representative. An uncertified union is barred from recognitional or organizational picketing in situations described in subparagraphs of that section: (A) where another union is lawfully recognized and the representation question cannot be appropriately raised; (B) where there has been a valid election within the last 12 months; or (C) where the union does not file an election petition within a reasonable time (not to exceed 30 days).

A proviso to subparagraph (C) permits truthful publicity picketing unless that picketing interferes with pickups or deliveries. The court recog-

nized that in the present case "an objective" of the picketing was ultimate recognition, but it read the publicity proviso as protecting the picketing in this instance since its purpose was also truthfully to advise the public and it did not induce other unions to stop deliveries or service.

The court agreed with another appeals court's opinion that section 8(b)(7)(C) "gives the union freedom to appeal to the unorganized public for spontaneous popular pressure upon an employer," but that it really was "intended . . . to exclude the invocation of pressure by organized labor groups or members of unions, as such."⁷

Jurisdictional Disputes. The NLRB ruled⁸ that the attempt of a plumbers union to force changes in subcontracting arrangements so that disputed work would be assigned to its members was within the scope of the jurisdictional disputes section of the LMRA. In awarding the disputed work to a laborers union, the Board noted that probably the most significant factor in its determination was the general contractor's choice of a subcontractor and—through him—his selection of workers.

The work in dispute was included in a subcontract awarded to an outside utility contractor who employed laborers, whose recognized work right included laying of pipe on public thoroughfares. The inside work, traditionally done by plumbers, was awarded to a mechanical subcontractor who had an agreement with the plumbers union that it would not contract for a job unless outside work like that here in dispute was included in the contract. To protest the alleged violation of the contract, the plumbers union admittedly engaged in secondary boycott activity proscribed by section 8(b)(4)(i) and (ii) of the LMRA.

The Board, after deciding that the dispute was properly before it under section 10(k) of the act, found that the union's conduct also violated section 8(b)(4)(D)—the act's jurisdictional dispute section—since it was an attempt to force changes in subcontracting arrangements between em-

⁴ *Smitley (Crown Cafeteria) v. NLRB* (C.A. 9, Jan. 30, 1964).

⁵ *Hotel & Motel Employees Union and Smitley (Crown Cafeteria)* 130 NLRB 570 (1961).

⁶ *Ibid.*, 135 NLRB 1183 (1962); see also *Monthly Labor Review*, May 1962, p. 549.

⁷ *NLRB v. Local 3, National Brotherhood of Electrical Workers*, 317 F. 2d 493 (C.A. 2, 1963).

⁸ *Local 5, Plumbers Union and Arthur Venneri Co.*, 145 NLRB No. 157 (Feb. 7, 1964).

ployers. The conduct, it said, was designed to have the disputed work transferred to mechanical subcontractors and thus assigned to its members. The plumbers union had argued that section 8(b) (4) (D) was not involved since its conduct was only to prevent the mechanical subcontractor from performing its contract with the general contractor, not to force the reassignment of work.

The Board awarded the disputed work to the laborers, having considered as one of the most important factors in its decision the general contractor's choice of subcontractor and, through it, the selection of laborers instead of plumbers to lay the pipe. Limiting its ruling to the facts of this case, the Board noted that other factors, which are often determinative of such cases—such as charter claims, arbitration decisions, skill, relative efficiency, and past practice and custom—were approximately equally favorable to both unions.

In his dissent, Member Fanning stated that the Board should not have made a determination under section 10(k) pursuant to a jurisdictional dispute finding under section 8(b) (4) (D), since the same conduct of the plumbers union that resulted in a jurisdictional dispute finding had previously been determined to be an unfair labor practice in this case under section 8(b) (4) (ii) (B). These sections, he said, are mutually exclusive and had an award been made under section 10(k) favoring the plumbers, they would not have been permitted to continue their strike activity to enforce the Board's award against the employer since that conduct would still have been enjoined under the previous unfair labor practice finding.

Veterans' Reemployment Rights

Seniority Rights. In two cases decided under the Universal Military Training and Service Act,⁹ the U.S. Supreme Court determined that veterans who, prior to entering military service, had begun a training program leading to a journeyman status, and who completed that program upon return from service, were entitled to retroactive

seniority in that status since their promotions were foreseeable as reasonably certain at the time of entering service and did, in fact, occur after they completed the training program. The Court reaffirmed the "escalator principle"—that a veteran steps back on the seniority escalator at the precise point he would have occupied had he kept his position continuously during his military absence.

The first case¹⁰ involved employees who, prior to entering military service, had been selected for and had begun a training program leading to promotion as journeymen carmen mechanics. When they returned from military duty, the ex-servicemen who completed the mandatory training period and were promoted to the journeyman status claimed their seniority in that status from the date they would have completed the training program but for their military service. The court of appeals denied this claim, finding that there was no certainty that promotion to the journeyman status would have occurred on a given date, and that promotion was less than automatic due to certain contingencies or "variables" such as: layoffs due to illness or reduction in force; the continuing need for and availability of enough qualified carmen to fill carman positions; and continuing satisfactory work by the plaintiffs in completing the required training.

The High Court decided that promotion to the journeyman status at the completion of the training was automatic and depended only on continued employment. The only discretion the employer had was in selecting men for the training program, and here the plaintiffs had been so selected prior to their entrance into military service. The Court reaffirmed its ruling in an earlier case¹¹ with the same fact situation, that the act protects the veterans as though they had been actually employed or trained during their military service.

The automatic advancement situation involved in this case, the Court went on to say, is to be distinguished from a case where advancement depends upon an employer's discretionary choice not exercised prior to entry into service.¹² In such situations, the returning veteran cannot show within a reasonable certainty that he would have advanced simply by remaining on the job during the time of his military service.

A returning veteran, the Court said, is not required to show—since it would be virtually im-

⁹ 62 Stat. 614, as amended, 50 U.S.C. App. Sec. 459.

¹⁰ *Tilton v. Missouri Pacific Railroad Co.* (U.S. Sup. Ct., Feb. 17, 1964).

¹¹ *Diehl v. Lehigh Valley Railroad Co.*, 348 U.S. 960 (1955).

¹² See *McKinney v. Missouri, Kansas, Texas Railroad Co.*, 357 U.S. 265, 1958.

possible to do so—that it was absolutely certain at the time of his induction into military service that all circumstances necessary for advancement in status would later occur. The “variables” raised by the court of appeals would not, therefore, bar the veterans from proving a statutory right to seniority adjustments. The test required to show such entitlement when there has been an affirmative exercise of management’s discretion is that, “as a matter of foresight, it was reasonably certain that advancement would have occurred, and if, as a matter of hindsight, it did in fact occur.”

In the second case¹³ the plaintiff was a veteran who began his training program at one location prior to entering the military and completed it at another location after his return, and sought his retroactive seniority date at the second location where employment conditions were more favorable.

The court of appeals ruled that the plaintiff could not have predicted with certainty his other-

wise automatic promotion because of the possibility that there may have been no demand for workers of his class at the specific location at a future date.

Relying on its decision in the first of these cases, the Supreme Court reversed and noted that the possibility the court of appeals raised was like those that always exist but will not defeat a veteran’s seniority rights.

In both cases, the Court made it clear that “a returning veteran cannot claim a promotion that depends solely upon satisfactory completion of a prerequisite period of employment training unless he first works that period.” But, upon satisfactorily completing that period, the Court said, he can insist upon a seniority date reflecting credit for the delay caused by military service.

¹³ *Brooks v. Missouri Pacific Railroad Co.*, (U.S. Sup. Ct., Feb. 17, 1964).

Chronology of Recent Labor Events

February 17

February 7, 1964

A 6-MONTH PRISON SENTENCE against Maurice A. Hutcheson, president of the United Brotherhood of Carpenters, for contempt of Congress was reduced by a Federal district court to 2 years' probation. The conviction grew out of Hutcheson's refusal in 1960 to answer questions before a Senate select committee. (See also p. 445 of this issue.)

February 12

THE PRESIDENT signed Executive Order 11141 declaring contractors and subcontractors engaged in the performance of Federal contracts shall not discriminate because of age in the terms and conditions of employment, except upon the basis of a bona fide occupational qualification, retirement plan, or statutory requirement. Also prohibited are advertisements which specify maximum age limits. (See MLR, March 1964, p. 300.)

February 15

THE LADIES' GARMENT WORKERS' UNION and three employer associations representing jobbers in the eight-State New York dress market area signed a 3-year contract affecting 30,000 workers. Provided were wage increases of 3.23 and 3.13 percent, respectively, for pieceworkers effective March 2, 1964, and February 1, 1965; and 5-percent increases or a minimum of \$3 for weekly salaried workers beginning March 2, 1964. Craft minimums were raised, and increased employer contributions to the union's health and welfare and pension plans are to be effective in 1965 and 1966. (See also p. 440 of this issue.)

February 16

MEMBERS of the Automobile Workers ratified a 3-year agreement retroactive to January 1, 1964, with J. I. Case Co., Racine, Wis. Covering some 2,500 workers, the contract provides pieceworkers a 5-cent hourly increase each contract year, while dayworkers receive 5-cent increases in each of the first 2 years and 8 cents in the third. A union shop was also included and health and welfare benefits were improved.

THE SUPREME COURT ruled that servicemen who had completed qualification requirements for upgraded journeyman jobs upon their return from the Armed Forces were entitled to have their seniority in the journeymen job made effective on the date the qualifications would have been met had their training not been interrupted by military duty. In overruling a lower court, the Supreme Court ruled that the seniority requirements of the Universal Military Training and Service Act were met, "if, as a matter of foresight, it was reasonably certain that advancement would have occurred, and if, as a matter of hindsight, it did in fact occur." The cases were *Tilton v. Missouri Pacific Railroad Co.*, and *Brooks v. same*. (See also p. 436 of this issue.)

PITTSBURGH PLATE GLASS Co. and the Glass and Ceramic Workers reached agreement on a 2-year contract providing pay raises and benefit improvements totaling about 6 cents the first year and 7 cents the second, to some 10,000 workers at 10 plants. Benefits include a severance pay plan and improvements in the pension program. (See also p. 442 of this issue.)

February 18

IN A NATIONAL LABOR RELATIONS BOARD representation election, employees of the New York Telephone Co. rejected by a 3 to 2 margin a bid by the Teamsters union to replace the Communications Workers of America as bargaining agent. The Teamsters had sought to represent the 23,500 plant workers following a vote by a 10,000-member CWA local in New York City to affiliate. (See also p. 444 of this issue.)

February 25

THE AFL-CIO EXECUTIVE COUNCIL adjourned its mid-winter meeting, after announcing that it would establish a trust to pool qualified health and welfare and pension funds for investment in "socially desirable housing projects" and to provide affiliates with an investment program. The Council stated that wage guidelines would not control union wage demands; gave its support to a statutory requirement of a 35-hour workweek, a \$2 an hour minimum wage, and double time for all overtime worked; and urged that more funds be made available to expand antipoverty programs. Two additional arbitrators were named to rule on disputes arising out of the Federation's internal disputes plan, and a committee was formed to clarify the plan. (See also pp. 443-444 of this issue.)

LONGSHOREMEN'S refusal to load wheat for shipment to Russia ended with the President's declaration that at least 50 percent of all wheat sold under future export licenses will be carried by American ships. Maritime unions began their 9-day boycott when permission was granted to the Continental Grain Co. to ship in foreign bottoms on grounds that not enough American ships were available. (See also p. 444 of this issue.)

February 27

MAJOR NEW YORK CITY newspapers and union officials agreed to establish a joint board to prevent future news-

paper strikes in the city. Mayor Robert Wagner had proposed the idea following a 114-day strike in 1963. (See also p. 445 of this issue.)

February 28

RADIATION SAFETY and health standards applicable to Federal supply contracts under the Walsh-Healey Act became effective. Application was withheld from contractors operating Atomic Energy Commission plants and facilities and from employers in Arkansas, California, Kentucky, Mississippi, New York, and Texas operating under State licenses, pending issuance of further orders.

Developments in Industrial Relations*

Wages and Collective Bargaining

APPAREL

AN ESTIMATED 30,000 dressmakers were covered by 3-year contracts ratified on February 10 by the International Ladies' Garment Workers with three employer associations representing jobbers in New York City and eight eastern States, while two contractor associations, whose members employ about 50,000 workers, balked at the terms. Jobbers typically design the dresses and do the cutting, while contractors ordinarily confine themselves to sewing operations on dresses they receive from jobbers. The sewers' wages are determined by negotiations between the jobber and the union, but most sewers are employed by contractors who had demanded that the jobbers share more of the new contract's cost. One group of contractors insisted that the jobbers assume the cost of paid holidays for weekworkers as well as pieceworkers, and the other group objected to differentials in wage rates between New York City and the other areas covered by the contracts.

The agreements provided a 3.23-percent increase for pieceworkers on March 2 with an additional 3.13-percent increase on February 1, 1965. On March 2, weekly paid workers would receive a 5-percent increase (with a minimum of \$3 a week) and cutters a \$6-a-week increase. Minimums were increased in eight crafts by from \$5.50 a week for drapers to \$14 a week for cutters. The employers also agreed to pay 7½ percent (instead of the previous 5 percent) of gross payroll to the union's health and welfare program on February 1, 1965; most of the increase was to be used to provide a second week of paid vacation. Payments to the pension fund will be increased to 4½ percent from 3½ percent on February 1, 1966. The jobbers acceded to the union's demand for time clocks in

all shops, and complete time records are to be filed with the union, thus facilitating the computation of hourly earnings for pieceworkers.

METALWORKING

An agreement resulting in elimination of some premium overtime pay and greater flexibility in scheduling operations was reached in early February by representatives of the Auto Workers and Goodyear Aerospace Corp. for about 330 Vinyl Department employees in the Akron area. The new provisions were incorporated into a 5-year supplement to the master contract expiring July 1965; they were reached after the company announced it was considering moving the Vinyl Division away from Akron. The supplement provides that in the Vinyl Department, where operations are on a nearly continuous 7-day basis, the new workweek will consist of any 5 days of 8 hours each, with staggered shifts during a 7-day period; previously the workweek started on Monday. Sunday work continued to be paid at double time, and daily 8-hour shifts were substituted for two 8½-hour shifts and one of 6½ hours. A shift differential of 15 cents an hour was established partly to compensate third-shift workers for the longer workday. Under the new agreement, the plant will close for a week twice during the year, with vacations to be taken during these periods.

In the Philadelphia area, SKF Industries, Inc., a manufacturing affiliate of Swedish Ball Bearing Co., agreed with the United Steelworkers, representing 2,500 workers, on 11 work rule changes, including possible substitution of a 7-day for a 5-day workweek if sales orders increase and a study of incentive plans. Wages rates were not changed. As a result of the settlement, management agreed at least to maintain its manufacturing operations at existing levels in the Philadelphia area; plans were also announced to spend \$2 million to modernize its Philadelphia operations. Earlier it had claimed that earnings at the plant were 25 to 50 percent higher than those of its domestic competitors; it had proposed to lay off 600 workers and build a plant in Shelbyville, Tenn., unless the workers accepted either a

*Prepared in the Division of Wage Economics, Bureau of Labor Statistics, on the basis of published material available in early March.

10-percent wage decrease with rule changes or a 25-percent cut without rule changes. SKF also stated, following the settlement, that it was attempting to enlist help of State and local officials to prevent tariff reductions on foreign bearings.

A 114-day strike by 2,000 employees represented by the United Automobile Workers at another bearing manufacturer, Torrington Co. in Torrington, Conn., was ended when the members ratified a 39-month contract on January 19. The agreement provided annual improvement factor increases of 2½ percent, with a minimum increase of 5 cents, for timeworkers, and a 5-cent annual addition to the hourly earnings of incentive workers. The agreement also liberalized pensions and insurance benefits, providing a \$2.25—instead of the former \$2—a month pension for each year of service up to 30, and increased hospitalization, sickness and accident, and life insurance benefits. If the company transfers any Torrington operations to another plant within a radius of 75 miles, the employees retain the right to their jobs without loss of seniority or company service credit. The company also recognized the union as the bargaining representative for any plants constructed within 75 miles.

A severance pay plan was established, whereby workers with at least 7½ years of continuous service who are bumped or transferred as a result of subcontracting work to an independent contractor or because of relocation of equipment, shutdown, or permanent abandonment of an operation could elect to receive 40 hours' pay for each year of continuous service, in lieu of continuing their recall rights under the contract. It was agreed that the company would limit its subcontracting so as not to deprive regular employees of jobs or normal hours of employment; if questions arise concerning the effect of subcontracting on bargaining unit employees' jobs or hours of work, the company will negotiate with the union. However, company decisions regarding subcontracting were not made a subject of arbitration.

A profit-sharing plan was approved in mid-February by stockholders of the Lakey Foundry Corp. of Muskegon, Mich., giving the company's 1,300 employees half of profits in excess of 8 percent of the company's net worth. The company has made a profit only once in the past 6 years. The 1,100 hourly employees, represented by the

United Automobile Workers, had a few days earlier accepted a 5-percent wage reduction in order to enable the company to modernize its plant and continue in business. A previous proposal for a wage cut had been rejected because salaried workers' earnings were not to be reduced. A profit-sharing plan had been a subject of negotiations in April 1963 when the UAW voted to forego the annual improvement factor in exchange for such a plan.

It would apply to before-tax earnings resulting from the corporation's manufacturing operations for the fiscal years ending October 31, 1963, and October 31, 1964. Before distribution, 8 percent of the company's net worth would be set aside for the corporation and its stockholders. Of the remainder, 50 percent would be available for distribution to all employees and 50 percent would be retained by the corporation.

The percentage share to be apportioned among members of the bargaining unit would be determined by dividing aggregate annual earnings of the union employees by total earnings of all employees—individual earnings in excess of \$15,000 would be disregarded in the computation. Total profits going to bargaining unit members would be divided among the employees on the basis of hours actually worked during the year.

TRANSPORTATION

A 33-day tugboat strike came to an end in New York harbor on March 4 when members of Local 333, United Marine Division of the National Maritime Union approved a 3-year contract with the Marine Towing and Transportation Employers' Association. The contract, affecting about 3,000 workers, was similar to one offered by five companies which broke away from the employer association on February 28. The agreement reportedly provided a 50-cent hourly wage increase for captains and 35 cents an hour for deck hands over the contract term. The employers also agreed to pay an additional \$31.90 a month into the insurance and pension funds. Previously, the companies paid \$15 monthly to the insurance fund, \$8.68 a month to the basic pension fund, and an additional \$6 a month to a contributory pension fund provided the employee paid a similar amount. A management spokesman estimated that labor costs would increase from 19½ to 21 percent as a result of the settlement.

The workers had gone on strike on February 1, after rejecting an offer which reportedly provided a 53¾-cent hourly package increase. However, the rejection was based on the members' dissatisfaction that the contract did not provide for a fourth or relief crew on vessels that undertake long coastal voyages. Under the approved contract, the parties agreed to have an independent management consultant study the economic feasibility of establishing the fourth crew. The fourth crew would increase crew rotation and allow workers to spend up to half their time ashore according to a union spokesman.

MISCELLANEOUS SETTLEMENTS

The Pittsburgh Plate Glass Co. with 10 plate and window glass plants in Pennsylvania, Maryland, Missouri, Oklahoma, Ohio, and West Virginia and the United Glass and Ceramic Workers of North America, representing approximately 10,000 employees, reached agreement on a 2-year contract effective February 16, 1964. It provides a wage increase, improvements in the pension plan and establishment of a severance pay plan. The total package value was estimated by a union spokesman at 13 cents—6 cents the first year and 7 cents the second.

After 36 weeks of negotiations, Sandia Corp., a subsidiary of Western Electric Co., reached agreement on January 14 with the Office Employees International Union and the Atomic Projects and Production Workers Metal Trades Council on 2-year contracts providing wage increases averaging 3 percent retroactive to July 6, 1963, and an additional 3 percent effective 1 year later. Company contribution to the family health plan was increased. The contracts affect 2,500 employees of the company's New Mexico installation.

Western Electric Co. and the Communications Workers of America reached agreement on January 20 on wage increases ranging from 6 to 13 cents an hour for 10,000 distribution and warehouse employees across the nation. Workers in Los Angeles, Atlanta, New Orleans, St. Louis, and San Leandro, Calif., received an additional 5 cents an hour. Changes in supplementary benefits similar to those received by other Bell System affiliates included improvements in health and welfare benefits, pensions, and vacations.

Lit Brothers Department Stores and the Retail Clerks International Association reached agreement on a 2-year contract providing for weekly pay increases averaging \$2.70 in 1964 and \$2.35 in 1965 for 1,100 employees in the Philadelphia area. Ratified on January 31, the contract also provided a 37½-hour week for all employees; formerly, hours varied among departments.

In early February, the Pittsburgh local of the Printing Pressmen's union reached agreement on a 3-year contract with the city's commercial printers which gave each company an option to either grant a \$3-a-week wage increase the first year and continue the existing workweek at 36¼ hours, or give no increase in weekly pay and increase the workweek to 37½ hours, but guarantee each worker 52 weeks' pay for the first year of the contract. Those guaranteeing 52 weeks' pay would be permitted to offset accumulated overtime against the guarantee during each quarter. During the guaranteed pay period, an employee may be assigned to perform work other than his normal duties provided the work is not assigned to employees represented by another union. The union may at its option return to the 36¼-hour workweek on January 16, 1967, at the schedule of wages then in effect at plants that retained the 36¼-hour workweek.

Weekly pay will increase \$2.50 for pressmen and \$2 for assistants in the second and third years of the contract for those companies remaining on the 36¼-hour workweek, while pressmen and assistants on the 37½-hour workweek will receive increases of \$3 and \$2.40, respectively. Other benefits included improved pensions, hospital, surgical, and major medical benefits for employees, establishment of a hospital and surgical plan of up to \$4,000 for retirees and dependents, and improved vacation and bereavement leave.

Beech-Nut Life Savers, Inc., and the independent Beech-Nut Employees Association, representing approximately 1,300 employees, reached agreement on January 18 on a 2-year contract retroactive to January 1, 1964. Terms of the agreement included 5-cent general wage increases in each of the 2 years; a fourth week of vacation after 25 years of service; the Friday after Thanksgiving as an eighth paid holiday, and a revised hospitalization plan providing for major medical benefits.

FLSA Hearings

Two subcommittees of the House Committee on Education and Labor held hearings during February on proposals sent to Congress late in January by President Johnson to amend the Fair Labor Standards Act (FLSA) to require payment of double time for excessive overtime on an industry basis and to extend coverage of the provisions of the act to additional workers. The proposed legislation would authorize the Secretary of Labor to establish industry committees composed of representatives of labor, business, and the public to set a standard workweek beyond which double time for overtime would be required. The existing time and one-half requirement would continue for any hours in excess of 40 but below the new standard established for the industry.

The proposals with respect to extension of the minimum wage and overtime provisions of the act would affect an estimated 735,000 workers, while it was proposed to bring an additional 1.9 million workers already covered by the minimum wage provisions under the overtime penalty requirements of the act. Among the workers to be covered for the first time by both the wage and hours provisions would be employees in restaurants and food service establishments, hotels, laundries, and dry-cleaning establishments meeting certain size standards, and in small logging operations, as well as in farm products processing and cotton ginning; the rate for these workers would be set at \$1 an hour for 3 years, at \$1.15 in the fourth year, and then at \$1.25. The overtime penalty provisions of the act would also be applied gradually to these workers. Existing overtime exemptions would be removed for workers in certain transportation industries and for certain service station employees.

Secretary of Labor Wirtz testified on two occasions before the committee—first on the proposals to extend the minimum wage and hours provisions, second on the proposal to increase the penalty overtime rate. In his testimony, he stated that although an increase in overall economic activity was needed in order to solve the existing unemployment problem, the proposal to discourage overtime by higher premium pay would reduce unemployment. He recognized that a substantial amount of overtime was of an emergency nature, but he stated that in view of the increased

cost of supplementary benefits the deterrent effect of the time and a half penalty rate under the FLSA had been substantially reduced since its enactment in 1938.

Union spokesmen agreed there was a need to discourage employers from scheduling overtime, but they criticized the provision establishing increased overtime rates by a tripartite committee on an industry-by-industry basis. Andrew J. Biemiller, director of legislation for the AFL-CIO, proposed instead the establishment of a flat, across-the-board requirement of double time for all overtime worked.

Auto industry witnesses denied that the cost of fringe benefits discourages employment of new workers in their industry and testified that because vacation, holiday, and pension costs do not start until employees have been on the payroll for some time, it is actually less expensive to hire new employees on a short-term basis than to work present employees overtime. The controlling factor in decisions of this nature was said to center on what the effects of relatively short periods of employment during peak periods are on morale, plant efficiency, and product quality. It was also stressed that space limitations and production methods frequently make it impossible to add shifts or increase work stations temporarily. Representatives of other employer groups opposed the increased overtime rate on grounds that it would tend to raise prices or reduce profits, thereby either encouraging inflation or discouraging the creation of new jobs.

AFL-CIO Council

The Executive Council of the AFL-CIO held its winter meeting at Bal Harbour, Fla., in late February and focused its attention mainly on the problems of poverty and unemployment. The Council referred two items on its agenda to the AFL-CIO General Board, composed of members of the Executive Council together with representatives of AFL-CIO departments and affiliated unions. The General Board decided to set up a mortgage investment trust to pool the funds of their pension and welfare plans in order to finance construction of housing projects and at the same time boost construction jobs and bring higher returns to the invested funds. The General Board

also voted a voluntary assessment on union members of 2½ cents for 20 months as their contribution to the Eleanor Roosevelt Memorial Foundation and to the John F. Kennedy Library.

The Council predicted that the adoption of double pay for overtime coupled with a workweek reduction to 35 hours would create 3½ million jobs. It assumed that each hour's reduction in the workweek would produce 500,000 new jobs, and double pay for overtime would produce 450,000 new jobs in manufacturing and 1 million jobs throughout the economy. It argued that these steps were necessary because the stimulation of the tax cut would wear off by 1965 and because of the existence of widespread underemployment and unemployment, the growth in the labor force, and increasing productivity. The Council endorsed continuation of the accelerated public works program, the principle of comparability in pay between private industry and government, the principle of civilian supervision of youth employment opportunities programs, and prompt enactment of President Johnson's housing and community development program calling for a minimum goal of 2½ million new dwelling units a year for the next 12 years.

Florida East Coast Railway

Construction work on Government space sites at Merritt Island and Cape Kennedy was halted on February 10 and 11 when workers refused to cross picket lines of the Railroad Telegraphers Union who were protesting use of a Government-owned spur line by the struck Florida East Coast Railway. However, a temporary injunction against the picketing was issued by a Federal judge on February 12 and work was resumed. In 1963, a Presidential Board of Inquiry recommended that the space agency not do business with the struck railroad, but authorization to make deliveries on the 4½-mile spur was granted on February 10 by officials of the agency who said they were obligated to do so by an agreement made with the railroad prior to the strike. Contending they were unable to meet the wage pattern set by the railroad national committee, the railroad management had balked at two settlement recommendations by factfinding boards and had refused arbitration. The railroad had continued

most of its freight operations with strike replacements and supervisory employees. Since the strike by nonoperating unions began on January 23, 1963, numerous acts of vandalism or sabotage had occurred. After dynamite blasts derailed an 85-car freight train on February 14 and caused a 5-diesel unit and its 27 cars to crash on February 27, the President ordered an investigation by the FBI.

New York Telephone Vote

It was announced on February 19 that plant workers at the New York Telephone Co. had voted to retain the Communications Workers of America as their bargaining agent; the CWA defeated the Teamsters union in an NLRB election by a vote of 12,558 to 8,751. A third union, the Independent Brotherhood of Telephone Workers received 574 votes. This was the sixth unsuccessful attempt by the Teamsters to raid the CWA and break into the communications field; it was also their strongest showing. The CWA reportedly had its major strength in the upstate area, while the Teamsters had considerable strength in New York City. There are about 23,500 members in 23 CWA locals throughout the State. CWA officials indicated that they would drive for a better 3-year settlement in New York than they won from other telephone companies across the Nation in 1963. Telephone company officials had publicly expressed opposition to the Teamsters.

Grain Boycott

Refusal of the International Longshoremen's Association to load grain sold to Russia was ended on February 25 when AFL-CIO President George Meany notified President Johnson that the Longshoremen and other maritime unions supporting them accepted terms of a plan whereby at least half of future shipments to Russia would be sent in American ships. The late President John F. Kennedy had previously announced the same minimum but the Department of Commerce permitted Continental Grain Co. to ship only 38 percent of its grain in American ships on grounds that U.S. vessels were not available. The Longshoremen had charged that the action violated a commitment. Future requests for waivers of the 50-percent stipulation will be reviewed upon complaint, and pro-

visions were made for advisory participation by industry and union representatives in the review.

Other Developments

In a meeting in Chicago on January 24-25, the Skilled Trades Council of the International Union of Electrical Workers called for a shorter workweek to reduce unemployment. The Council also proposed reducing the retirement age and increasing training facilities to deal with problems of unemployment.

A 1-day strike affecting Florida and other East Coast States was ended when National Airlines accepted a recommendation by Secretary of Labor Wirtz that bargaining on remaining unsolved contract issues be resumed for 5 days under Mediation Board auspices, concluding with binding arbitration if necessary. The Secretary's proposal was subsequently accepted by the Air Line Employees Association, representing 1,800 clerical and reservations employees.

On February 27, a labor-management committee in New York City voted unanimously to establish a joint board designed to prevent future newspaper strikes in the city. The joint board is to be made up of two representatives of each of the newspaper members of the Publishers' Association and of the association itself as well as two representatives each of the 10 unions and of the Allied Printing Trades Council. The chairmanship is to alternate each 3 months between a man selected by the association and a man selected by the unions.

A contract signed in late February by Spartan Grocers, Inc., in Los Angeles and Teamster Local 595 provided for arbitration of cases of alleged job discrimination. Under the contract, any of five named civil rights groups can intervene on behalf of job applicants who feel that they have been discriminated against because of race, sex, age, or national origin. Civil rights groups were named in the contract reportedly because there was question whether the union could legally spend money to process grievances of nonmembers.

On February 7, a 6-month prison sentence imposed on Maurice A. Hutcheson, president of the International Brotherhood of Carpenters, by a District Court Judge in 1960 and later upheld by the U.S. Supreme Court was reduced to 2 years' probation, though a \$500 fine was upheld. Mr. Hutcheson had been sentenced in 1960 on contempt charges for refusing to answer questions before a Senate select committee investigating labor racketeering; the questions involved an Indiana highway land sale in which he was subsequently found guilty of conspiracy by an Indiana State Court in November 1960; but in October 1963, the Indiana Supreme Court held that the trial record did not establish the conspiracy.

Teamster President James R. Hoffa was found guilty of alleged jury tampering charges on March 4 in Chattanooga, Tenn. He was convicted on 2 of 3 charges arising out of a 1962 trial in Nashville, Tenn., where a jury was unable to reach a final decision as to whether he had accepted payments from a trucking firm to insure labor peace.

Book Reviews and Notes

Introduction to America

Beyond the Melting Pot: The Negroes, Puerto Ricans, Jews, Italians, and Irish of New York City. By Nathan Glazer and Daniel Patrick Moynihan. Cambridge, Mass., The M.I.T. Press and Harvard University Press, 1963. 360 pp. \$5.95.

This book is a marvelous introduction to America. Ostensibly reporting on how the mysterious and fascinating culture and politics of New York City have been shaped by successive waves of immigrants, Glazer and Moynihan have, in fact, provided a fresh persuasive description of how immigrants contributed to shaping the American ways of life. Writing with the shrewd flair of a long-experienced police-court reporter, they offer a verve and precision in these pages that is totally unfamiliar outside our most sharply edited magazines. But packaged in their spritely phrases are insights drawn from a mass of studies made by sociologists, political scientists, and social workers—plus a great many shrewd observations of their own.

Taking up each of the migrant groups in turn, the authors discuss the most lively and most typical contributions that the group's ethnic and religious background has made to shaping New York City's way of existence and, how the forces of metropolitan existence in a new, strange, and secular land have reshaped the migrants and their children. Glazer discusses the sins, shortcomings, and spectacles offered by the Negroes, Puerto Ricans, Jews, and Italians; Moynihan, the Irish. Each has correspondingly presented the contributions of each group more forcefully and fairly than the typical spokesman for the groups have done. All this is achieved with a cool insight and a quick sympathy.

What was the path of residential succession through the city for the Negroes—and up the political hierarchy? What portion of East Side restaurants discriminated in 1950, in 1960? How do contraceptive practice and birth rates differ from Puerto Rico to East Harlem? Why did both upper and lower income Jews vote more heavily for Kennedy than Irish Catholics? Why did LaGuardia do worse against O'Dwyer in Italian areas than in others? Why does a candidate for Governor of Puerto Rico campaign in New York City? What about the architectural boxes now being put up on Third Avenue? These and a hundred other fascinating and improbable questions are touched upon in the Glazer-Moynihan discussion of the role of ethnic groups in New York City's growth. Their study does not offer bright new conclusions about structural factors in New York's economic growth or procedures for doing away with racial conflict or proposals for a strengthening of religious life, moral values, or human understanding. But their discussion of specific issues resembles the work of the pointillists or their brother impressionists. By painting specific details in full color, they create a picture which when examined at a slight distance offers a deeper view and understanding. Such understanding should make the discussion more relevant and more effective. And those who enjoy a lively nonfiction whodunit will find *Beyond the Melting Pot* no less absorbing.

—STANLEY LEBERGOTT
Professor of Economics
Wesleyan University

Well-Ploughed Ground

Adjusting to Technological Change. Edited by Gerald G. Somers, Edward L. Cushman, Nat Weinberg. New York, Harper & Row, Publishers, 1963. 230 pp. (Industrial Relations Research Association Publication 29.) \$4.50.

This latest volume in the IRRA series covers its subject in a logical, well-organized fashion and contains many of the insights which are indispensable for an orderly and humane adjustment to technological change. Some of the studies are

rather sketchy and a good deal of the material has been published previously. In addition, the book fails to discuss in any detail the problems of leisure and the changing nature of work which are so relevant to the question of adjusting to technological change. Nevertheless, it does succeed in making the overall outlines of the problem clear and pointing up necessary courses of action for both public and private decisionmakers.

The opening selection by Walter Buckingham stresses the revolutionary nature of current technological change—a necessary point of departure for any meaningful discussion of the social and economic aspects of the new technology. In succeeding chapters, Philip Taft discusses union reactions to such changes in the past and Jack Barbash provides an “agenda” of the collective bargaining issues and trends which changing technology has given rise to in the present.

The next three chapters deal with specific current efforts at adjustment. Charles Killingsworth examines “modes of accommodation between the union desire for job security and the management desire for efficiency” in the auto, rubber, steel, longshore, and railroad industries—modes which run the gamut from a rigid emphasis on fixed rules to a flexibility made acceptable by measures for cushioning the impact of change.

The chapter by Arnold Weber, based upon a study made for the Armour Automation Committee, focusses upon a specific device, “The Inter-Plant Transfer of Displaced Employees.” This “in-depth” examination of the kinds of transfer rights which have been negotiated and the problems involved in negotiating and implementing such rights provides a kind of manual on the subject which should have considerable practical value.

In his description of the Armour Automation Fund’s efforts to assist workers displaced by a plant shutdown in Oklahoma City, Edwin Young points out the limitations of crash programs, the inadequacies of public employment services “in their present status,” and the difficulties confronting even more carefully planned programs and more adequate services during a period of general economic stagnation.

Moving from the specific to the more general, the chapter by Sar Levitan and Harold Sheppard

discusses the impact of technological change upon community life and governmental efforts to deal with the resulting problems. In the final chapter, the Director-General of the Swedish National Labor Market Board, Bertil Olsson, covers the European experience.

Just as Buckingham begins the discussion on the proper note by stressing the revolutionary nature of technological change, Olsson ends it fittingly by putting the question of adjustment in its proper context. Technological changes will have a positive effect, he says:

only on the condition that the full-employment community is a fact and that the increased product is divided in such a way that it benefits all the groups in the community. . . . To distribute the result of production to all groups in the community and to do so in such a way that a high demand is maintained is an economic-political problem which must be solved by political means. Countries which do not solve these problems will also be unable to solve the problems of technological change.

—IRVING BELLER

Research Department, AFL-CIO

A Constraint Proposal

Union Monopolies and Antitrust Restraints. By Patrick M. Boarman. Washington, Labor Policy Association, Inc., 1963. 203 pp., bibliography. \$5.

This volume constitutes a brief in behalf of the thesis that the economic power of unionism in the United States “threatens the very foundations of our decentralized economic and social system.” In order to reduce union power “to levels less menacing than those that presently obtain,” the author recommends that unions be subjected to the provisions of the Sherman Antitrust Act.

Professor Boarman finds that our unions “enjoy what is in effect a power to levy a monopoly tax on the nonunionized sectors of the economy.” In addition, “Massive wastage of labor resources, distortions in the allocation of all productive resources, chronic unemployment, suppression of competition in product markets, inflation, economic stagnation, balance of payments deficits, and the associated deterioration of the United States position in the world economy—these, as we have shown, are the further burdens which must be

borne by a society which has given carte blanche to labor monopolies."

This reviewer finds that Professor Boarman's case in support of the above-quoted conclusions is shallow and unconvincing. Much of his argument rests upon deductive reasoning from unrealistic premises, fortified by a substantial reliance upon "post hoc, ergo propter hoc" reasoning. Reassurance is frequently supplied by quotations from like-minded publications on the labor monopoly problem. There is only a superficial and partial examination of pertinent empirical work, often from secondary sources.

For example: Boarman cites Neil Chamberlain's textbook *Labor* (1958) as authority for the statement that "statistical studies indicate strong unions have made their greatest relative wage gains precisely in periods of unemployment when labor is plentiful." But Chamberlain (who is summarizing Levinson's hypothesis) goes on to note that "The period 1920-33 answers this description" and adds, "In times of full employment or overemployment, and with a government favorable to labor, unions gain no comparative advantage."

In regard to occupational differentials, Boarman points out that "a substantial narrowing of the structure of relative wages has occurred precisely during the period when labor unions were consolidating their power over broad areas of the economy." He then cites Chamberlain's *Labor* as the source for the assertion that "A number of students of this trend in wage differentials ascribe it almost entirely to union pressure for 'across the board increases of standard amount.'" But most students of this trend, including Chamberlain, have found the contrary. Chamberlain said (*Labor*, p. 459): "the reduction of differentials may have been less attributable to the unions than to some underlying forces which made skilled labor relatively less valuable in the labor market."

Professor Boarman, having convinced himself that the economic power of United States unionism must be restrained, turns in his closing chapter VII to the exploration of policy alternatives. He examines and rejects direct government controls over the terms and conditions of employment as either unworkable or necessitating "the destruction of the free economy." The "limitist" ap-

proach, which would establish legal limits on the size of collective bargaining units, is found wanting because of its presumed inflexibility and inability to take account of special cases, and also because it would "engender opposition so intense" that the necessary legislation could probably not be secured. The author's conclusion is that unions belong "under the general restraints of the anti-trust laws." Such action, he urges, will end the inequity of their application only to product markets, will reduce the economic damage caused by unions, and "will transfer the adjudication of labor-management disputes which threaten substantial injury to the public from arbitrary administrative agencies to the courts."

For a policy-oriented effort, the analyses of policy alternatives are disappointingly thin. Professor Boarman's work, except for his stated faith in the ability of the courts to do the job, provides no grounds for favoring the judicial as against the administrative route.

It is this reviewer's judgment that *Union Monopolies and Antitrust Restraints* does not provide a valid diagnosis of economic cause and effect in relation to unionism; but even if one accepts, arguendo, its oversimplified and extreme economic conclusions, this volume does not provide a useful basis for the design of policy.

—MARK L. KAHN
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Wayne State University

Advice to Management

Successful Labor Relations—An Employers' Guide. By Noel Arnold Levin. New York, Fairchild Publications, Inc., 1963. 240 pp. \$7.50.

The author has written an "employers' guide" designed to treat the "major aspects of the labor-management relationship," the "broad scope of collective bargaining dynamics," and the "practical details of day-to-day labor relations."

He is primarily concerned, however, with helping management "to protect and exercise its rights and to operate successfully within the framework of reality." Hence he stresses the legal aspects of labor relations. Not only does he cover negotiating and administering the first and subsequent contracts, but he also explains how to fight union entry, how to blunt union weapons, and how to

sever relations with the union. Thus the employers' guide describes quite an extended tour.

As a snapshot of the present status of labor relations law, the book inevitably runs the risk of early obsolescence. Yet it still gives serviceable information on what to do until the labor relations advisor or legal counsel arrives with the latest National Labor Relations Board or court decision.

The book is by far more interesting in its non-legal sections, when it takes advantage of the author's plant-level labor relations experience. The flavor of collective bargaining, for instance, clearly comes across as he describes the "minuet" of demand, caucus, counter-demand, etc. Cautioning that a company's chances of favorable representation election results are better if the election can be arranged for a Friday afternoon rather than for a Monday morning, for example, implies the author's involvement in some hard contests. His is a good, practical description of how employer associations operate, but he is inadvertently ironic as he advances a good union argument against employer "free riders" who benefit from association activities without becoming dues-paying members.

Mr. Levin is a management representative who accepts unions, has a healthy respect for his professional union counterparts, and is concerned with reaching the best possible peaceful settlement with which management can live. He advises moderation in dealing with the union. He believes escalator clauses deny the old law that states "what goes up must come down;" he is for unilateral management control of trust funds; and he supports inclusion of the broadest possible arbitration clause in the contract—with the proviso that if a company wants to exclude certain issues, then it should distinctly spell these out.

Since the author appears to be a good advocate of management's position, one wishes that he had spent more time on more issues and had not tantalized us with chapter titles such as "Subcontracting, Plant Relocation, and the Runaway Shop," which gave more promise than the one paragraph on subcontracting that appeared.

—LEON E. LUNDEN

Division of Industrial and Labor Relations
Bureau of Labor Statistics

Concentrated Expertise

Labor Arbitration and Industrial Change: Proceedings of the Sixteenth Annual Meeting, National Academy of Arbitrators, Chicago, January 23-25, 1963. Edited by Mark L. Kahn. Washington, Bureau of National Affairs, Inc., 1963. 374 pp. \$8.50.

This is the ninth volume in the series of the proceedings of the National Academy of Arbitrators, and it continues the tradition by which these volumes have become the leading work on labor-management arbitration each year. The speakers whose thoughts are recorded are leading arbitrators, principal representatives of companies and unions concerned with arbitration, or other prominent practitioners of the subject. This year they talk of arbitrability, the remedy power of arbitrators, automation, the merging of seniority lists, and other matters prominently before arbitrators during the year.

Of special interest to executives of unions and companies is the talk by Arthur M. Ross describing research on distressed grievance procedures and their rehabilitation. This article could be very helpful to those who are coping with overburdened, overlegalistic, or overwhimsical grievance procedures.

There is also a witty presidential address by Benjamin Aaron which will certainly induce many arbitrators to take a critical look at their own behavior, style of writing, and logic.

Secretary of Labor W. Willard Wirtz discusses the pressures developing for the establishment of a Court of Labor-Management Relations (the so-called Baruch proposal). Mr. Wirtz fears that such a court would replace collective bargaining, and he urges, instead, an intensification of three present trends in collective bargaining: (1) Discussion between the parties, during the contract period, of durable problems, such as automation, which cannot be dealt with adequately in the "countdown" period just before the expiration date of an agreement; (2) the use of neutral third parties as advisors, consultants, and factfinders; and (3) special arrangements for crucial bargaining periods, including agreement to arbitrate some issues and advance efforts to coordinate the different interests and opinions within the participating labor and management groups.

The volume contains the usual annual report of the Academy's Committee on Law and Legislation. This is exceptionally valuable to arbitrators themselves, since it describes important developments in the law of arbitration case by case and state by state. One of the major current legal issues, the relation of arbitrators to the National Labor Relations Board, is discussed in a separate article in the volume by Frank W. McCulloch, chairman of the NLRB, who gives important advice to arbitrators who have cases in which the NLRB may have concurrent jurisdiction.

—SPENCER D. POLLARD

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Government and the Economy

Fiscal Policy, Cycles and Growth. By Michael Levy. New York, National Industrial Conference Board, Inc., 1963. 141 pp., bibliography. (Studies in Business Economics, 81.) \$12.50 for non-Associate members.

This compact volume will be welcome to anyone wishing to review developments in the theory behind recent Federal fiscal policy, especially as this theory has figured in the last three reports of the Council of Economic Advisers. The economic strategy of the tax cut is put very neatly into perspective in this book, although, as it turns out, Mr. Levy is not persuaded that the evidence supports the necessity for the cut.

The "new fiscal policy" is defined as a departure from the "limited goal of stabilizing intra-cyclical fluctuations" to the "more ambitious goal of improving the long-term growth rate." The concept of the "full-employment surplus" and the "GNP gap" are tools of the new fiscal policy, replacing the outmoded idea of "balancing the Budget over the cycle."

The level of economic output has fallen below its potential since 1957, although the size of the cumulative "gap" varies according to which methods of estimation are used. The usual, or at least the official, explanation for this unsatisfactory performance has been that Federal fiscal policy has not been sufficiently expansionary in the last few years in the face of capital investment that appears to have lost some of its earlier vigor. Administration economists are saying that larger Federal deficits must be planned to offset higher

net private saving (the excess of private saving over investment).

Largely on the basis of statistical analysis, Mr. Levy questions the fiscal stagnation thesis. Employing estimates of "full-employment investment" and "full-employment private saving" to complement the "full-employment Federal surplus," he concludes that the desire to invest has lost little of the vigor of the early fifties, despite lower ratios of investment to GNP. Consequently, the combined level of public and private saving would be "in balance at full-employment" even though Federal tax and spending policies were not greatly modified.

Why, then, the persistent higher levels of unemployment in recent years? Mr. Levy's answer is, in the main, "structural maladjustments"—in other words, demand was high enough and unfilled jobs existed, but the unemployed were unable to fill the vacancies because of inadequate training, geographical immobility, cost rigidities, or for other reasons.

Even if one is readily disposed to admit that better education, training, worker placement programs, and so forth, could reduce unemployment materially, it is difficult for this reviewer to believe that structural problems are a major cause of unemployment. Why should structural maladjustments have become more intractable after 1957? How much reliance can one place in estimates of full-employment investment or private saving developed from regression analysis of time series data—particularly since it has been so long since we have had periods of full-employment? The size of the full-employment surplus—Government saving—can be estimated with more confidence, because revenues and the built-in expenditure stabilizers are fairly stable functions of income and employment. On the other hand, information about the cyclical and secular responsiveness of investment is meager; we don't even know whether investment is becoming progressively more capital-saving, as well as more labor-saving, as time goes on. The investment function shifts up or down depending on psychological as well as economic factors. Common sense suggests that in the absence of more certain knowledge fiscal stimuli should be tried.

—MARY WISE SMELKER

Office of the Economic Consultant
Bureau of Labor Statistics

Short-Course Text

Labor Markets, Unions, and Government Policy.

By Everett Johnson Burt, Jr. New York, St. Martin's Press, Inc., 1963. 454 pp. \$8.75.

During the past two decades the materials in labor textbooks have undergone considerable change. The descriptive, institutional approach characterizing the books published in the 1940's gave way in the 1950's to texts which attempted to incorporate appropriate economic principles when possible and to introduce techniques of economic analysis into some of the discussions—particularly in those dealing with employment and wages. These efforts made the study of labor more relevant for students of economics. Nevertheless, the subject was still considered by many to lie outside the scope of economic analysis.

Some of the recent and cogent analytical studies in the field of labor have made possible new and more satisfactory approaches in writing textbooks. Analysis of the labor market and of those factors which bear on the supply and demand for labor are gradually becoming the focal points of labor economics. Those who teach labor courses can now more effectively utilize economic analysis. Professor Burt has done a good job in his new text by moving in this direction.

As the book is relatively small, it is primarily useful in a one-semester course. The first fifth of the text covers the labor force and labor markets, emphasizing the supply side. This is followed by a discussion of union development, union structure, the processes and objectives of collective bargaining, and the influences of government in labor relations. The material in these sections comprise about half the volume. There follows an analysis of wages, including the roles of unions and government in the determination of wages, and unemployment. The final two chapters stress governmental policies dealing with full employment and economic security.

Although there are opposing views, I believe there is much justification for having the chapters covering the demand for labor, wages, and unemployment problems placed immediately following the discussion of the supply of labor. Such arrangement, which relegates the institutional material dealing with unions to the end, would give students a more coherent view of labor economics.

It would also consolidate those portions of the book in which Professor Burt makes his chief contribution to a field in which there already are a large number of texts.

The topics covered by the author are well chosen. They are all of importance to students who want a broad background of the subject. More so than in other labor texts, there is consistent emphasis on relevant economic principles. However, some duplication would be avoided if the sections on growth of unionism in chapter 6 were discussed in conjunction with and subsequent to chapter 7, which considers the development of unions before the 1930's.

I do feel that more editorial care should have been exercised. There are a few errors of fact, occasional awkward sentences, incorrectly used words, and a large number of typographical errors. But all in all, the book is sound and useful and will offer much to students.

—ROBERT D. LEITER

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Bold Venture

Some Aspects of Wage Theory and Policy. By Sidney Weintraub. Philadelphia, Chilton Books, 1963. 254 pp. \$7.

Weintraub's latest book represents clear evidence that some economists can profit from the stern editing of a publisher. While some duplication is to be expected in a collection of essays, this book contains a dismaying amount of it. The book can also serve as a demonstration that not all economists dealing with labor issues are union apologists. Almost all price instability is attributed, implicitly if not explicitly, to the "brute strength" of unions. The book further provides convincing evidence that portions of the academic community, as well as the public, are increasingly critical of the excesses of private power said to be in evidence in the collective bargaining process. Weintraub is persuaded there are few effective constraints on wage demands, for often wages and unemployment increase together. This leads to unemployment increase together. This leads to underutilization and misallocation of resources and inequities of income distribution. He is quite

economic limits to wage increases, and urge that such standards be imposed, if need be, by public authority. Finally, the book can serve its intended purpose as a springboard for lively discussion on the causes of inflation and unemployment. With sweeping grandeur, Weintraub locates "regularities in nature," dismisses inconsistencies between his theory and fact with allusions to the imperfections of the data, and so on. It is a bold assault, offered in a manner that cannot fail to evoke a response from even the most jaded economist. Notwithstanding the casual organization and the cavalier treatment of many staggering issues, this is a book of intellectual substance and appropriate territory for exploration for both the student seeking a dissertation topic and the wider community seeking evidence on the causes and cures of inflation and unemployment.

Weintraub's major analytic tool is what Bronfenbrenner has labeled the "statistical wages fund," but a relationship which Weintraub prefers to treat as a modified version of the equation of exchange. The price level is treated as the ratio of the wage bill (multiplied by a constant) to production. Thus:

$$P = \frac{kwN}{Q}$$

where P and Q are price and output levels, w the wage level, N the level of employment. The above equation can be reduced to unit labor cost terms by dividing through the average product of labor, $A=Q/N$. We are then left with

$$P = \frac{kw}{A}$$

where w/A represents per unit labor costs. The price level is determined by the constant markup of product prices over these unit costs. The Wage-Cost Markup (WCM) equation appears throughout the study as the explanation for inflation. Stating the case simply, wage demands outstrip labor productivity. With constant k (historically a value of 2, but with the upward drift in the wage/income ratio in recent years now closer to 1.9) the price increase follows. Monetary authorities are stripped of their capacity to affect prices; at best they can only minimize the growth of unemployment through inflationary policies. So long as wage adjustments are not anchored in productivity experience, there is no way the simul-

taneous burdens of inflation and unemployment can be avoided.

This dismal doctrine is not, of course, new, but Weintraub feels that good use can be made of the constancy of k in formulating wage determination standards conducive to price stability and high employment. (In his view, even if the constancy of k is not fully understood or explained, there is no reason why it should be feared or its applications for policy purposes shunned.) While he appears as a critic of the guidelines for noninflationary wage and price behavior provided in the 1962 economic report of the President, his 78 pages in chapter 6, "Toward a National Wage Policy," represent an economic defense for the substance (if not implementation procedures) of existing standards. But there are several deficiencies in the approach—should the standards be imposed—not given sufficient attention by Weintraub.

First and most obvious, the markup policies for particular firms reflect a wide range of pressures other than unit labor costs, including changes in technology, unit capital and unit material costs, shifts of the income and price elasticity of product demand, and so on. The influence of unit labor costs may be obscured or exaggerated by the range of variables that link such costs to product price. Any board assessing the legitimacy of individual wage-price adjustments may find little reassurance or guidance in the historical constancy of k .

Because Weintraub is willing to impose limits on these adjustments through public authority, sober assessment must be given to the service now rendered by the freedom of either side to apply economic sanctions against the other. That freedom, though seldom exercised, is clearly the most effective pressure yet devised to compel agreement. Can we be certain that we have devised viable or appropriate economic principles to supplant the influence of economic power?

There is much more here than an analysis of the wage policy issue. Weintraub diagnoses the interdependence of aggregate supply and demand with wage, price, and income levels and speculates on the effects of increasing employment on prices and consumption for groups classified by factor rewards. He undertakes some interesting statistical explorations of the factors increasing

and diminishing the wage share—by pitting wage increases against product price increases, employment increases against output increases, wage-employment elasticities against sale-employment elasticities and so on—and compares the actual ratio of wage shares with those that might have been obtained in the light of the net influence of these pressures.

Not all of Weintraub's conclusions seem warranted by his collection of facts. The source of actual wage/income shares in column 1 in table 24 does not appear to be the same as his data in table 29 for wage/income shares. In fact, the data in table 29 for the 1935-40 interval cannot be reconciled with the figures used in table 24. We are not provided with the price index used for the calculations in his study, although much is made of the importance of the variable to macroemployment theory. The measure he employs to determine wage rates, we learn late in the study, is full-time annual earnings.

But these are minor criticisms of a person who has much to say and whose greatest fault seems to be that he is in too much of a hurry to say it.

—PAUL SULTAN
Claremont Graduate School and
University Center

Stiff Antidote

The U.S. Economy in the 1950's: An Economic History. By Harold G. Vatter. New York, W. W. Norton & Co., Inc., 1963. 308 pp. \$5.

This book tells more than we want to know about the 1950's and much less than we need to know. This is so, in part, because Professor Vatter attempts to offer a stiff antidote to "the long tradition of storytelling that has passed for history." The antidote in the form of vast amounts of statistics and charts is indeed stiff. The reviewer wished for more "storytelling."

Nevertheless this is a useful book, particularly in its analysis of general trends. The discussion dealing with the setting and the structural changes is concise and excellent. The discussion of the unabated growth of corporate market power, of the state of labor unions and agriculture, and of our role in the world economy is

equally good. The remaining chapters are technical and thus useful mainly to experts.

As to setting, Professor Vatter suggests three overriding factors in the 1950's: The "Soviet effect" by which he means the cold war, the emergence of underdeveloped economies into policy considerations, and the resurgence of Western Europe and Japan in the international scene. All three influenced the tone and direction of the decade.

The structural changes added up to a sluggish rate of growth, particularly in the late fifties. Personal income remained as inequitably distributed as in the 1920's and the relative position of the 30 percent of the population in the lowest income brackets changed not at all throughout the decade. Movement toward a more egalitarian society was arrested. The U.S. economy became essentially one of employees and large corporations, with 85 percent of the work force engaged as employees, a considerable increase from 64 percent in 1900. Wages and profits increased in the fifties, with interest payments and rent declining as functional shares of income. Finally, the economy became mildly more "tertiary," at least in terms of the number of employees engaged in government and service industries.

The sluggish rate of growth and the attendant high and persistent rate of unemployment, according to Vatter, were the result of an inability to redistribute personal income more equitably and "the relative retarding of Federal welfarism." Not only did Federal expenditures decline as a percentage of GNP, they were overconcentrated in the military sector. A clear picture of the adverse impact of military spending emerges in this book.

Professor Vatter understresses the main issue of the decade, namely, the necessity for a tax structure which genuinely redistributes personal income in conjunction with an increase in Federal welfarism. The question "whither capitalism?" after all, hinges on economic growth.

The book will be most useful to students and professors. Historians will find the book helpful when they come to write the economic history of the 1950's.

—THOMAS J. LEARY
Federal Trade Commission

The Austrian Theory

America's Great Depression. By Murray N. Rothbard. Princeton, N.J., D. Van Nostrand Co., Inc., 1963. 361 pp. \$8.95.

This book is polemical. It "rests squarely on the Misesian interpretation of the business cycle," in an attempt to correct what the author calls a "remarkable dearth of study of the 1929 depression by economists."

The general argument is that the "cluster of errors" that develops at the crisis period is rooted in monetary intervention by banks and the government, which buoys up unsound investment in capital goods (lengthens the structure of production beyond that supportable by "rational" choices of savers and investors). The boom ends when monetary expansion ceases and is followed by a depression, the "necessary and beneficial return of the economy to normal after the distortion imposed by the boom." To end a depression as quickly as possible, this theory of the cycle posits a policy of strict laissez faire during the depression. The prevention of depression, the theory goes, could be accomplished by government's stopping any inflationary expansion from getting underway in the first place, because its inexorable consequence is to distort the structure of production through its dislocation of cost-price relationships in the setting of monopoly elements, particularly labor monopolies. Because the government is an inherently inflationary institution in the author's view, the prevention of inflation could be made possible only if fractional reserve banking were prohibited and a 100-percent gold reserve to all currency and deposits were made mandatory.

In the author's view, virtually every policy undertaken by government during depression hobbles recovery—attempts to prevent or delay liquidation, make credit easier, maintain wage rates and prices, stimulate consumption, "subsidize" unemployment by relief or unemployment compensation are all to be deplored. In short, every human effort to allay or soften the blows of depression should be abandoned and the market allowed to make the appropriate adjustments. The major blame for the 1929 depression is pinned on Herbert Hoover and his predecessor, Calvin Coolidge. The reason, however, is that they were both too interventionist.

The author's criticisms fall heavily on the Keynesians in particular; his attack upon them occupies an entire chapter. Other formulations are by no means immune: overproduction theories of the cycle are "arrant nonsense"; underconsumption theories are "absurd"; the acceleration principle is a "tissue of fallacies"; Schumpeter's theory has the misfortune of being "grounded on Walrasian rather than Austrian general economics"; Hawtrey is "one of the evil geniuses of the 1920's." The roster of economists whose thinking the author regards as muddled is legion; it includes virtually every president of the American Economic Association during the last 40 years. Nor are businessmen exempt. Owen D. Young, Gerard Swope, Bernard Baruch, Andrew Mellon were all misguided. And labor unions by definition are pure and simple monopoly sellers of labor.

Much as one might agree with the contention that too little work has been done on the Great Depression in particular and business cycles in general, it is doubtful that Rothbard's approach provides the light to match the heat of his attack on the main stream of economic analysis. His ardent attempt to resurrect the Austrian theory of the cycle does little to meet the substantial difficulties with that theory as noted, for example, by Professor Haberler in his *Prosperity and Depression*.

—GRANT N. FARR

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A Text for Canada

Labor Policy and Labor Economics in Canada.

By H. D. Woods and Sylvia Ostry. Toronto, Macmillan of Canada, 1962. 534 pp., bibliography. \$8.95, St. Martin's Press, New York.

There is no comprehensive text book on Canadian labor problems. Moreover, Professors Woods and Ostry, having explored the possibilities, suggest that far more of the main institutional and economic aspects of the Canadian labor scene must be mapped and analyzed before a text can be compiled that would be comparable to those available on American labor. Consequently, they have limited this volume to the study of labor policy, labor supply, and wages.

Professor Woods' portion of the study provides a description and commentary on the develop-

ment and functioning of the Federal and provincial legal framework of collective bargaining which historically has combined two major streams of experience. One was the growth of government machinery to compel the settlement of disputes and to protect the public interest—a development which appeared at the turn of the century in Canada and is still firmly entrenched in Australia. The other flowed from the principles embodied in the Wagner Act in the United States, which actively fostered the growth of collective bargaining institutions and sought to compel direct labor-management negotiation.

In Professor Woods' view, the stress in Canada on the public interest in industrial peace led the Federal Government and the Provinces to extend compulsory conciliation from limited to more or less general usage in industrial disputes. (For historical reasons the Provinces have jurisdiction over more than 90 percent of the labor force, while following the lead of the Federal Government in labor legislation.) Professor Woods suggests that in the process Canadian compulsory conciliation coupled with its lengthy delays served to devitalize collective bargaining in Canada and fostered a uniformity of concept and practice in the handling of labor disputes. He would limit the use of compulsion by state agencies, at least to those disputes where the public interest is clearly very high, and would encourage the development of private mechanisms in place of public devices to settle disputes so as to permit healthy experimentation and flexibility in labor policy and the practice of collective bargaining. As he sees it, Canadian compulsory conciliation has not demonstrated its superiority over voluntary systems—a line of thought that in recent years appears to have been gaining support in Canada.

Professor Ostry, for her part, has compiled considerable statistical material describing the source, distribution, and movement of Canada's labor supply, as well as changes in real and money wages as they relate to national income, occupation, industry, and geography. She does not discuss such broad issues as cyclical unemployment, wage determination, or the effects of social policy on wages. However, her limited statistics do indicate convincingly the powerful pull of the U.S. economy on the Canadian labor market, and generally indicate that some well-established concepts

in economic reasoning might not check out against statistical evidence. At the very least, her analysis makes it clear that the equalizing mechanisms postulated in economic analysis work very imperfectly.

According to the authors, much definitive documentation remains to be done in order to establish empirical foundations for generalization about the Canadian labor market. In the limited area the authors have chosen, they have made an excellent substantive contribution towards this end, while their extensive supplementary bibliography by itself should make this volume a serviceable reference for use by the student and specialist.

—HERBERT E. WEINER
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Global Problem Solving

Lessons From the Past. By Jan Tinbergen. New York, Elsevier Publishing Co., Inc., 1963. 132 pp. \$5.50.

Professor Tinbergen states his objective in writing this book as an "attempt to give a bird's eye view of the economic aspects of our human adventures during the last 50 years and the prospects of eventually overcoming our difficulties."

Three main geographic areas are discussed—East, the Communist countries; West, the other developed countries; and South, the developing countries.

The book is divided into three parts. Part I, *Analysis of the Past*, presents a very good economic analysis of the events of the past half century. This summary of the socioeconomic history in West, East, and South lays the groundwork for the balance of the book. Professor Tinbergen's selection of historical events shows exceptional insight.

Part II, *Prognosis*, contains two chapters, "Lessons from the Past" and "Where Are We Going?" They forecast the world's future economic and social trends, assuming current policies remain unchanged.

According to the author, lack of international cooperation has been the most dramatic characteristic. He accepts the equalitarian principle of the Socialists and the Communists, but goes on to state "that the only way to introduce a greater equality of incomes is to create more qualified and skilled people."

He further states that "the economic systems of both East and West will go on moving toward a common optimum, a mixed system: more elements of socialism will be added to the Western system and elements of efficiency to the Eastern system—international integration will continue, and a more rational organization of larger units will result." He later states that "without an agreement, sooner or later all hell will burst out."

Part III, *Planning*, suggests future changes in policies which might help solve some of the difficult problems we now face. Chapter 6, "Aims," discusses higher productivity, suggesting a maximum employment of 98½ to 99 percent of the working population. Other major topics covered are better distribution of income, stability of the economy as a whole, a constant general price level, and cultural and general humanitarian aims. Peace is given a high priority among the economic aims.

In "Cybernetics in the Nuclear Era," the author discusses the possible means to attain the aims set out in the rest of the text. The government "must itself create the necessary infrastructure and those industries which are not forthcoming in the private sector. It must subsidize the use of labor whenever there is a surplus of labor; it must help and advise private enterprise, especially small-scale industries and agriculture, by pilot units, industrial estates or parks, and a network of consultants." He also suggests that welfare economics can help in finding improvements to be made in our institutional setup, that wealth taxes should be used more widely (since they do not distort decisions to increase production as much as do income and private taxes), and that many important policies in economic matters must no longer be handled by national governments. Tinbergen would have the developed countries set aside 1 percent of their annual national income to aid the developing countries.

He argues that coexistence between the East and the West is necessary and can be met only on two conditions: belief that the other will survive and agreement on rules of peaceful change.

—ARDEN B. OLSEN

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Education and Training

Reports on Apprenticeship in California, Connecticut, District of Columbia, Florida, Maryland, New Jersey, New York, Tennessee and Wisconsin. By the State Advisory Committees to the U.S. Commission on Civil Rights. Washington, U.S. Commission on Civil Rights, 1964. 158 pp.

Apprenticeship: A Sure Road to Skills. By Edward E. Goshen. (In *Occupational Outlook Quarterly*, U.S. Department of Labor, Bureau of Labor Statistics, February 1964, pp. 16–20. 35 cents, Superintendent of Documents, Washington.)

Executive Training and Development. By Robert D. Gray. Pasadena, Calif., California Institute of Technology, Industrial Relations Center, 1964. 11 pp. (Circular 29.)

Your Future as a Home Economist. By Jeanne Paris. New York, Richards Rosen Press, Inc., 1964. 160 pp. (Careers in Depth.) \$2.95.

Employee Benefits

Pension Plans Under Collective Bargaining—A Reference Guide for Trade Unions. By Richard E. Shoemaker. Washington, American Federation of Labor and Congress of Industrial Organizations, 1964. 131 pp. (Publication 132.) \$1.75.

Welfare and Pension Plan Statistics: The 100 Largest Plans, 1959–61. Washington, U.S. Department of Labor, Office of Welfare and Pension Plans, 1963. 10 pp.

Some Competitive Aspects of Fringe Benefits. By R. L. Blomstrom. (In *Personnel Journal*, Swarthmore, Pa., January 1964, pp. 11–14. 75 cents.)

Health and Safety

Vital and Health Statistics Data From the National Health Survey: Impairments Due to Injury by Class and Type of Accident, United States, July 1959–June 1961. Washington, U.S. Department of Health, Education, and Welfare, Public Health Service, 1964. 35 pp. (Publication 1000—Series 10—No. 6.) 25 cents, Superintendent of Documents, Washington.

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The New Frontier NLRB. By Kenneth C. McGuiness. Washington, Labor Policy Association, Inc., 1963. 268 pp. \$6.

The Regulation of Organizational and Recognitional Picketing Under Section 8(b)(7) of the National Labor Relations Act. By Joseph R. Crowley. (In *Marquette Law Review*, Milwaukee, Wis., Winter 1963-64, pp. 295-322. \$1.25.)

The "Flint Glass Workers' Union" vs. the Glassware Industry: Union-Management Policies in a Declining Industry. By Richard H. Slavin. (In *Labor History*, Tamiment Institute, New York, Winter 1964, pp. 29-39. \$1.50.)

Basic Agreements and Joint Statements on Labor-Management Relations. Geneva, International Labor Office, 1963. 123 pp. (Labor-Management Relations Series, 17.)

Employer's Duty to Bargain About Subcontracting and Other "Management" Decisions. (In *Columbia Law Review*, New York, February 1964, pp. 294-314. \$2.)

The Duty to Bargain: Law in Search of Policy. By Robert P. Duvin. (In *Columbia Law Review*, New York, February 1964, pp. 248-292. \$2.)

The Enforcement of Collective Bargaining Contracts—A Summary. By John H. Kirkwood. (In *Labor Law Journal*, Chicago, February 1964, pp. 111-118. \$1.25.)

The Growth of Third Party Power in Industrial Disputes. By A. W. R. Carrothers, E. P. O'Neal, J. J. Carson. (From *British Columbia Labor-Management Conference*, 1963, pp. 157-186.) Vancouver, University of British Columbia, Institute of Industrial Relations, 1963. \$2.20.

Industrial Unrest in the Nation's Rail Industry. By Edward B. Shils. (In *Labor Law Journal*, Chicago, February 1964, pp. 81-110. \$1.25.)

Labor Peace—Sweden's Formula. By Eli Weisman. Detroit, United Automobile Workers, 1964. 6 pp. (Reprinted from *American Swedish Monthly*, September 1963.)

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Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training by the U.S. Department of Labor, Transmitted to the Congress March 1964. Washington, 1964. xix, 279 pp. \$1.50, Superintendent of Documents, Washington.

Nation's Manpower Revolution: Relating to the Training and Utilization of the Manpower Resources of the Nation, Parts 7-9. Hearings before the Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare, U.S. Senate, 88th Congress, 1st session. Washington, 1963 and 1964. 3 vols., pp. 2277-3347. Available from Superintendent of Documents, Washington.

Employment Effects of a Local Minimum Wage. By Maurice Benewitz and Robert E. Weintraub. (In *Industrial and Labor Relations Review*, Ithaca, N.Y., January 1964, pp. 276-288. \$1.75.)

Electronic Computers in Australia: Employment and Personnel Aspects—Employment Effects. By K. J. Creek and N. L. Webb. (In *Personnel Practice Bulletin*, Commonwealth of Australia, Department of Labor and National Service, Melbourne, December 1963, pp. 14-22. 5s.)

Women Workers in a Changing World: Employment of Women With Family Responsibilities. Geneva, International Labor Office, 1964. 144 pp. (Report VI(2) prepared for International Labor Conference, 48th session, 1964.) \$1.50. Distributed in United States by Washington Branch of ILO.

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The Role of the United States Employment Service in a Changing Economy. By William Haber and Daniel H. Kruger. Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, 1964. 122 pp. Free.

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Labor Organizations

Free Speech, Fair Trials, and Factionalism in Union Discipline. (In *Yale Law Journal*, New Haven, Conn., January 1964, pp. 472-492. \$2.50.)

Counsel Fees for Union Officers Under the Fiduciary Provision of Landrum-Griffin. (In *Yale Law Journal*, New Haven, Conn., January 1964, pp. 443-471. \$2.50.)

The United Automobile Workers: Past, Present, and Future. By Walter P. Reuther. (In *Virginia Law Review*, Charlottesville, January 1964, pp. 58-103. \$2.)

Workers Vote: The Political Behavior of Men in the Printing Trade. By Gene N. Levine. Totowa, N.J., Bedminster Press, 1963. 359 pp.

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Personnel Management

Communicating With Employees. By Robert P. Cort. Waterford, Conn., National Foremen's Institute, Bureau of Business Practice, 1963. 148 pp., bibliography.

Psychological Testing in Industry: A Critical Evaluation. By Erwin S. Stanton. (In *Personnel Journal*, Swarthmore, Pa., January 1964, pp. 27-32. 75 cents.)

Supervisory Leadership: An International Comparison. By William F. Whyte and Lawrence K. Williams. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1963. 8 pp. (Reprint 143; from proceedings of a symposium held by the Council for International Progress in Management.) \$1.

Prices and Consumption Economics

Consumer Expenditures and Income: Northern New Jersey, 1960-61 and Supplement 1. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1963. 18 and 9 pp., respectively. 2d report. (BLS Report 237-63.) Other reports in this series include:

	Report No.
<i>Wichita, Kans., 1961; Supplement 1</i>	237-67
<i>Hartford, Conn., 1961; Supplement 1</i>	237-68
<i>Durham, N.C., 1961; Supplement 1</i>	237-69
<i>Green Bay, Wis., 1961; Supplement 1</i>	237-73
<i>Honolulu, Hawaii, 1961; Supplement 1</i>	237-78

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Economics of Public Welfare. By Ewan Clague. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1964. 6 pp. (BLS Report 238-4: Analytical Report on Survey of Consumer Expenditures, 1960-61.)

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The Soviet Price Reform Discussion. By Morris Bornstein. (In *Quarterly Journal of Economics*, Cambridge, Mass., February 1964, pp. 15-48. \$1.75.)

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Health and Safety Aspects of Automation and Technological Change. A collection of abstracts, 1956 to 1962, prepared by the International Labor Office. Washington, U.S. Department of Labor, Office of Manpower, Automation and Training, 1964. 181 pp.

Automation and Employment. By S. Moos. (In *Political Quarterly*, London, January-March 1964, pp. 80-86.)

Jobs, Machines, and People (A Conversation). By Ralph Helstein, Gerard Piel, Robert Theobald. Santa Barbara, Calif., Center for the Study of Democratic Institutions, 1964. 24 pp. Single copy free.

Social Security

The Social Security Program in the United States. By Charles I. Schottland. New York, Appleton-Century-Crofts, Division of Meredith Publishing Co., 1963. 209 pp. \$5.95.

State Workmen's Compensation Laws: A Comparison of Major Provisions With Recommended Standards. U.S. Department of Labor, Bureau of Labor Standards, 1964. 43 pp. (Bulletin 212, rev. 1964.) 35 cents, Superintendent of Documents, Washington.

The General Structure of Law Applicable to Employee Injury and Death. By Ben F. Small. (In *Vanderbilt Law Review*, Nashville, Tenn., October 1963, pp. 1021-1037. \$2.)

Wages and Hours

Occupational Wage Survey: San Bernardino-Riverside-Ontario, Calif., September 1963. Washington, U.S.

Department of Labor, Bureau of Labor Statistics, 1963. 28 pp. (Bulletin 1385-9.) 25 cents, Superintendent of Documents, Washington. Other bulletins in this series include:

	Bulletin No.	Pages	Price (cents)
Seattle, Wash., September 1963-----	1385-10	28	25
Cleveland, Ohio, September 1963-----	1385-11	22	25
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Boston, Mass., October 1963-----	1385-16	32	25
Washington, D.C.-Md.-Va., October 1963-----	1385-17	22	25
Waterloo, Iowa, November 1963----	1385-18	18	20

Industry Wage Survey: Communications, 1962. By Joseph C. Bush. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1964. 18 pp. (Bulletin 1389.) 20 cents, Superintendent of Documents, Washington.

Industry Wage Survey: Part I, Motor Vehicles; Part II, Motor Vehicle Parts, April 1963. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1964. 72 pp. (Bulletin 1393.) 45 cents, Superintendent of Documents, Washington.

Job Evaluation—Text and Cases. By John A. Patton, C. L. Littlefield, Stanley Allen Self. Homewood, Ill., Richard D. Irwin, Inc., 1964. 487 pp., bibliography. 3d ed. \$11.35.

Wage Rates and Fringe Benefits in the Manufacturing Industries of South Carolina. By David R. Pender and Donald O. Clark. Columbia, University of South Carolina, Bureau of Business and Economic Research, 1964. 183 pp. (Essays in Economics No. 9.)

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Report of the [Congressional] Joint Economic Committee on the January 1964 Economic Report of the President With Minority and Additional Views. Washington, 1964. 74 pp. (S. Rept. 93, 88th Cong., 2d sess.) 25 cents, Superintendent of Documents, Washington.

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Technology and Economic Development. New York, Alfred A. Knopf, Inc., 1963. 205 pp., bibliography. (A Scientific American Book.)

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Statistics on Incomes, Prices, Employment, and Production [Great Britain]. London, Ministry of Labor, December 1963. 134 pp. \$3, British Information Services, Sales Section, New York.

Introduction to Statistics. By William Mendenhall. Belmont, Calif., Wadsworth Publishing Co., Inc., 1964. 305 pp. \$11.50.

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	
	1964		1963										1961		1960	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1961	1960	
	Total, both sexes															
Total labor force.....	75,259	74,514	75,201	76,000	76,086	75,811	77,167	77,917	77,901	75,864	74,897	74,382	73,999	74,175	73,126	
Civilian labor force.....	72,527	71,793	72,461	73,261	73,344	73,062	74,418	75,173	75,165	73,127	72,161	71,650	71,275	71,603	70,612	
Unemployment.....	4,524	4,565	3,846	3,930	3,453	3,516	3,857	4,322	4,846	4,066	4,063	4,501	4,918	4,806	3,931	
Unemployment rate seasonally adjusted ²	5.4	5.6	5.5	5.9	5.5	5.6	5.5	5.6	5.7	5.9	5.7	5.6	6.1	6.7	5.6	
Unemployed 4 weeks or less.....	1,669	2,069	1,734	1,955	1,623	1,692	1,670	1,907	2,802	1,833	1,597	1,553	1,814	1,897	1,799	
Unemployed 5-10 weeks.....	1,236	988	859	767	662	617	806	1,221	806	679	672	963	1,315	964	823	
Unemployed 11-14 weeks.....	455	402	324	349	251	332	430	200	222	262	371	598	485	411	353	
Unemployed 15-26 weeks.....	654	605	492	401	443	382	438	376	502	649	743	696	684	728	502	
Unemployed over 26 weeks.....	510	501	436	463	476	503	510	557	514	643	681	691	619	804	454	
Employment.....	68,002	67,228	68,615	69,325	69,891	69,546	70,561	70,851	70,319	69,061	68,097	67,148	66,358	66,796	66,681	
Nonagricultural.....	64,071	63,234	64,576	64,548	64,541	64,220	65,065	64,882	64,365	63,833	63,424	62,812	62,309	61,333	60,958	
Worked 35 hours or more.....	48,953	47,179	50,817	46,129	50,960	50,462	47,678	47,214	49,804	50,833	46,505	48,669	47,063	47,257	46,388	
Worked 15-34 hours.....	8,694	9,637	7,679	12,456	7,402	7,124	6,985	6,556	7,015	7,261	10,455	7,588	8,573	7,522	8,249	
Worked 1-14 hours.....	4,321	4,164	4,092	3,935	3,893	3,645	3,261	3,332	3,580	4,144	3,856	4,119	4,238	3,610	3,279	
With a job but not at work ³	2,103	2,255	1,885	2,029	2,288	2,990	7,142	7,780	3,966	2,093	2,608	2,436	2,432	2,946	3,042	
Agricultural.....	3,931	3,993	4,039	4,777	5,350	5,326	5,496	5,969	5,954	5,178	4,673	4,437	4,049	5,463	5,723	
Worked 35 hours or more.....	2,108	2,108	2,179	2,994	3,716	3,619	3,702	4,130	4,199	3,489	3,198	2,587	2,261	3,540	3,811	
Worked 15-34 hours.....	1,077	1,042	1,100	1,196	1,094	1,170	1,155	1,237	1,226	1,196	1,041	1,042	1,040	1,245	1,279	
Worked 1-14 hours.....	524	549	476	411	442	424	444	466	413	415	305	487	483	477	444	
With a job but not at work ³	223	294	284	176	98	112	196	187	119	80	129	241	267	200	190	
	Males															
Total labor force.....	49,956	49,731	49,924	50,285	50,368	50,602	52,060	52,477	52,204	50,483	50,010	49,675	49,503	49,918	49,507	
Civilian labor force.....	47,255	47,041	47,215	47,677	47,657	47,884	49,342	49,765	49,500	47,778	47,306	46,975	46,816	47,378	47,025	
Unemployment.....	2,826	2,881	2,477	2,253	1,874	1,902	2,224	2,516	2,779	2,434	2,600	3,013	3,293	3,060	2,541	
Employment.....	44,429	44,160	44,739	45,324	45,784	45,983	47,118	47,249	46,722	45,345	44,706	43,962	43,523	44,318	44,485	
Nonagricultural.....	41,029	40,686	41,294	41,828	41,644	41,880	42,733	42,538	42,078	41,205	40,762	40,251	39,994	39,811	39,807	
Worked 35 hours or more.....	33,782	32,879	34,799	32,166	35,387	35,317	34,007	33,791	35,283	35,055	32,806	33,648	32,710	32,984	32,511	
Worked 15-34 hours.....	4,187	4,530	3,466	6,442	3,238	3,205	3,345	3,060	3,256	3,161	4,941	3,439	4,026	3,587	4,100	
Worked 1-14 hours.....	1,795	1,777	1,718	1,686	1,610	1,552	1,441	1,437	1,551	1,795	1,658	1,678	1,779	1,511	1,360	
With a job but not at work ³	1,265	1,452	1,311	1,292	1,410	1,808	3,941	4,250	1,988	1,193	1,357	1,468	1,481	1,729	1,836	
Agricultural.....	3,400	3,474	3,445	3,836	4,139	4,103	4,385	4,711	4,644	4,140	3,945	3,711	3,529	4,508	4,678	
Worked 35 hours or more.....	1,918	1,908	1,951	2,622	3,121	3,067	3,232	3,591	3,634	3,071	2,888	2,888	2,074	3,132	3,265	
Worked 15-34 hours.....	803	795	820	754	626	631	669	681	637	702	700	730	788	827	792	
Worked 1-14 hours.....	475	497	409	307	309	301	315	329	276	296	247	384	423	370	348	
With a job but not at work ³	203	274	263	154	84	102	168	111	96	68	112	216	246	179	172	
	Females															
Total labor force.....	25,302	24,783	25,277	25,715	25,718	25,209	25,108	25,440	25,697	25,381	24,886	24,707	24,492	24,257	23,619	
Civilian labor force.....	25,271	24,752	25,246	25,684	25,687	25,178	25,076	25,408	25,665	25,349	24,854	24,675	24,460	24,225	23,587	
Unemployment.....	1,698	1,684	1,369	1,682	1,580	1,615	1,633	1,806	2,067	1,632	1,463	1,489	1,625	1,747	1,390	
Employment.....	23,573	23,068	23,877	24,001	24,107	23,563	23,443	23,602	23,598	23,717	23,391	23,186	22,835	22,478	22,196	
Nonagricultural.....	23,042	22,548	23,282	23,061	22,897	22,340	22,332	22,344	22,287	22,679	22,663	22,560	22,315	21,523	21,151	
Worked 35 hours or more.....	15,170	14,301	16,020	13,962	15,572	15,147	13,672	13,424	14,522	15,327	13,699	15,022	14,356	14,273	13,877	
Worked 15-34 hours.....	4,507	5,057	4,213	6,014	4,164	3,921	3,640	3,496	3,760	4,099	5,515	4,149	4,547	3,934	4,149	
Worked 1-14 hours.....	2,526	2,387	2,377	2,349	2,282	2,092	1,819	1,895	2,029	2,352	2,198	2,430	2,459	2,098	1,919	
With a job but not at work ³	838	803	674	736	879	1,183	3,529	3,529	1,978	900	1,251	960	950	1,217	1,206	
Agricultural.....	531	520	594	940	1,210	1,223	1,111	1,258	1,310	1,038	728	625	520	955	1,045	
Worked 35 hours or more.....	190	199	224	372	597	551	467	539	564	418	311	204	187	408	445	
Worked 15-34 hours.....	273	247	280	443	467	537	485	556	590	493	341	312	255	419	486	
Worked 1-14 hours.....	49	53	69	104	134	122	129	137	135	117	59	83	57	107	96	
With a job but not at work ³	20	20	21	22	15	10	28	26	23	12	17	26	20	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 industry¹

[In thousands]

Revised series: see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Total employees.....	56,949	56,866	58,585	58,220	58,426	58,211	57,651	57,422	57,609	56,967	56,505	55,714	55,374	57,174	55,841
Mining	612	617	631	634	637	641	646	641	650	643	632	616	618	634	652
Metal mining.....	82.0	82.6	83.5	84.1	84.4	84.7	84.4	84.0	83.0	81.5	78.7	79.5	82.4	82.8	82.8
Iron ores.....	26.3	26.7	27.6	27.6	27.9	28.1	27.9	26.9	26.5	24.4	23.1	22.9	25.9	25.5	25.5
Copper ores.....	28.1	28.0	27.8	27.6	27.5	27.5	27.5	27.9	27.9	28.5	28.0	28.0	27.9	28.5	28.5
Coal mining.....	135.4	137.1	136.1	136.0	134.5	135.1	125.9	138.8	141.5	142.8	141.7	147.3	138.7	151.7	
Bituminous.....	124.1	125.8	124.8	125.0	123.8	124.5	114.5	128.0	130.5	131.9	130.5	135.8	127.6	139.8	
Crude petroleum and natural gas.....	293.5	295.0	291.5	289.5	295.0	297.9	302.2	300.3	295.0	289.7	288.1	287.8	293.4	299.2	
Crude petroleum and natural gas fields.....	161.0	161.6	161.2	161.6	163.3	166.5	167.5	166.3	163.0	162.9	162.3	163.1	163.6	167.4	
Oil and gas field services.....	132.5	133.4	130.3	127.9	131.7	131.4	134.7	134.0	132.0	126.8	125.8	124.7	129.9	131.8	
Quarrying and nonmetallic mining.....	106.3	116.1	122.6	127.1	126.7	128.2	128.5	127.0	123.3	118.1	107.7	103.8	119.7	118.7	
Contract construction	2,659	2,606	2,925	3,176	3,333	3,378	3,437	3,364	3,232	3,049	2,846	2,556	2,470	3,029	2,909
General building contractors.....	797.2	889.2	972.4	1,011.6	1,026.4	1,055.9	1,033.5	984.6	916.0	804.0	768.6	741.7	820.4	881.1	
Heavy construction.....	432.4	536.1	632.4	706.3	723.2	735.5	718.4	691.0	635.7	551.0	451.0	420.7	604.1	593.8	
Highway and street construction.....	191.3	256.3	329.9	387.5	398.8	404.6	392.3	377.6	341.5	274.9	203.8	181.9	312.2	298.1	
Other heavy construction.....	241.1	279.8	302.5	318.8	324.4	330.9	326.1	313.4	294.2	276.1	247.2	238.8	291.9	295.7	
Special trade contractors.....	1,376.5	1,499.7	1,571.2	1,615.1	1,628.4	1,645.2	1,612.0	1,556.1	1,497.2	1,430.9	1,336.5	1,308.0	1,504.5	1,434.5	
Manufacturing	16,982	16,938	17,139	17,229	17,367	17,398	17,199	17,050	17,111	16,960	16,845	16,756	16,683	17,035	16,859
Durable goods.....	9,675	9,666	9,765	9,789	9,811	9,801	9,609	9,666	9,738	9,673	9,593	9,508	9,474	9,659	9,493
Nondurable goods.....	7,307	7,272	7,374	7,440	7,556	7,597	7,590	7,384	7,373	7,287	7,252	7,248	7,209	7,376	7,367
Durable goods															
Ordnance and accessories.....	272.5	274.6	277.6	276.4	276.7	276.4	275.7	276.2	275.5	274.5	273.9	277.9	279.2	276.7	270.7
Ammunition, except for small arms.....	194.2	194.4	196.0	193.8	193.3	192.4	191.1	191.1	189.3	187.7	186.9	189.8	190.6	191.0	183.4
Sighting and fire control equipment.....	77.7	77.2	78.3	76.6	76.2	76.2	76.1	76.6	76.2	75.8	75.8	76.1	76.0	76.2	76.1
Other ordnance and accessories.....	57.0	58.0	58.6	59.0	59.2	58.8	58.5	58.5	58.2	57.6	57.6	58.0	57.7	58.4	55.1
Lumber and wood products, except furniture.....	559.3	562.2	584.4	597.2	605.9	614.1	608.8	589.4	584.9	594.6	571.9	560.9	556.1	585.8	588.7
Logging camps and logging contractors.....	73.9	75.2	82.3	86.8	89.9	93.3	89.9	82.8	78.5	82.4	74.1	71.1	72.6	81.5	83.0
Sawmills and planing mills.....	237.4	238.2	248.3	254.8	258.0	261.5	263.1	256.2	255.4	257.1	248.3	244.9	241.8	252.8	255.7
Millwork, plywood, and related products.....	151.7	152.6	154.8	156.3	157.6	158.3	154.7	150.6	149.9	155.1	151.7	148.0	146.4	152.6	151.9
Wooden containers.....	33.6	33.6	34.8	34.6	35.0	35.7	36.5	36.4	36.6	36.0	35.0	34.3	34.0	35.3	36.4
Miscellaneous wood products.....	62.7	62.6	64.2	64.7	65.4	65.3	64.6	63.4	64.5	64.0	62.8	62.6	61.3	63.7	61.8
Furniture and fixtures.....	393.7	389.8	395.5	397.8	399.7	399.1	396.7	386.5	387.7	382.8	382.6	383.0	382.3	389.8	385.1
Household furniture.....	290.5	287.0	290.7	291.2	291.5	289.3	286.7	279.4	280.7	278.0	278.9	278.6	277.3	283.3	276.0
Office furniture.....	26.4	27.0	27.2	27.2	27.5	27.4	27.3	25.8	26.9	26.6	26.8	27.0	27.2	27.1	27.8
Partitions; office and store fixtures.....	35.4	36.3	37.8	39.3	40.5	40.9	40.4	39.0	38.2	37.8	38.7	38.9	39.0	40.6	
Other furniture and fixtures.....	41.1	41.0	41.5	41.6	41.4	41.9	41.8	40.9	41.1	40.0	39.1	38.7	38.9	40.5	
Stone, clay, and glass products.....	584.4	582.5	603.6	619.9	623.9	629.9	635.6	630.0	626.8	615.3	599.6	574.1	563.2	607.5	594.0
Flat glass.....	31.9	32.3	32.6	32.2	31.6	31.3	30.3	30.2	30.1	29.9	29.3	29.5	30.8	30.4	
Glass and glassware, pressed or blown.....	108.6	111.8	113.4	113.8	115.9	116.7	116.1	115.6	113.6	112.6	110.9	109.5	113.1	109.6	
Cement, hydraulic.....	36.9	37.3	38.2	40.1	40.9	42.0	42.6	42.7	42.3	41.0	40.0	36.3	35.4	39.9	
Structural clay products.....	64.0	63.3	67.3	68.5	68.7	70.1	72.0	71.3	71.1	69.8	67.7	63.9	62.9	68.1	
Pottery and related products.....	44.3	44.5	45.4	45.1	44.8	44.4	43.7	43.5	43.7	43.6	43.0	42.7	43.9	43.8	
Concrete, gypsum, and plaster products.....	157.7	157.0	167.8	177.2	180.9	183.3	185.4	184.0	183.3	177.3	168.0	164.8	148.6	171.8	
Other stone and mineral products.....	120.8	120.2	121.3	121.9	121.3	121.6	122.8	122.4	121.3	120.3	118.5	116.5	115.5	120.0	
Primary metal industries.....	1,183.4	1,168.8	1,163.7	1,152.0	1,152.7	1,166.0	1,170.8	1,195.9	1,209.1	1,191.6	1,174.8	1,151.9	1,136.4	1,165.7	1,163.8
Blast furnace and basic steel products.....	590.5	580.3	576.5	568.8	571.4	581.8	593.2	615.9	623.9	612.2	597.9	578.5	564.3	586.3	591.9
Iron and steel foundries.....	207.8	204.9	203.0	201.3	200.0	201.7	196.2	198.4	200.5	198.4	197.2	195.1	194.4	198.3	
Nonferrous smelting and refining.....	70.1	69.5	69.7	69.9	69.7	70.2	70.3	69.6	68.4	67.6	66.7	66.5	66.8	68.1	
Nonferrous rolling, drawing, and extruding.....	184.2	184.3	184.3	182.7	182.7	182.7	183.5	183.0	185.4	183.1	182.0	181.4	181.0	182.7	
Nonferrous foundries.....	72.4	71.9	71.8	71.3	71.0	71.3	70.4	70.9	71.4	71.3	71.5	71.5	71.3	70.0	
Miscellaneous primary metal industries.....	58.4	57.9	58.4	58.0	57.9	58.3	57.2	57.4	58.3	58.2	58.6	58.7	58.7	58.2	
Fabricated metal products.....	1,160.9	1,161.1	1,175.6	1,177.8	1,182.7	1,178.6	1,160.5	1,149.1	1,163.0	1,147.6	1,133.7	1,121.5	1,119.7	1,152.7	1,127.5
Metal cans.....	60.8	59.3	60.3	61.2	61.6	64.2	65.5	65.0	64.6	63.0	62.0	60.2	58.8	62.0	
Cutlery, handtools, and general hardware.....	140.7	140.8	141.4	139.9	138.6	137.3	132.6	130.5	135.5	134.6	134.8	134.8	135.7	136.0	
Heating equipment and plumbing fixtures.....	78.5	78.4	79.0	79.0	79.3	79.2	79.0	77.5	77.0	75.9	74.8	74.3	74.5	76.9	
Fabricated structural metal products.....	329.3	331.2	338.4	343.6	347.4	351.4	352.0	346.6	344.3	335.9	327.5	320.8	319.7	337.5	
Screw machine products, bolts, etc.....	89.3	88.7	89.2	88.6	88.8	89.2	88.7	87.6	89.1	88.5	88.3	88.9	88.8	88.7	
Metal stampings.....	203.8	204.6	205.9	205.9	205.4	198.8	187.4	189.0	196.8	196.1	194.4	192.7	193.1	196.8	
Coating, engraving, and allied services.....	71.1	70.9	72.6	73.0	73.6	72.3	70.3	69.1	70.2	69.7	68.7	66.9	67.1	70.0	
Miscellaneous fabricated wire products.....	59.2	59.5	59.7	58.9	59.5	58.4	58.0	57.0	57.9	57.7	57.3	56.8	56.8	56.7	
Miscellaneous fabricated metal products.....	128.2	127.7	129.1	127.7	128.5	127.8	127.0	126.8	127.6	126.2	125.9	125.6	125.2	126.8	

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

Industry	[In thousands]												Revised series; see box, p. 470.		
	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Machinery.....	1,552.5	1,556.2	1,550.0	1,531.1	1,527.5	1,524.7	1,516.4	1,512.4	1,523.1	1,518.4	1,514.4	1,514.4	1,506.4	1,520.3	1,489.8
Engines and turbines.....	85.1	85.4	86.3	86.1	86.2	86.3	85.4	84.7	84.5	84.4	85.7	85.7	85.9	85.6	84.0
Farm machinery and equipment.....	211.0	221.4	219.4	217.2	216.9	217.6	216.6	214.6	215.1	212.6	211.6	210.8	210.4	214.4	210.7
Construction and related machinery.....	281.6	280.1	279.5	273.9	272.4	270.9	269.1	268.3	271.0	269.4	269.4	268.4	266.8	270.4	261.7
Metalworking machinery and equipment.....	171.2	170.7	170.0	169.3	168.4	167.9	166.9	166.8	168.5	168.0	168.5	168.1	167.5	168.2	169.0
Special industry machinery.....	237.1	235.6	235.1	231.8	232.2	233.4	232.2	231.0	231.1	228.2	229.5	229.3	228.0	231.1	227.6
Office, computing, and accounting machines.....	155.7	155.3	155.8	154.0	154.4	153.9	153.6	152.8	153.0	152.3	153.5	153.9	153.8	153.8	156.3
Service industry machines.....	100.5	100.6	100.2	100.1	100.3	99.7	98.7	101.2	102.9	103.3	101.9	100.1	98.8	100.5	100.8
Miscellaneous machinery.....	184.5	183.3	183.2	181.5	180.1	179.0	178.8	175.7	177.0	174.9	173.7	173.0	171.2	176.5	167.4
Electrical equipment and supplies.....	1,561.6	1,568.0	1,581.7	1,584.9	1,595.4	1,590.5	1,571.7	1,566.3	1,580.4	1,572.8	1,572.4	1,577.4	1,586.9	1,581.5	1,579.2
Electric distribution equipment.....	170.2	170.0	170.6	170.3	169.0	169.5	170.5	168.6	168.5	167.8	167.6	167.4	168.0	168.9	167.8
Electrical industrial apparatus.....	190.0	188.2	188.1	187.6	187.8	187.8	187.8	187.8	188.2	186.8	186.1	185.7	186.3	187.2	185.4
Household appliances.....	157.3	157.3	160.3	161.9	160.8	157.9	153.9	152.6	155.0	153.4	151.9	149.2	146.8	154.7	150.2
Electric lighting and wiring equipment.....	152.9	151.7	152.8	153.8	154.3	153.0	150.2	146.5	147.4	146.0	147.0	147.2	146.7	149.3	143.2
Radio and TV receiving sets.....	109.7	111.9	116.9	119.7	122.6	122.2	118.3	113.5	112.1	106.9	103.7	104.9	105.3	113.0	110.7
Communication equipment.....	411.6	418.2	419.4	417.5	425.0	426.1	425.5	427.1	432.0	435.8	441.0	447.1	452.1	433.7	445.0
Electronic components and accessories.....	260.8	261.3	262.5	263.8	264.3	263.8	265.7	261.6	265.7	265.2	264.7	265.5	265.9	264.8	266.8
Miscellaneous electrical equipment and supplies.....	109.1	109.4	111.1	110.3	111.6	110.2	99.8	108.6	111.5	110.9	110.4	110.4	111.8	109.9	110.0
Transportation equipment.....	1,648.9	1,654.3	1,664.8	1,659.2	1,650.4	1,626.8	1,487.0	1,600.4	1,620.7	1,620.4	1,616.5	1,603.7	1,607.5	1,614.2	1,542.3
Motor vehicles and equipment.....	770.7	776.4	782.8	777.3	768.3	752.3	617.6	732.1	747.0	745.8	738.9	727.4	730.8	738.4	691.6
Aircraft and parts.....	650.1	653.3	656.0	654.0	652.1	648.6	644.5	643.3	644.9	644.5	647.6	649.4	653.0	649.4	634.6
Ship and boat building and repairing.....	138.4	138.5	139.2	141.2	142.1	140.4	141.6	141.8	144.0	148.9	149.4	149.3	147.2	144.2	141.3
Railroad equipment.....	48.2	47.7	47.2	47.3	47.3	45.1	44.1	44.3	44.7	42.3	43.0	42.3	41.6	44.1	40.6
Other transportation equipment.....	37.9	39.1	39.5	40.6	40.6	40.4	39.2	38.9	40.1	38.9	37.6	35.3	34.9	38.0	34.2
Instruments and related products.....	373.5	373.5	376.6	376.8	375.8	375.5	376.2	372.0	373.5	368.1	367.3	366.0	364.8	371.5	360.4
Engineering and scientific instruments.....	72.4	72.7	73.0	73.0	73.2	73.1	73.9	73.1	73.9	73.4	73.6	74.1	74.1	73.6	73.9
Mechanical measuring and control devices.....	99.4	98.8	99.0	97.1	96.5	97.1	98.0	97.9	97.9	97.0	97.4	97.5	97.3	97.5	95.0
Optical and ophthalmic goods.....	43.0	42.6	42.6	42.6	42.2	42.0	41.2	41.1	42.0	41.5	41.5	40.9	40.9	41.5	40.6
Surgical, medical, and dental equipment.....	53.7	53.7	53.9	54.0	53.8	54.0	53.8	52.3	53.6	53.0	52.7	52.3	52.1	53.1	50.1
Photographic equipment and supplies.....	77.0	78.0	78.5	78.2	77.8	77.8	78.3	77.7	76.0	74.3	73.8	73.1	72.7	75.9	72.4
Watches and clocks.....	29.0	30.4	31.6	31.9	31.9	31.5	31.0	29.9	30.1	28.9	28.8	28.1	27.7	29.8	28.3
Miscellaneous manufacturing industries.....	383.9	374.7	391.2	415.4	420.2	419.2	409.3	388.2	393.2	388.7	381.2	377.0	371.6	393.4	391.2
Jewelry, silverware and plated ware.....	43.4	43.3	43.7	43.8	43.4	43.1	41.9	38.8	41.7	41.5	41.6	41.5	41.9	42.1	42.3
Toys, amusement and sporting goods.....	88.4	98.0	115.9	122.8	120.1	116.0	106.3	105.2	103.6	96.8	92.3	86.7	103.8	102.5	102.5
Pens, pencils, office and art materials.....	31.6	33.2	33.4	32.2	32.4	32.0	31.3	31.9	32.1	31.7	31.4	30.8	31.9	31.0	31.0
Costume jewelry, buttons, and notions.....	54.8	56.8	58.3	58.8	58.0	60.1	59.9	56.5	58.0	56.1	55.2	56.1	56.4	57.3	57.8
Other manufacturing industries.....	158.8	156.6	159.5	164.0	163.0	163.5	159.5	155.3	156.4	155.4	155.9	155.7	155.8	158.3	157.6
<i>Nondurable goods</i>															
Food and kindred products.....	1,641.9	1,664.2	1,709.8	1,752.0	1,832.8	1,872.6	1,864.6	1,779.5	1,732.0	1,679.9	1,659.4	1,653.2	1,648.7	1,738.4	1,759.9
Meat products.....	300.0	303.5	311.6	313.5	314.0	313.6	312.9	310.7	307.8	303.6	300.6	299.1	301.8	307.9	312.9
Dairy products.....	283.9	284.4	287.9	289.3	293.5	298.9	305.8	307.9	305.2	297.5	294.2	292.0	290.6	296.2	303.4
Canned and preserved foods, except meats.....	186.2	201.8	228.4	297.8	354.2	341.6	264.3	227.4	203.2	197.5	197.4	190.1	241.7	253.7	253.7
Grain mill products.....	128.9	129.9	130.1	130.1	133.8	135.1	136.1	135.9	134.1	131.1	127.8	128.6	127.6	131.0	130.8
Bakery products.....	287.1	287.6	291.8	293.1	294.0	292.8	295.1	296.0	294.0	290.7	289.4	290.6	289.7	292.3	293.6
Sugar.....	44.1	47.2	50.7	48.8	33.0	31.4	30.7	30.0	30.0	28.9	28.9	28.4	29.8	35.6	35.3
Confectionery and related products.....	79.5	78.1	82.2	84.3	83.4	80.5	76.3	69.9	72.6	70.8	71.3	75.0	75.4	76.5	75.4
Beverages.....	207.8	210.1	214.7	217.0	220.5	220.3	223.9	223.9	219.9	213.2	209.5	206.7	202.4	214.7	212.3
Miscellaneous food and kindred products.....	139.0	140.3	142.5	145.6	147.0	144.2	141.5	140.2	140.1	139.2	140.2	140.4	141.3	142.0	142.4
Tobacco manufactures.....	85.8	88.1	95.2	99.5	106.6	107.5	100.5	74.9	75.6	78.6	80.8	80.8	86.1	89.2	91.0
Cigarettes.....	37.6	38.2	38.0	38.0	38.0	38.6	38.6	38.2	38.1	37.5	37.6	37.6	37.1	37.9	37.5
Cigars.....	22.7	23.4	23.9	23.7	23.7	23.4	23.0	21.9	22.8	22.8	23.0	23.3	23.3	23.1	23.0
Textile mill products.....	886.9	880.7	887.9	894.8	897.7	895.8	896.5	884.0	895.1	887.6	886.9	884.8	881.2	889.5	902.6
Cotton broad woven fabrics.....	233.5	233.4	234.3	233.8	234.2	233.7	234.0	232.4	233.0	232.5	233.0	233.5	233.4	233.6	240.4
Silk and synthetic broad woven fabrics.....	85.1	85.0	85.4	85.1	84.3	83.7	84.1	82.5	83.6	82.6	82.1	81.9	81.9	83.3	81.7
Weaving and finishing broad wools.....	46.7	46.4	45.9	45.8	47.2	47.8	49.0	49.5	50.4	50.2	50.7	50.8	50.7	51.8	51.8
Narrow fabrics and smallwares.....	26.8	26.9	27.2	27.3	27.4	27.2	27.0	26.1	27.2	26.9	26.8	26.7	26.8	27.0	27.6
Knitting.....	208.1	204.1	208.3	216.5	219.7	219.6	219.5	216.4	218.3	215.3	213.3	212.1	208.8	214.0	219.4
Finishing textiles, except wool and knit.....	75.0	74.7	75.2	75.0	74.4	74.3	74.3	73.6	74.5	74.1	74.5	74.4	74.1	74.4	74.9
Floor covering.....	38.3	38.7	38.7	38.7	38.5	37.9	37.8	37.0	37.1	37.7	37.7	37.7	38.3	37.9	37.4
Yarn and thread.....	107.0	106.4	106.7	106.0	105.5	105.5	105.7	101.9	104.9	103.6	103.1	102.4	102.4	104.2	103.3
Miscellaneous textile goods.....	66.2	65.5	66.2	66.6	66.5	66.1	65.1	64.6	66.1	65.3	65.7	65.3	64.8	65.7	66.3

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

[In thousands]

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
<i>Nondurable goods—Continued</i>															
Apparel and related products.....	1,319.5	1,281.4	1,297.9	1,310.1	1,329.6	1,329.0	1,331.9	1,280.0	1,289.2	1,288.2	1,280.2	1,301.2	1,284.0	1,297.7	1,266.7
Men's and boys' suits and coats.....	115.7	115.0	115.2	113.2	113.5	116.1	116.6	113.9	118.8	117.9	116.3	117.7	117.9	116.3	117.2
Men's and boys' furnishings.....	328.3	322.4	326.7	330.1	333.6	335.5	340.2	330.2	334.1	330.3	326.8	323.6	322.5	329.4	319.0
Women's, misses', and juniors' outerwear.....	410.9	392.0	391.8	392.0	399.8	400.6	404.5	384.9	380.2	388.4	390.5	404.8	396.0	392.4	381.7
Women's and children's undergarments.....	120.0	117.8	121.6	125.6	124.9	122.9	120.8	113.4	116.0	116.1	116.4	116.5	115.8	118.7	116.5
Hats, caps, and millinery.....	82.5	80.6	78.2	78.7	80.0	79.6	81.3	81.2	82.3	79.6	75.4	81.3	80.6	79.7	78.4
Fur goods and miscellaneous apparel.....	67.3	71.9	76.1	78.4	77.3	75.6	72.7	73.0	71.4	71.0	71.5	69.4	73.0	73.9	
Miscellaneous fabricated textile products.....	155.1	153.8	161.2	164.1	166.3	163.9	158.2	151.1	154.1	155.0	152.6	150.0	146.4	155.7	147.2
Paper and allied products.....	620.5	620.5	625.7	626.4	626.3	629.0	629.3	620.6	624.1	615.8	614.5	613.2	609.9	620.7	614.5
Paper and pulp.....	213.7	213.5	215.5	215.3	215.5	216.9	219.6	217.2	217.8	213.6	212.9	212.2	212.2	215.2	217.3
Paperboard.....	68.7	68.7	68.2	68.2	67.9	68.0	68.3	67.9	67.9	67.7	66.8	67.4	67.2	67.8	65.8
Converted paper and paperboard products.....	149.5	149.8	150.8	150.1	150.3	151.9	150.8	147.6	147.9	146.7	147.5	146.6	145.2	148.4	144.5
Paperboard containers and boxes.....	188.6	188.5	191.2	192.8	192.6	192.2	190.6	187.9	190.5	187.8	187.3	187.0	185.3	189.3	186.9
Printing, publishing, and allied industries.....	938.7	937.2	946.4	940.8	941.7	937.8	935.1	930.5	932.8	927.9	925.3	907.7	903.3	927.9	924.9
Newspaper publishing and printing.....	325.7	323.6	327.8	325.1	326.4	325.4	325.8	325.9	323.4	323.4	321.3	303.0	302.2	319.5	324.1
Periodical publishing and printing.....	70.7	71.1	70.7	70.6	70.0	69.1	68.3	68.8	69.9	70.3	71.2	71.0	70.2	70.3	
Books.....	76.8	76.3	75.2	75.6	76.2	76.2	74.1	74.4	74.1	73.7	72.8	72.4	74.5	72.5	
Commercial printing.....	302.0	303.5	304.6	303.6	302.7	299.9	297.2	296.2	297.7	296.8	296.5	297.5	295.2	298.8	296.0
Bookbinding and related industries.....	48.1	48.0	50.2	49.7	50.4	50.9	51.7	51.5	51.6	50.4	50.1	49.7	49.0	50.4	49.1
Other publishing and printing industries.....	113.5	114.6	116.4	116.3	116.0	115.4	115.1	114.5	114.4	113.3	113.4	113.5	113.5	114.6	113.0
Chemicals and allied products.....	872.6	864.0	866.5	866.6	870.0	871.8	875.9	872.3	870.2	869.4	870.1	858.1	850.1	865.6	846.0
Industrial chemicals.....	285.8	284.8	284.8	285.1	284.7	286.8	289.4	288.4	287.6	285.2	284.6	283.2	282.2	285.4	283.4
Plastics and synthetics, except glass.....	174.6	173.8	173.5	172.9	172.8	172.6	172.9	172.6	170.9	168.7	166.0	164.7	164.2	169.7	161.2
Drugs.....	117.9	117.3	117.6	117.4	117.1	117.1	118.3	117.6	116.8	115.4	115.1	114.6	114.0	116.2	111.3
Soap, cleaners, and toilet goods.....	99.0	96.7	99.2	99.1	101.7	101.1	101.6	99.5	99.2	97.7	98.3	98.2	97.6	99.3	96.9
Paints, varnishes, and allied products.....	64.2	63.5	64.0	64.3	64.5	65.0	66.1	66.1	65.3	64.1	63.6	62.8	62.4	64.2	62.9
Agricultural chemicals.....	52.4	49.8	47.9	46.9	48.6	47.8	46.0	48.9	56.8	61.3	63.4	63.4	49.3	50.0	48.3
Other chemical products.....	78.7	78.1	79.5	80.2	80.6	81.4	81.6	82.1	81.5	81.5	81.2	81.2	80.4	80.9	81.9
Petroleum refining and related industries.....	183.9	183.5	184.5	186.8	188.8	191.0	193.1	191.1	190.4	188.9	187.0	185.7	185.6	188.1	195.0
Petroleum refining.....	152.1	152.3	152.0	152.4	153.0	154.6	155.8	154.4	153.9	153.4	153.6	154.3	153.7	153.6	160.5
Other petroleum and coal products.....	31.8	31.2	32.5	34.4	35.8	36.4	37.3	36.7	36.5	35.5	33.4	31.4	31.9	34.5	34.5
Rubber and miscellaneous plastic products.....	408.7	408.2	410.2	413.1	411.6	409.4	405.0	400.5	412.4	410.4	408.1	406.6	406.0	408.8	405.8
Tires and inner tubes.....	95.5	95.3	94.5	91.9	91.6	91.3	96.0	98.7	98.4	98.3	98.1	98.4	96.0	99.2	
Other rubber products.....	161.8	160.9	162.0	162.9	162.3	161.5	159.8	155.7	162.1	161.1	160.6	160.9	161.3	161.2	160.5
Miscellaneous plastic products.....	151.4	151.8	152.9	155.7	157.4	156.3	153.9	148.8	161.6	150.9	149.2	147.6	146.3	151.6	146.0
Leather and leather products.....	348.5	344.3	349.7	350.3	350.8	352.7	357.9	350.6	350.7	342.6	342.0	351.5	353.9	350.3	360.3
Leather tanning and finishing.....	29.9	30.1	31.7	31.7	31.5	31.3	31.5	30.7	31.5	30.9	30.6	30.8	31.2	31.3	31.9
Footwear, except rubber.....	238.7	236.9	236.2	233.6	231.7	234.2	239.0	236.2	235.7	232.3	232.1	237.4	239.9	235.6	241.2
Other leather products.....	79.9	77.3	81.8	85.0	87.6	87.2	87.4	83.7	83.5	79.4	79.3	83.3	82.8	83.5	87.2
Transportation and public utilities.....	3,871	3,877	3,931	3,944	3,968	3,982	3,976	3,975	3,954	3,897	3,859	3,847	3,844	3,913	3,903
Railroad transportation.....	757.6	773.4	770.5	776.2	780.2	791.2	789.8	788.9	779.7	779.7	768.9	761.0	757.3	774.4	797.1
Class I railroads.....	662.4	672.3	675.9	681.4	685.8	696.9	695.0	694.7	684.5	674.4	666.9	664.4	679.6	700.2	
Local and interurban passenger transit.....	281.9	281.5	278.9	277.9	276.2	258.3	258.4	268.9	274.4	273.2	275.7	276.6	273.1	271.1	
Local and suburban transportation.....	86.9	87.2	87.5	87.8	87.8	86.8	87.0	87.7	88.1	87.3	87.3	87.8	87.8	87.6	90.5
Taxicabs.....	116.9	117.0	114.5	113.1	112.2	111.1	111.4	111.7	112.7	113.9	116.9	117.6	114.1	113.2	
Intercity and rural buslines.....	42.2	41.6	41.2	41.8	43.1	43.6	43.7	42.7	41.6	40.5	39.7	39.9	41.7	41.4	
Motor freight transportation and storage.....	882.7	913.2	924.6	935.7	934.2	921.1	920.1	912.3	877.3	868.3	858.6	856.7	898.0	879.9	
Air transportation.....	213.9	213.8	212.9	212.0	211.5	212.4	211.8	210.7	209.4	208.4	207.8	207.3	210.5	200.5	
Air transportation, common carriers.....	194.0	193.5	192.4	191.8	191.6	191.9	191.3	189.5	187.8	186.7	186.5	186.6	189.7	179.5	
Pipeline transportation.....	19.4	19.5	19.6	19.7	20.1	20.4	20.5	20.4	19.9	20.0	20.0	20.0	20.0	21.3	
Other transportation.....	284.2	293.1	300.9	302.2	306.4	305.6	305.7	302.4	305.6	294.0	297.9	302.2	296.0	297.1	
Communication.....	828.3	826.8	825.8	832.5	830.5	840.0	842.4	831.5	824.4	823.7	821.2	819.2	828.5	824.7	
Telephone communication.....	686.5	685.3	684.7	690.8	693.2	698.8	701.4	691.8	685.8	684.5	683.1	681.0	688.5	687.7	
Telegraph communication.....	32.9	33.2	33.0	33.3	33.6	33.6	34.0	34.1	34.7	35.0	35.0	35.3	34.2	37.0	
Radio and television broadcasting.....	104.6	104.0	103.8	104.1	103.9	103.3	102.7	101.3	99.6	99.9	99.8	98.6	101.5	95.8	
Electric, gas, and sanitary services.....	608.9	609.9	611.1	611.3	617.9	626.5	625.9	619.1	606.7	602.8	605.2	605.0	612.3	611.1	
Electric companies and systems.....	245.6	246.0	246.1	246.2	248.8	251.7	251.5	249.2	243.8	240.9	244.7	244.7	246.5	246.5	
Gas companies and systems.....	153.6	154.0	154.4	154.3	155.9	158.4	158.3	156.9	153.5	153.1	152.9	153.0	154.8	155.1	
Combined utility systems.....	170.7	171.4	171.9	172.1	174.2	176.6	176.3	173.8	171.0	170.8	170.4	170.5	172.5	172.7	
Water, steam, and sanitary systems.....	39.0	38.5	38.7	38.7	39.0	39.8	39.9	39.2	38.4	38.0	37.2	36.8	38.4	36.7	

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry¹—Continued

[In thousands]

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Wholesale and retail trade	11,775	11,893	12,774	12,166	12,014	11,942	11,878	11,832	11,848	11,720	11,740	11,497	11,433	11,865	11,582
Wholesale trade.....	3,189	3,199	3,238	3,208	3,208	3,199	3,196	3,168	3,132	3,085	3,075	3,069	3,065	3,143	3,061
Motor vehicles and automotive equipment.....		238.1	238.8	238.3	237.3	236.7	237.3	237.5	236.7	234.1	232.6	232.0	231.2	235.2	228.2
Drugs, chemicals, and allied products.....	191.4	192.8	192.7	192.1	191.7	192.1	192.1	190.7	190.2	188.5	189.1	189.2	188.8	190.5	187.0
Dry goods and apparel.....	133.6	134.7	135.3	134.6	134.0	134.9	134.8	134.1	131.9	131.7	131.9	131.5	131.5	133.5	131.5
Groceries and related products.....	500.6	506.6	501.0	512.7	514.6	512.5	512.5	508.5	497.1	475.6	472.4	476.9	474.4	494.2	487.1
Electrical goods.....	232.4	231.7	230.2	231.0	231.1	232.0	231.0	228.6	227.4	226.4	224.6	224.4	224.4	228.5	218.1
Hardware, plumbing and heating goods.....	145.5	146.5	146.1	146.5	146.5	147.2	147.3	145.8	144.1	144.1	142.9	142.3	145.1	142.3	
Machinery, equipment, and supplies.....	558.1	559.9	557.9	554.5	550.9	550.1	547.2	538.9	533.5	532.1	528.3	525.8	541.7	511.8	
Retail trade.....	8,586	9,536	8,958	8,806	8,743	8,682	8,664	8,716	8,635	8,665	8,428	8,368	8,722	8,521	
General merchandise stores.....	1,624.4	2,176.1	1,805.8	1,694.3	1,652.1	1,602.0	1,683.8	1,605.4	1,590.2	1,617.5	1,537.2	1,514.5	1,664.0	1,627.0	
Department stores.....	962.5	1,319.6	1,070.9	992.3	961.9	932.0	923.2	940.0	932.0	949.4	903.3	889.5	979.8	959.6	
Limited price variety stores.....	300.7	412.4	341.9	329.7	325.4	309.9	306.0	311.2	312.0	328.1	307.5	300.2	324.6	325.3	
Food stores.....	1,434.5	1,460.3	1,431.8	1,425.1	1,414.1	1,400.2	1,403.8	1,402.8	1,395.2	1,401.3	1,393.1	1,396.6	1,409.1	1,371.4	
Grocery, meat, and vegetable stores.....	1,266.9	1,279.0	1,260.0	1,255.0	1,243.4	1,229.7	1,233.3	1,230.5	1,222.7	1,221.7	1,222.5	1,221.2	1,226.2	1,202.9	
Apparel and accessories stores.....	608.9	744.8	639.9	620.9	614.5	614.5	683.6	610.7	608.5	616.7	608.5	608.5	620.4	612.2	
Men's and boys' apparel stores.....	109.2	133.8	104.7	99.9	99.3	97.0	97.6	101.8	97.5	100.7	95.6	97.7	102.5	100.5	
Women's ready-to-wear stores.....	228.3	274.7	240.7	233.5	229.7	223.1	218.3	228.2	229.3	238.6	221.9	215.4	231.4	229.3	
Family clothing stores.....	94.6	122.0	97.5	93.1	91.8	86.8	87.5	91.2	90.0	92.9	88.9	88.5	93.7	96.1	
Shoe stores.....	112.5	136.5	125.1	123.3	126.1	119.6	118.5	122.6	124.1	156.4	115.2	111.7	124.5	120.9	
Furniture and appliance stores.....	396.6	409.5	400.9	397.4	393.6	392.4	390.3	389.7	387.2	387.5	388.9	386.8	392.9	389.5	
Eating and drinking places.....	1,735.7	1,758.0	1,763.9	1,773.6	1,781.3	1,801.5	1,809.9	1,817.9	1,789.2	1,743.9	1,713.7	1,698.7	1,762.1	1,722.8	
Other retail trade.....	2,893.2	2,987.3	2,916.0	2,894.7	2,887.2	2,896.4	2,892.8	2,889.6	2,864.2	2,849.2	2,808.5	2,794.7	2,873.5	2,792.5	
Motor vehicle dealers.....	688.6	686.6	682.7	680.3	678.3	680.0	679.4	676.8	671.8	669.6	666.8	665.9	675.1	642.0	
Other vehicle and accessory dealers.....	171.2	176.4	170.3	165.8	166.3	168.7	168.3	167.9	163.4	161.7	155.6	153.8	164.5	152.7	
Drug stores.....	381.9	400.1	387.3	381.0	380.9	379.3	379.2	377.0	377.4	378.1	378.6	373.6	380.6	374.3	
Finance, insurance, and real estate	2,884	2,877	2,880	2,878	2,884	2,887	2,919	2,916	2,885	2,858	2,842	2,825	2,813	2,866	2,798
Banking.....	746.8	746.2	744.7	743.6	743.6	752.1	749.7	739.3	730.8	730.6	729.2	727.3	738.4	714.0	
Credit agencies other than banks.....	298.8	298.0	296.7	295.6	294.2	295.4	295.6	291.6	289.3	288.0	286.3	285.6	291.8	279.4	
Savings and loan associations.....	91.1	89.7	89.3	88.9	88.3	89.1	89.4	87.0	85.4	85.1	84.4	84.1	81.7	81.0	
Personal credit institutions.....	156.2	156.9	155.9	155.5	155.1	155.3	155.5	154.9	154.4	153.8	153.3	153.1	154.6	150.8	
Security dealers and exchanges.....	123.7	123.9	123.8	123.6	123.4	125.3	125.7	124.3	123.5	123.0	123.6	122.9	123.8	131.8	
Insurance carriers.....	870.7	872.0	870.8	868.6	869.8	878.4	874.2	865.3	861.6	860.0	861.3	859.3	866.4	851.4	
Life insurance.....	467.2	466.8	465.3	464.7	464.7	468.5	466.0	461.2	460.0	459.0	460.1	458.9	462.7	454.1	
Accident and health insurance.....	52.4	52.2	52.1	51.9	52.0	52.6	52.6	51.9	51.4	51.4	51.4	51.3	51.8	51.1	
Fire, marine, and casualty insurance.....	309.8	311.2	311.5	310.2	311.1	314.9	313.5	310.8	309.3	308.8	309.0	308.3	310.5	305.7	
Insurance agents, brokers, and services.....	221.6	220.2	220.0	219.3	219.6	222.4	221.3	219.2	217.4	216.6	216.1	216.1	218.6	211.9	
Real estate.....	539.6	544.1	546.6	557.1	559.0	568.4	571.3	569.2	569.5	548.2	533.3	526.9	551.1	532.9	
Operative builders.....	49.5	51.3	53.8	56.4	55.9	58.4	57.9	57.3	55.2	53.0	49.8	46.5	53.5	48.1	
Other finance, insurance, and real estate.....	75.6	76.0	75.8	76.1	77.0	76.7	77.8	76.4	76.1	75.4	75.4	75.1	76.1	76.9	
Services and miscellaneous	8,344	8,310	8,379	8,408	8,472	8,436	8,457	8,474	8,423	8,294	8,199	8,076	7,997	8,297	7,949
Hotels and lodging places.....	584.9	593.1	603.2	639.8	672.6	766.1	766.3	692.7	626.0	600.2	586.5	581.4	641.9	596.5	
Hotels, tourist courts, and motels.....	544.4	549.8	559.2	592.8	615.6	659.9	662.0	633.8	575.7	554.7	545.1	540.7	585.3	539.9	
Personal services.....		507.5	507.9	511.6	513.5	512.1	513.8	517.7	519.9	513.6	511.1	501.7	498.9	510.5	516.2
Laundries, cleaning and dyeing plants.....		108.6	109.0	110.0	109.7	108.6	108.9	107.6	108.1	107.7	107.7	108.0	107.3	108.5	107.9
Miscellaneous business services.....		159.9	165.8	166.4	172.2	176.6	184.2	181.1	177.6	171.2	162.4	160.1	170.9	176.3	
Advertising.....		36.5	40.0	38.6	39.6	37.2	38.2	36.4	34.3	33.0	32.9	35.0	35.8	39.4	
Motion pictures.....		123.4	125.8	127.8	132.6	139.4	146.0	144.7	143.3	138.2	137.3	127.4	134.3	136.9	
Motion picture filming and distributing.....		36.5	40.0	38.6	39.6	37.2	38.2	36.4	34.3	33.0	32.9	35.0	35.8	39.4	
Motion picture theaters and services.....		123.4	125.8	127.8	132.6	139.4	146.0	144.7	143.3	138.2	137.3	127.4	134.3	136.9	
Medical services.....		1,322.8	1,318.6	1,320.0	1,316.7	1,310.8	1,312.0	1,312.6	1,302.9	1,290.7	1,289.0	1,287.1	1,280.4	1,300.8	1,246.7
Hospitals.....		9,748	9,926	9,787	9,751	9,547	9,139	9,170	9,506	9,546	9,542	9,541	9,516	9,535	9,188
Government	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822	9,822
Federal Government ³	2,327	2,323	2,482	2,342	2,343	2,342	2,367	2,375	2,365	2,340	2,344	2,334	2,332	2,358	2,340
Executive.....		2,293.1	2,451.8	2,312.6	2,313.5	2,312.4	2,337.0	2,344.5	2,334.4	2,311.0	2,314.7	2,304.3	2,302.3	2,328.0	2,310.6
Department of Defense.....		938.1	939.7	940.1	941.5	943.0	951.3	953.9	951.5	949.9	951.9	951.8	957.0	949.2	963.3
Post Office Department.....		588.2	738.0	593.3	588.5	586.3	588.7	588.7	585.7	582.8	583.3	582.2	580.6	598.4	597.2
Other agencies.....		766.8	774.1	779.2	783.5	783.1	797.0	801.9	797.2	778.3	779.5	770.3	764.7	780.4	750.2
Legislative.....		24.1	24.2	24.1	24.1	24.3	24.5	24.6	24.4	23.7	23.8	23.8	23.8	24.1	23.7
Judicial.....		5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.6	5.6	5.7	5.6	5.7	5.5
State and local government ⁴	7,495	7,425	7,444.7	7,445	7,408	7,205	6,772	6,795	7,141	7,206	7,198	7,207	7,184	7,177	6,849
State government.....		1,862.1	1,866.5	1,868.6	1,868.1	1,801.6	1,744.8	1,751.7	1,790.7	1,808.7	1,805.0	1,803.6	1,800.0	1,807.2	1,726.4
State education.....		667.1	667.8	678.4	663.9	591.1	621.3	628.3	638.0	634.8	631.9	636.5	627.6	615.7	567.7
Other State government.....		1,195.0	1,198.7	1,190.2	1,194.2	1,210.5	1,223.5	1,223.4	1,202.7	1,173.9	1,173.1	1,167.1	1,172.4	1,191.4	1,158.8
Local government.....		5,663.1	5,577.7	5,576.2	5,549.4	5,403.4	5,026.7	5,043.3	5,349.9	5,397.3	5,393.2	5,403.2	5,383.6	5,369.5	5,122.1
Local education.....		3,208.5	3,228.1	3,225.9	3,197.3	3,023.4	2,590.7	2,601.1	2,961.7	3,076.3	3,087.4	3,110.2	3,095.5	3,020.6	2,832.3
Other local government.....		2,354.6	2,349.6	2,350.3	2,352.1	2,380.0	2,436.0	2,442.2	2,388.2	2,321.0	2,305.8	2,293.0	2,288.1	2,348.9	2,289.8

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry¹

Industry	[In thousands]												Revised series; see box, p. 470.		
	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Mining		481	493	498	499	504	508	505	512	506	496	481	482	497	514
Metal mining.....		68.0	68.6	69.5	69.9	70.5	70.2	70.1	69.8	68.9	67.3	64.5	64.9	68.1	67.9
Iron ores.....		22.2	22.6	23.6	23.6	23.9	24.1	24.0	23.1	22.6	20.5	19.2	19.0	22.0	21.3
Copper ores.....		23.1	23.0	22.8	22.6	22.7	22.4	22.3	22.7	22.9	23.4	22.9	22.9	22.8	23.4
Coal mining.....		119.4	120.8	120.0	119.9	118.7	119.0	111.5	122.3	124.0	125.8	124.7	129.8	122.3	133.4
Bituminous.....		109.4	110.8	109.9	110.1	109.3	109.6	101.3	112.7	114.3	116.1	114.9	119.7	112.4	123.0
Crude petroleum and natural gas.....		207.8	209.1	206.8	204.2	209.4	211.7	215.6	214.5	210.4	205.2	204.5	203.8	208.4	214.0
Crude petroleum and natural gas fields.....		92.7	92.7	93.3	93.3	95.3	97.8	98.5	98.1	95.8	95.9	96.1	96.6	95.8	99.7
Oil and gas field services.....		115.1	116.4	113.5	110.9	114.1	113.9	117.1	116.4	114.6	109.3	108.4	107.2	112.5	114.3
Quarrying and nonmetallic mining.....		85.5	94.8	101.7	104.9	105.6	106.7	107.3	105.8	102.7	97.7	87.3	83.5	98.7	98.6
Contract construction		2,161	2,470	2,722	2,879	2,921	2,977	2,906	2,777	2,600	2,398	2,114	2,029	2,578	2,468
General building contractors.....		668.8	756.5	840.0	879.4	895.0	923.9	902.0	855.3	787.7	735.4	641.5	613.9	790.3	754.9
Heavy construction.....		356.1	457.5	554.0	626.8	645.0	656.4	639.3	613.1	558.6	474.0	376.1	346.2	526.7	515.3
Highway and street construction.....		158.8	223.3	296.4	353.4	365.5	370.9	359.3	345.4	309.8	243.5	173.4	151.9	280.1	267.7
Other heavy construction.....		197.3	234.2	257.6	273.4	279.5	285.5	280.0	267.7	248.8	230.5	202.7	194.3	246.6	247.6
Special trade contractors.....		1,135.9	1,256.4	1,328.4	1,372.3	1,381.3	1,397.0	1,364.6	1,308.6	1,253.5	1,188.5	1,096.7	1,069.3	1,261.0	1,197.5
Manufacturing	12,522	12,482	12,665	12,756	12,895	12,923	12,705	12,571	12,652	12,526	12,426	12,344	12,276	12,585	12,494
Durable goods.....	7,079	7,070	7,155	7,180	7,204	7,193	6,995	7,056	7,138	7,063	7,010	6,919	6,884	7,059	6,946
Non-durable goods.....	5,443	5,412	5,510	5,576	5,691	5,730	5,710	5,515	5,514	5,443	5,416	5,425	5,392	5,526	5,548
<i>Durable goods</i>															
Ordnance and accessories.....	117.1	118.3	119.0	119.4	120.0	119.3	118.0	118.2	118.4	118.1	117.5	119.8	120.3	119.1	119.7
Ammunition, except for small arms.....	69.6	69.7	69.6	69.3	69.5	69.0	67.8	67.6	67.0	66.4	65.7	67.3	67.8	67.9	68.2
Sighting and fire control equipment.....		9.4	9.6	9.7	9.9	10.1	10.5	10.7	11.4	11.8	12.4	12.8	13.0	11.3	13.5
Other ordnance and accessories.....	38.5	39.2	39.8	40.4	40.6	40.2	39.7	39.9	40.0	39.9	39.4	39.7	39.5	39.9	38.0
Lumber and wood products, except furniture.....	498.2	500.5	521.7	534.2	542.7	551.0	547.1	527.5	522.9	532.9	511.0	500.5	496.0	524.0	526.2
Logging camps and logging contractors.....	68.5	69.7	76.9	81.2	84.3	87.5	85.1	78.0	73.3	77.3	68.9	66.5	67.9	76.4	78.2
Sawmills and planing mills.....	216.2	216.8	226.7	232.7	235.6	239.3	241.0	234.4	233.4	235.3	227.0	223.3	220.3	231.0	233.0
Millwork, plywood, and related products.....	128.6	129.4	131.2	133.0	134.3	135.1	131.6	126.9	126.7	132.0	128.7	125.3	124.0	129.5	128.6
Wooden containers.....	30.4	30.3	31.4	31.2	31.8	32.4	33.3	33.3	33.4	32.8	31.9	31.1	30.8	32.0	33.0
Miscellaneous wood products.....	54.5	54.3	55.5	56.1	56.7	56.7	56.1	54.9	56.1	55.5	54.5	54.3	53.0	55.2	53.5
Furniture and fixtures.....	326.7	323.9	329.4	332.0	333.7	333.3	331.0	321.3	322.5	317.3	317.8	317.7	316.7	324.3	319.7
Household furniture.....	248.5	245.5	249.1	249.8	250.1	248.1	245.7	238.9	240.0	237.4	238.0	238.0	236.4	242.4	235.7
Office furniture.....		20.7	21.3	21.6	21.9	21.8	21.7	20.5	21.3	20.9	21.2	21.4	21.5	21.5	22.3
Partitions; office and store fixtures.....		25.9	26.8	28.3	29.6	30.9	31.1	30.4	29.3	28.4	28.0	28.7	29.0	29.2	30.5
Other furniture and fixtures.....	31.6	31.8	32.2	32.3	32.1	32.5	32.5	31.5	31.9	30.6	29.9	29.6	29.8	31.3	31.3
Stone, clay, and glass products.....	466.1	464.7	485.9	500.9	504.1	510.3	516.3	512.1	508.1	496.7	482.4	457.7	447.2	489.5	470.1
Flat glass.....		25.8	26.2	26.5	25.9	25.6	25.2	24.5	24.5	24.3	24.2	23.6	23.9	24.9	25.2
Glass and glassware, pressed or blown.....	93.8	93.9	97.7	98.5	98.4	100.5	101.2	100.6	100.1	98.0	96.9	95.0	93.6	97.7	93.2
Cement, hydraulic.....	28.8	29.0	29.9	31.7	32.5	33.7	34.4	34.4	34.0	32.7	31.8	28.4	27.5	31.7	32.1
Structural clay products.....	53.7	52.8	56.9	58.3	58.4	59.8	61.4	60.9	60.7	59.6	57.4	54.1	53.0	57.9	58.3
Pottery and related products.....		37.5	37.9	38.7	38.3	38.1	37.8	37.1	36.9	37.1	37.2	36.4	36.0	37.3	37.2
Concrete, gypsum, and plaster products.....	120.1	119.5	130.0	139.2	142.8	145.0	147.8	147.6	145.6	139.8	131.1	118.2	112.4	134.5	128.9
Other stone and mineral products.....	89.6	89.6	90.6	90.9	90.5	90.8	91.8	91.2	90.5	89.3	88.0	86.1	85.2	89.2	88.8
Primary metal industries	959.9	947.6	940.7	928.3	929.1	942.0	945.6	970.0	984.4	969.6	952.6	929.2	914.1	942.1	935.8
Blast furnace and basic steel products.....	480.5	472.0	466.6	458.9	461.9	472.2	482.6	505.0	513.0	503.1	488.7	468.6	454.5	476.2	475.5
Iron and steel foundries.....	178.2	175.5	173.4	171.3	169.8	171.4	166.0	168.3	170.4	168.6	167.4	165.2	164.5	168.3	163.7
Nonferrous smelting and refining.....	54.3	53.8	53.8	53.9	53.8	54.2	54.2	54.3	54.0	52.8	52.2	51.4	51.1	53.1	52.6
Nonferrous rolling, drawing, and extruding.....	140.7	140.6	140.8	139.2	139.0	138.9	139.5	138.7	141.8	140.0	138.8	138.3	138.0	139.3	139.1
Nonferrous foundries.....	60.2	59.7	59.8	59.1	58.8	59.2	58.4	58.8	59.3	59.2	59.3	59.4	59.5	59.2	58.1
Miscellaneous primary metal industries.....	46.0	46.0	46.3	45.9	45.8	46.1	44.9	44.9	45.9	45.9	46.2	46.3	46.5	46.0	46.7
Fabricated metal products	891.1	890.9	904.0	907.4	912.6	909.0	889.2	878.7	893.9	880.0	867.6	855.4	853.6	884.1	863.8
Metal cans.....	51.0	49.4	50.4	51.3	51.6	53.8	55.3	54.7	54.4	52.8	51.8	49.8	48.5	51.8	51.2
Cutlery, handtools, and general hardware.....	111.5	111.6	111.9	111.1	109.6	108.1	103.2	101.4	106.4	105.6	105.9	105.9	106.5	106.9	106.2
Heating equipment and plumbing fixtures.....	59.1	59.1	59.5	59.6	59.9	60.1	59.5	58.3	57.9	56.8	55.9	55.8	55.7	57.8	55.6
Fabricated structural metal products.....	231.1	232.7	239.7	244.6	249.1	253.5	252.7	247.7	245.9	239.0	230.7	224.1	223.1	239.7	234.7
Screw machine products, bolts, etc.....	69.8	69.3	69.8	69.4	69.7	70.1	69.6	68.7	70.1	69.8	69.7	70.1	70.2	69.8	69.4
Metal stampings.....	165.8	166.6	168.3	168.3	167.7	161.0	150.1	151.3	159.4	158.9	157.4	155.7	155.9	159.4	153.8
Coating, engraving, and allied services.....	59.8	59.5	60.8	61.4	61.8	60.6	58.5	57.4	58.3	57.6	56.9	55.3	55.4	58.3	56.1
Miscellaneous fabricated wire products.....	47.6	47.8	47.8	47.1	47.8	46.9	46.3	45.4	46.3	45.8	45.5	45.4	45.0	46.2	45.1
Miscellaneous fabricated metal products.....	95.4	94.9	95.8	94.6	95.4	94.9	94.0	93.8	95.2	93.7	93.8	93.3	93.3	94.2	91.8

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry¹—Continued

[In thousands]

Revised Series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Machinery	1,078.8	1,083.4	1,076.8	1,059.3	1,056.5	1,055.1	1,043.8	1,040.9	1,054.8	1,052.1	1,055.5	1,050.8	1,046.1	1,052.9	1,086.0
Engines and turbines	56.6	56.6	57.5	57.1	56.8	57.2	56.2	55.6	55.4	55.4	56.7	56.7	56.0	56.6	55.7
Farm machinery and equipment	90.5	90.5	87.2	84.3	83.6	83.6	81.3	84.1	86.7	89.6	91.9	91.9	90.4	86.8	80.5
Construction and related machinery	139.6	149.7	147.6	145.6	145.4	146.4	144.8	142.7	144.1	141.6	141.0	140.2	139.4	143.2	139.6
Metalworking machinery and equipment	211.6	210.5	210.2	204.6	203.4	201.7	199.9	199.1	202.4	201.3	201.4	199.5	199.2	201.7	195.4
Special industry machinery	117.5	117.3	116.6	115.8	115.0	115.2	113.6	113.8	115.6	115.3	116.0	115.4	114.9	115.2	116.8
General industrial machinery	158.1	156.8	155.9	153.0	153.6	154.7	153.5	153.3	153.8	152.8	153.2	153.3	153.1	153.7	153.8
Office, computing, and accounting machines	90.8	90.9	90.7	89.7	90.4	89.9	89.0	88.5	89.8	90.2	92.1	93.0	93.5	91.0	97.4
Service industry machinery	68.7	68.8	68.3	68.0	68.3	67.5	66.8	68.7	70.7	71.3	69.8	68.0	67.3	68.4	69.0
Miscellaneous machinery	143.5	142.3	142.8	141.2	140.0	138.9	138.7	135.1	136.3	134.5	133.4	132.8	131.4	136.3	128.0
Electrical equipment and supplies	1,049.8	1,053.5	1,062.0	1,064.7	1,073.5	1,067.4	1,048.3	1,040.2	1,056.9	1,048.8	1,047.7	1,049.9	1,057.7	1,057.2	1,060.3
Electric distribution equipment	112.3	112.3	112.8	112.8	111.4	112.1	112.8	111.1	111.4	110.8	110.9	110.4	111.1	111.7	111.3
Electrical industrial apparatus	130.3	128.8	128.9	128.6	128.5	128.8	128.0	128.1	128.5	127.8	127.3	126.5	127.1	128.0	126.7
Household appliances	120.1	119.9	123.8	125.1	124.0	122.0	117.9	116.2	118.1	117.8	116.5	113.9	114.5	118.8	114.8
Electric lighting and wiring equipment	118.7	118.4	119.4	120.8	121.1	119.8	117.1	113.6	115.0	113.4	114.4	114.4	114.4	114.2	111.6
Radio and TV receiving sets	84.1	86.5	90.0	93.1	95.6	93.7	91.1	86.0	84.8	78.7	75.2	76.4	77.6	85.2	82.8
Communication equipment	210.6	213.5	210.7	208.3	214.7	214.8	214.8	213.8	215.8	221.9	226.2	230.3	233.5	220.4	230.4
Electronic components and accessories	191.3	191.5	192.3	192.7	193.6	192.7	194.0	189.4	194.9	194.3	193.8	194.6	194.9	193.8	198.8
Miscellaneous electrical equipment and supplies	82.4	82.6	84.1	83.3	84.6	83.5	72.6	81.5	84.4	84.1	83.4	83.4	84.7	83.0	84.0
Transportation equipment	1,150.7	1,154.5	1,162.8	1,157.0	1,149.2	1,124.8	984.1	1,098.9	1,121.1	1,120.7	1,118.0	1,104.4	1,104.8	1,113.2	1,060.7
Motor vehicles and equipment	601.1	606.4	612.5	607.8	599.2	583.8	449.6	564.8	581.2	580.5	574.6	563.6	567.2	571.8	534.1
Aircraft and parts	363.5	365.5	366.2	365.1	361.1	356.5	351.0	349.8	352.1	350.3	353.3	352.8	354.7	355.8	350.6
Ship and boat building and repairing	115.2	115.2	115.8	117.9	119.1	117.0	118.4	118.8	121.0	126.3	127.1	127.5	124.0	121.3	118.6
Railroad equipment	37.0	37.0	36.7	36.1	36.3	34.1	33.0	33.4	33.8	31.6	32.3	31.7	30.9	33.3	29.9
Other transportation equipment	30.4	31.6	32.1	33.5	33.4	33.4	32.1	32.1	33.0	32.0	30.7	28.8	28.0	31.0	27.6
Instruments and related products	236.5	236.4	239.9	240.6	240.2	239.9	239.5	236.6	238.8	234.8	234.5	233.1	232.4	236.9	230.4
Engineering and scientific instruments	37.7	37.7	38.1	38.5	38.5	38.4	38.5	38.2	39.2	38.8	38.9	39.4	39.3	38.8	39.3
Mechanical measuring and control devices	64.8	64.1	64.6	63.0	62.7	63.1	63.4	63.7	64.0	63.3	63.7	63.7	63.7	63.5	62.1
Optical and ophthalmic goods	30.8	30.4	30.4	30.6	30.3	30.2	29.4	29.3	29.8	29.5	29.6	29.5	29.5	29.8	29.6
Surgical, medical, and dental equipment	37.5	37.5	37.7	37.9	37.8	37.9	37.8	36.8	37.6	37.4	37.2	36.8	36.6	37.3	34.9
Photographic equipment and supplies	43.5	44.4	44.7	44.6	44.3	45.1	44.2	43.7	42.3	41.8	41.2	41.1	43.2	41.6	
Watches and clocks	23.2	24.7	25.9	26.3	26.0	25.3	24.4	24.5	23.5	23.3	22.5	22.2	24.3	22.9	
Miscellaneous manufacturing industries	304.1	295.8	312.8	336.6	342.1	341.2	331.9	311.7	316.3	312.0	304.9	300.3	294.6	316.1	314.6
Jewelry, silverware, and plated ware	33.8	33.5	33.8	34.0	33.8	33.3	32.3	29.7	32.0	31.9	32.3	31.9	32.4	32.5	32.9
Toys, amusement and sporting goods	69.9	80.2	98.3	105.1	102.9	98.7	88.7	88.2	87.1	80.1	75.5	70.1	86.7	85.5	
Pens, pencils, office and art materials	23.4	24.9	25.1	24.5	24.6	24.3	23.7	24.3	24.1	23.8	23.6	22.9	24.1	23.2	
Costume jewelry, buttons, and notions	45.0	47.0	48.5	48.8	50.0	60.0	47.0	48.2	46.4	45.6	46.3	46.6	47.5	48.0	
Other manufacturing industries	125.7	124.0	126.9	130.7	129.9	130.4	126.6	122.6	123.6	122.5	123.1	123.0	122.6	125.3	125.0
<i>Nondurable goods</i>															
Food and kindred products	1,059.5	1,062.7	1,127.5	1,168.8	1,248.0	1,255.3	1,271.5	1,188.2	1,145.8	1,097.7	1,080.5	1,080.9	1,072.0	1,155.0	1,175.5
Meat products	239.2	243.0	251.2	253.3	263.9	253.3	252.4	250.6	247.5	243.0	239.0	241.3	247.5	251.6	
Dairy products	136.5	137.0	139.3	140.9	143.6	147.7	153.4	154.9	153.6	147.3	145.4	143.0	142.0	146.1	152.2
Canned and preserved food, except meats	149.8	164.9	191.2	259.7	314.9	301.5	225.0	189.4	165.6	159.8	159.8	159.8	152.9	203.6	214.9
Grain mill products	89.3	90.2	89.9	90.3	94.2	95.1	96.1	95.6	94.2	91.9	88.9	89.6	89.1	92.1	91.5
Bakery products	163.1	163.4	168.5	169.4	170.7	170.0	171.4	172.1	170.9	167.3	165.9	167.2	165.9	168.8	168.4
Sugar	36.1	40.3	43.5	41.2	26.4	24.4	23.8	24.0	24.0	22.5	22.5	23.9	23.9	29.4	
Confectionery and related products	62.9	61.9	65.7	67.9	67.9	65.4	61.0	55.0	57.4	55.7	56.1	59.7	60.1	61.1	60.1
Beverages	105.6	108.4	112.5	114.0	117.2	115.7	117.8	118.8	116.5	111.2	109.1	107.1	102.6	112.4	111.7
Miscellaneous food and kindred products	92.3	92.9	95.2	98.3	99.6	96.8	93.5	92.4	92.3	91.7	92.5	93.0	94.2	94.5	95.8
Tobacco manufactures	74.5	76.8	83.3	87.1	93.9	94.8	87.8	83.1	83.8	64.8	66.9	68.8	74.1	77.1	79.1
Cigarettes	31.6	31.9	31.7	31.7	32.2	31.9	31.5	31.5	31.6	31.0	31.2	31.2	31.0	31.5	31.4
Cigars	21.3	21.8	22.3	22.1	21.8	21.4	21.4	20.4	21.2	21.2	21.4	21.6	21.6	21.5	22.2
Textile mill products	795.1	788.1	795.3	802.0	804.4	802.7	803.1	791.6	802.5	796.0	795.3	793.6	790.1	797.2	812.4
Cotton broad woven fabrics	216.0	215.9	216.8	216.2	216.7	216.5	216.5	215.2	215.8	215.4	215.6	216.3	216.4	216.3	223.4
Silk and synthetic broad woven fabrics	77.0	77.0	77.3	76.9	76.0	75.5	75.7	74.3	75.4	74.5	74.0	73.8	73.9	75.1	73.9
Weaving and finishing broad woolsens	40.9	40.7	40.3	40.1	41.4	41.9	43.1	43.6	44.5	44.4	44.7	45.0	44.9	43.1	45.9
Narrow fabrics and smallwares	23.7	23.8	23.9	24.0	24.1	23.9	23.7	22.8	23.8	23.6	23.5	23.4	23.4	23.6	24.2
Knitting	186.7	181.8	186.2	194.3	197.3	197.4	197.4	194.8	196.7	194.0	192.2	191.0	187.6	192.9	198.1
Finishing textiles, except wool and knit	64.5	64.2	64.6	64.4	63.6	63.6	63.5	62.8	63.6	63.2	63.6	63.6	63.3	63.6	64.3
Floor covering	31.8	32.2	32.3	32.2	31.5	31.4	30.6	30.6	30.7	31.4	31.3	31.7	31.5	31.2	
Yarn and thread	98.9	98.2	98.6	97.9	97.3	97.2	97.3	93.5	96.6	95.2	94.9	94.4	94.4	96.0	95.6
Miscellaneous textile goods	55.4	54.7	55.4	55.9	55.8	55.2	54.5	54.0	55.5	55.0	55.4	55.0	54.5	55.2	55.9

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry¹—Continued

[In thousands]

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
<i>Nonurable goods—Continued</i>															
Apparel and related products.....	1,170.0	1,135.3	1,150.2	1,161.0	1,180.3	1,179.6	1,182.9	1,132.9	1,139.6	1,141.7	1,135.3	1,157.2	1,141.2	1,150.9	1,125.4
Men's and boys' suits and coats.....	103.5	102.9	103.0	100.8	101.3	103.7	104.5	102.0	106.2	105.4	103.9	105.1	105.4	103.9	104.9
Men's and boys' furnishings.....	297.5	292.1	296.1	298.8	302.6	304.9	306.4	299.8	303.3	300.2	297.3	294.1	292.6	299.1	289.6
Women's, misses', and juniors' outerwear.....	367.3	349.2	348.5	348.5	355.9	356.7	361.2	342.6	336.8	346.1	349.0	364.2	356.0	350.0	342.2
Women's and children's undergarments.....	105.9	103.9	107.8	111.9	111.2	109.1	107.0	99.9	102.5	102.5	102.8	102.8	102.1	105.1	103.1
Hats, caps, and millinery.....	28.9	27.6	26.5	29.1	28.9	28.9	30.6	28.6	27.0	26.0	27.3	31.9	31.3	28.7	29.2
Girls' and children's outerwear.....	73.9	72.3	69.9	70.2	71.3	70.9	72.6	72.4	73.6	71.1	66.9	72.6	72.4	71.1	70.2
Fur goods and miscellaneous apparel.....	57.9	54.3	62.2	66.1	68.2	67.5	65.5	62.8	62.9	61.4	61.2	62.1	60.3	63.2	63.9
Miscellaneous fabricated textile products.....	129.4	128.1	135.1	138.2	140.7	137.9	132.1	124.8	127.3	129.0	126.9	124.4	121.1	129.8	122.4
Paper and allied products.....	484.1	484.4	490.9	491.7	492.7	495.1	495.4	487.1	491.5	484.3	483.0	482.3	479.6	488.0	486.0
Paper and pulp.....	170.9	170.6	172.8	172.6	173.1	174.4	176.8	174.5	175.6	172.1	171.3	170.5	170.8	173.1	175.2
Paperboard.....	53.9	54.3	54.2	54.3	54.2	54.3	54.6	54.1	54.3	54.1	53.1	53.7	53.6	54.0	52.9
Converted paper and paperboard products.....	110.0	110.0	111.6	111.2	111.8	113.4	112.5	109.6	110.1	109.2	109.9	109.7	108.2	110.5	108.5
Paperboard containers and boxes.....	149.3	149.5	152.3	153.6	153.6	153.0	151.5	148.9	151.5	148.9	148.7	148.4	147.0	150.5	149.4
Printing, publishing, and allied industries.....	596.2	594.2	602.1	598.2	599.3	597.2	592.4	588.9	592.4	589.8	588.4	579.3	575.5	590.1	594.0
Newspaper publishing and printing.....	165.4	163.1	167.1	165.1	165.6	164.6	163.7	163.5	163.9	163.1	161.7	161.9	150.9	161.0	166.5
Periodical publishing and printing.....	27.6	27.5	27.6	27.6	27.8	27.6	26.8	26.4	27.0	27.9	28.6	28.9	28.8	27.8	28.5
Books.....	47.0	46.3	45.1	45.6	46.3	46.3	45.7	44.3	45.2	45.0	44.7	44.3	44.2	45.1	44.3
Commercial printing.....	236.1	237.7	239.1	238.4	237.6	235.5	232.6	231.9	233.2	232.5	232.2	232.3	231.6	234.3	233.8
Bookbinding and related industries.....	38.6	38.3	40.3	39.9	40.7	41.2	41.9	41.6	41.5	40.8	40.4	39.9	39.3	40.6	39.6
Other publishing and printing industries.....	79.8	80.5	81.8	82.1	82.0	82.0	81.7	81.2	81.6	80.5	80.8	80.6	80.7	81.3	81.4
Chemicals and allied products.....	527.3	519.5	521.8	522.4	526.1	527.3	527.5	524.7	527.3	530.0	531.9	521.5	515.9	524.2	517.2
Industrial chemicals.....	164.0	162.8	162.8	163.0	163.1	164.3	165.8	165.5	166.5	165.1	164.8	163.9	163.0	164.3	165.0
Plastics and synthetics, except glass.....	117.5	116.9	116.9	116.2	116.1	115.8	115.5	115.1	115.0	113.5	111.3	110.7	111.0	114.1	110.0
Drugs.....	63.1	62.7	63.3	63.5	63.2	63.3	63.8	63.4	63.2	62.5	62.2	61.5	61.4	62.7	60.0
Soap, cleaners, and toilet goods.....	60.0	58.5	60.3	61.1	63.2	62.8	62.0	60.1	59.7	58.7	59.3	59.6	59.3	60.4	58.6
Paints, varnishes, and allied products.....	36.6	35.9	36.2	36.3	36.6	37.1	38.0	38.1	37.6	36.8	36.4	35.6	35.2	36.6	36.0
Agricultural chemicals.....	36.0	33.5	31.7	30.9	32.2	31.4	29.5	29.1	32.3	40.3	44.9	37.4	33.4	33.7	32.9
Other chemical products.....	50.1	49.2	50.6	51.4	51.7	52.6	52.9	53.4	53.0	53.1	53.0	52.8	52.6	52.5	54.6
Petroleum refining and related industries.....	114.6	114.4	115.7	117.9	120.0	121.4	123.3	122.1	121.7	120.6	119.1	117.4	117.3	119.5	125.3
Petroleum refining.....	92.8	93.2	93.3	93.6	94.3	95.3	96.5	95.7	95.5	95.2	95.8	96.1	95.5	95.1	100.9
Other petroleum and coal products.....	21.8	21.2	22.4	24.3	25.7	26.1	26.8	26.4	26.2	25.4	23.3	21.3	21.8	24.4	24.3
Rubber and miscellaneous plastic products.....	314.4	313.3	315.3	318.4	317.0	314.9	310.1	306.7	319.1	317.0	315.2	313.9	313.1	315.0	314.3
Tires and inner tubes.....	67.9	68.0	67.0	64.8	64.5	64.0	63.9	63.9	71.9	71.5	71.4	71.3	71.4	68.9	72.1
Other rubber products.....	127.0	126.0	127.0	128.0	127.2	126.5	124.6	120.8	127.3	126.2	125.9	126.1	126.5	126.3	126.6
Miscellaneous plastic products.....	119.5	119.4	120.3	123.4	125.0	123.9	121.5	117.0	119.9	119.3	117.9	116.5	115.2	119.8	115.6
Leather and leather products.....	307.4	303.4	308.2	308.7	309.1	311.2	316.0	309.3	309.8	301.4	300.5	310.0	312.7	308.9	318.6
Leather tanning and finishing.....	26.1	26.3	27.9	27.8	27.6	27.5	27.6	26.8	27.7	27.0	26.8	27.0	27.5	27.4	28.0
Footwear, except rubber.....	212.7	211.2	210.3	207.6	205.8	208.4	213.9	210.5	210.3	206.6	206.2	211.5	214.0	209.8	215.7
Other leather products.....	68.6	65.9	70.0	73.3	75.7	75.3	75.4	72.0	71.8	67.8	67.5	71.5	71.2	71.7	74.9
Transportation and public utilities:															
Local and interurban passenger transit:															
Local and suburban transportation.....	82.6	82.9	83.3	83.6	83.6	83.6	82.6	82.7	83.3	83.9	83.0	83.7	83.9	83.4	86.3
Intercity and rural buslines.....	38.9	38.4	38.1	38.7	40.0	40.6	40.6	39.8	38.5	37.5	36.8	36.8	36.8	38.7	38.5
Motor freight transportation and storage.....	798.3	829.0	840.0	850.8	851.0	838.9	837.9	829.6	796.0	787.2	777.9	775.9	815.7	803.9	
Pipeline transportation.....	16.5	16.6	16.7	16.8	17.2	17.6	17.6	17.6	17.1	17.2	17.2	17.1	17.2	18.2	
Communication:															
Telephone communication.....	548.9	549.2	548.9	555.2	557.3	564.4	566.5	559.5	555.3	554.1	552.8	551.9	555.6	559.5	
Telegraph communication.....	22.2	23.2	23.3	23.5	23.8	23.9	24.1	24.9	24.7	24.9	25.1	25.3	24.3	26.9	
Radio and television broadcasting.....	86.6	85.8	84.7	85.1	85.7	85.3	84.4	83.6	81.5	81.3	81.2	80.9	83.3	79.9	
Electric, gas, and sanitary services:															
Electric companies and systems.....	529.3	531.0	532.4	533.1	539.3	548.0	547.8	541.9	529.6	526.4	528.5	528.8	534.7	537.1	
Gas companies and systems.....	208.9	209.4	209.7	209.9	212.2	215.0	214.9	213.0	207.8	205.6	209.2	209.2	210.4	211.4	
Combined utility systems.....	135.2	135.6	135.9	135.9	137.4	139.9	140.0	138.7	135.4	135.2	135.0	135.2	136.6	137.6	
Water, steam, and sanitary systems.....	151.4	152.5	153.0	153.5	155.6	158.1	157.9	155.3	152.7	152.3	151.9	152.3	154.0	156.3	
	33.8	33.5	33.8	33.8	34.1	35.0	35.0	34.3	33.6	33.3	32.4	32.1	33.6	32.0	

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry¹—Continued

[In thousands]

Revised series; see box below.

Industry	1964		1963										Annual average		
	Feb. ²	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Wholesale and retail trade¹	9,008	9,871	9,268	9,115	9,041	8,966	8,914	8,926	8,829	8,898	8,687	8,646	8,993	8,805	
Wholesale trade.....	2,731	2,773	2,746	2,750	2,741	2,739	2,714	2,680	2,636	2,630	2,625	2,621	2,690	2,630	
Motor vehicles and automotive equipment.....	200.5	201.2	201.1	200.6	200.6	201.3	201.8	201.0	198.3	197.1	196.3	195.5	199.1	192.8	
Drugs, chemicals, and allied products.....	158.6	161.0	160.0	159.3	159.0	159.6	158.2	157.8	156.5	157.1	157.1	156.8	158.2	156.4	
Dry goods and apparel.....	110.2	111.3	111.8	111.3	110.7	111.9	111.7	110.9	109.0	108.8	109.3	108.3	110.4	109.6	
Groceries and related products.....	442.3	448.3	442.6	453.1	454.2	452.7	448.8	437.8	418.4	415.9	420.2	418.5	436.0	431.1	
Electrical goods.....	196.5	197.3	196.5	198.1	198.2	200.1	199.3	197.9	197.0	196.7	195.6	195.5	197.3	191.0	
Hardware, plumbing and heating goods.....	125.1	126.4	126.0	126.6	126.9	127.5	127.8	126.3	124.7	124.7	123.8	123.4	125.6	123.2	
Machinery, equipment, and supplies.....	474.0	476.0	475.0	472.1	469.8	468.8	466.4	458.1	452.9	452.5	448.0	445.6	460.8	436.5	
Retail trade ¹	6,277	7,098	6,522	6,365	6,300	6,227	6,200	6,246	6,193	6,268	6,062	6,025	6,303	6,175	
General merchandise stores.....	1,481.8	2,030.3	1,662.5	1,551.2	1,513.3	1,466.3	1,448.7	1,469.4	1,453.0	1,480.1	1,401.2	1,379.6	1,525.8	1,496.8	
Department stores.....	879.1	1,233.6	987.1	907.6	879.5	852.7	843.6	860.3	851.7	869.9	824.1	810.7	898.7	881.4	
Limited price variety stores.....	277.1	389.0	318.6	305.9	302.2	286.8	283.1	288.2	289.2	304.2	283.2	276.8	301.3	304.1	
Food stores.....	1,333.5	1,361.0	1,334.7	1,328.8	1,318.0	1,305.4	1,308.5	1,308.6	1,301.3	1,305.6	1,296.5	1,301.3	1,313.4	1,280.2	
Grocery, meat, and vegetable stores.....	1,175.0	1,187.8	1,171.1	1,166.8	1,155.7	1,143.4	1,146.4	1,144.6	1,137.2	1,135.2	1,135.2	1,134.6	1,149.1	1,120.5	
Apparel and accessories stores.....	550.1	684.2	580.0	561.7	555.1	531.6	525.2	552.1	550.5	608.0	528.8	519.7	561.9	569.3	
Men's and boys' apparel stores.....	99.5	123.6	94.6	90.3	89.5	87.3	87.9	92.4	88.2	91.4	86.2	88.5	92.9	91.4	
Women's ready-to-wear stores.....	207.6	253.2	219.2	212.7	208.6	202.7	197.2	207.1	208.4	217.9	201.6	194.9	210.6	209.0	
Family clothing stores.....	88.2	114.9	90.8	86.1	85.1	80.3	81.0	84.4	83.4	86.0	82.0	81.6	86.9	88.9	
Shoe stores.....	97.5	121.7	110.4	108.6	111.2	105.2	104.1	108.2	110.0	142.6	101.4	98.2	110.2	107.6	
Furniture and appliance stores.....	352.1	364.8	356.1	353.2	349.5	349.0	347.3	346.7	343.8	344.0	345.3	343.8	349.2	347.2	
Other retail trade.....	2,559.1	2,657.7	2,589.0	2,570.4	2,563.8	2,575.1	2,570.4	2,568.8	2,544.5	2,530.7	2,490.5	2,480.9	2,552.6	2,490.5	
Motor vehicle dealers.....	596.7	596.1	592.6	590.9	589.8	592.2	591.7	589.1	585.2	582.2	580.8	579.7	587.3	559.9	
Other vehicle and accessory dealers.....	147.7	152.4	146.6	141.6	142.3	144.4	143.8	143.6	140.0	137.9	132.0	130.0	140.5	129.6	
Drug stores.....	352.6	371.9	358.9	352.9	352.5	351.6	350.8	348.8	349.6	349.7	348.5	346.7	352.7	348.0	
Finance, insurance, and real estate:															
Banking.....	628.8	630.4	629.8	629.2	629.3	637.8	636.2	626.3	618.2	618.2	617.1	615.0	624.9	606.7	
Security dealers and exchanges.....	113.5	113.5	113.4	113.3	113.3	115.2	115.6	114.3	113.4	112.9	113.6	113.0	113.7	122.3	
Insurance carriers.....	779.6	779.0	777.0	777.0	778.7	787.2	783.8	775.3	772.6	770.9	773.4	771.4	776.5	768.0	
Life insurance.....	420.7	420.0	419.1	419.8	422.9	420.8	416.4	415.6	414.5	416.2	415.1	415.1	417.9	413.0	
Accident and health insurance.....	46.5	46.5	46.2	46.2	46.3	47.0	46.9	46.2	45.8	45.8	45.8	45.8	46.2	45.8	
Fire, marine, and casualty insurance.....	276.6	276.7	275.8	276.9	280.8	279.8	277.1	276.1	275.6	276.1	275.6	276.8	273.9		
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels.....	507.3	515.8	525.0	557.2	580.7	622.7	624.4	597.4	541.8	521.5	512.7	509.1	550.9	509.2	
Personal services:															
Laundries, cleaning and dyeing plants.....	371.6	374.8	376.4	376.0	376.0	378.0	381.1	382.2	376.0	374.4	365.6	364.0	374.1	377.7	
Motion pictures:															
Motion picture filming and distribution.....	23.1	25.9	24.8	24.8	23.7	23.9	23.6	22.6	21.6	20.8	21.6	22.1	23.3	24.6	

¹ For comparability of data with those published in issues prior to October 1963, 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.

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., powerplant), and recordkeeping and other services closely associated with the above production operations.

Construction workers include working foremen, journeymen, mechanics, 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.

² Preliminary.

³ Data relate to nonsupervisory employees except messengers.

⁴ Excludes eating and drinking places.

Caution

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 October 1963. (See footnote 1, table A-2, and "Technical Note, Revision of Establishment Employment Statistics, 1963," appearing in the October 1963 *Monthly Labor Review*, p. 1194.) Moreover, when the figures are again adjusted to new benchmarks, the data 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, 1909-62* (BLS Bulletin 1312-1), which is available at depository libraries or which may be purchased from the Superintendent of Documents for \$3.50. 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
 [In thousands] Revised series; see box, p. 470.

Industry division and group	1964		1963										
	Feb. ²	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.
Total	58,082	57,802	57,748	57,580	57,646	57,453	57,344	57,340	57,194	57,060	56,873	56,706	56,468
Mining	625	626	630	630	629	632	635	640	639	640	639	631	631
Contract construction	3,143	2,992	3,069	3,057	3,066	3,071	3,083	3,069	3,046	3,019	3,005	2,928	2,920
Manufacturing	17,176	17,121	17,127	17,061	17,119	17,076	17,033	17,103	17,075	17,095	17,037	16,948	16,872
Durable goods	9,749	9,726	9,737	9,688	9,718	9,705	9,652	9,701	9,685	9,683	9,664	9,586	9,546
Ordnance and accessories	273	275	276	275	277	275	275	277	276	277	274	278	279
Lumber and wood products, except furniture	593	594	598	595	589	588	578	564	559	592	588	597	590
Furniture and fixtures	398	394	394	392	391	392	393	392	390	388	387	388	386
Stone, clay, and glass products	612	610	612	614	611	610	616	615	612	612	607	597	590
Primary metal industries	1,179	1,170	1,166	1,155	1,155	1,164	1,176	1,208	1,202	1,184	1,174	1,145	1,133
Fabricated metal products	1,173	1,163	1,169	1,162	1,164	1,165	1,162	1,159	1,156	1,151	1,148	1,136	1,131
Machinery	1,545	1,558	1,555	1,548	1,545	1,531	1,525	1,512	1,508	1,506	1,504	1,501	1,499
Electrical equipment and supplies	1,564	1,563	1,566	1,557	1,571	1,574	1,574	1,587	1,593	1,597	1,595	1,589	1,589
Transportation equipment	1,636	1,626	1,629	1,619	1,647	1,635	1,580	1,618	1,623	1,614	1,623	1,597	1,595
Instruments and related products	375	374	375	373	373	373	375	375	370	370	370	368	366
Miscellaneous manufacturing industries	401	399	397	398	395	398	398	394	389	393	390	390	388
Nondurable goods	7,427	7,395	7,390	7,373	7,401	7,371	7,381	7,402	7,390	7,412	7,377	7,362	7,326
Food and kindred products	1,739	1,744	1,741	1,733	1,742	1,723	1,728	1,730	1,732	1,743	1,738	1,757	1,747
Tobacco manufactures	89	88	91	95	89	86	91	87	88	89	90	89	89
Textile mill products	896	891	888	889	890	886	887	891	889	889	891	892	890
Apparel and related products	1,308	1,298	1,295	1,291	1,312	1,305	1,302	1,317	1,306	1,317	1,296	1,286	1,273
Paper and allied products	629	625	624	622	620	622	623	623	620	620	618	619	617
Printing, publishing, and allied industries	943	941	939	931	934	935	937	935	934	934	929	910	907
Chemicals and allied products	879	871	871	870	871	869	870	870	868	864	862	859	856
Petroleum refining and related industries	186	186	188	189	189	190	189	188	187	188	188	188	188
Rubber and miscellaneous plastic products	411	407	405	406	402	402	404	408	414	417	416	411	408
Leather and leather products	347	344	348	347	352	352	350	353	350	351	349	351	351
Transportation and public utilities	3,926	3,924	3,915	3,928	3,937	3,950	3,941	3,936	3,919	3,909	3,890	3,894	3,899
Wholesale and retail trade	12,079	12,047	11,963	11,941	11,935	11,922	11,907	11,884	11,864	11,825	11,784	11,795	11,729
Wholesale trade	3,213	3,212	3,190	3,176	3,173	3,170	3,155	3,159	3,148	3,129	3,119	3,106	3,093
Retail trade	8,866	8,835	8,773	8,765	8,762	8,752	8,752	8,725	8,716	8,696	8,665	8,689	8,636
Finance, insurance, and real estate	2,910	2,906	2,892	2,887	2,887	2,873	2,873	2,870	2,865	2,864	2,853	2,848	2,839
Service and miscellaneous	8,497	8,471	8,447	8,423	8,430	8,377	8,373	8,349	8,282	8,228	8,199	8,207	8,144
Government	9,726	9,715	9,705	9,653	9,643	9,552	9,499	9,489	9,504	9,480	9,466	9,455	9,424
Federal	2,327	2,349	2,349	2,347	2,352	2,347	2,348	2,351	2,349	2,345	2,339	2,340	2,332
State and local	7,399	7,366	7,356	7,306	7,291	7,205	7,151	7,138	7,155	7,135	7,127	7,115	7,092

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
 [In thousands] Revised series; see box, p. 470.

Major industry group	1964		1963										
	Feb. ²	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.
Manufacturing	12,703	12,650	12,653	12,590	12,649	12,611	12,575	12,650	12,628	12,647	12,604	12,521	12,455
Durable goods	7,153	7,127	7,129	7,081	7,110	7,097	7,051	7,103	7,086	7,081	7,070	6,994	6,956
Ordnance and accessories	117	118	118	117	120	119	119	119	120	119	118	119	120
Lumber and wood products, except furniture	533	534	536	532	529	525	517	503	498	530	528	538	531
Furniture and fixtures	331	328	327	325	325	326	326	326	325	325	322	322	321
Stone, clay, and glass products	494	490	494	495	491	490	496	498	493	492	489	480	474
Primary metal industries	956	948	943	932	931	939	953	984	977	962	952	922	911
Fabricated metal products	902	894	897	891	895	895	891	891	888	885	881	868	864
Machinery	1,070	1,085	1,081	1,074	1,074	1,061	1,058	1,045	1,042	1,040	1,041	1,038	1,038
Electrical equipment and supplies	1,051	1,048	1,047	1,041	1,051	1,049	1,051	1,061	1,069	1,068	1,067	1,061	1,059
Transportation equipment	1,140	1,127	1,129	1,116	1,143	1,136	1,079	1,118	1,122	1,112	1,123	1,099	1,094
Instruments and related products	238	236	238	238	237	237	240	241	240	237	236	234	233
Miscellaneous manufacturing industries	321	319	319	320	317	320	321	317	312	315	313	313	311
Nondurable goods	5,550	5,523	5,524	5,509	5,539	5,514	5,524	5,547	5,542	5,566	5,534	5,527	5,499
Food and kindred products	1,150	1,156	1,155	1,148	1,159	1,143	1,149	1,148	1,151	1,158	1,152	1,172	1,163
Tobacco manufactures	73	76	80	82	77	73	79	75	75	77	78	77	77
Textile mill products	804	798	795	796	795	793	793	798	797	798	800	800	799
Apparel and related products	1,158	1,151	1,148	1,144	1,164	1,159	1,154	1,169	1,160	1,171	1,153	1,141	1,130
Paper and allied products	490	488	490	488	488	488	490	490	489	488	486	488	486
Printing, publishing, and allied industries	600	598	597	590	591	593	594	594	595	595	591	582	579
Chemicals and allied products	532	525	525	524	527	528	527	527	527	525	524	521	521
Petroleum refining and related industries	117	116	118	119	120	120	120	120	119	120	120	119	119
Rubber and miscellaneous plastic products	316	312	310	311	308	309	310	315	321	324	323	318	315
Leather and leather products	305	303	306	307	310	310	308	311	309	310	307	310	310

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	1963												
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Employment service: ³													
New applications for work.....	1,037	793	827	953	878	829	928	1,096	911	904	861	904	1,097
Nonfarm placements.....	443	432	493	662	664	611	572	577	612	581	496	423	459
State unemployment insurance programs:													
Initial claims ⁴	1,848	1,865	1,200	1,157	957	1,066	1,351	973	1,079	1,216	1,127	1,308	2,102
Insured unemployment ⁵ (average weekly volume) ⁶	2,395	1,972	1,542	1,333	1,261	1,419	1,493	1,468	1,624	1,918	2,298	2,546	2,591
Rate of insured unemployment ⁷	5.7	4.7	3.6	3.1	3.0	3.4	3.6	3.5	3.9	4.7	5.6	6.2	6.3
Weeks of unemployment compensated.....	9,186	6,705	4,733	4,923	4,650	5,368	5,695	5,308	6,732	7,919	9,091	9,025	10,002
Average weekly benefit amount for total unemployment.....	\$36.07	\$35.78	\$35.37	\$35.15	\$34.93	\$34.67	\$34.43	\$34.34	\$34.91	\$35.54	\$35.80	\$35.70	\$35.52
Total benefits paid.....	\$319,302	\$232,954	\$164,977	\$171,957	\$163,126	\$186,814	\$195,632	\$188,189	\$235,851	\$274,798	\$316,422	\$313,272	\$342,411
Unemployment compensation for ex-service- men: ⁸													
Initial claims ⁹	39	39	29	31	28	29	31	22	20	23	25	27	39
Insured unemployment ⁵ (average weekly volume).....	73	60	48	43	42	45	44	42	47	58	71	77	77
Weeks of unemployment compensated.....	307	231	164	174	170	184	176	181	203	267	303	306	338
Total benefits paid.....	\$10,241	\$7,622	\$5,396	\$5,557	\$5,727	\$6,202	\$5,909	\$6,269	\$6,760	\$8,797	\$9,932	\$10,027	\$11,100
Unemployment compensation for Federal civilian employees: ¹⁰													
Initial claims ⁹	20	15	13	14	12	13	19	12	11	13	11	12	20
Insured unemployment ⁵ (average weekly volume).....	39	34	32	29	28	29	30	26	28	31	35	38	37
Weeks of unemployment compensated.....	165	143	111	120	114	123	110	113	119	137	150	148	156
Total benefits paid.....	\$6,109	\$5,369	\$4,297	\$4,723	\$4,540	\$4,844	\$4,387	\$4,941	\$4,678	\$5,241	\$5,591	\$5,433	\$5,744
Railroad unemployment insurance:													
Applications ¹¹	13	12	11	12	15	15	46	11	4	4	5	7	19
Insured unemployment (average weekly volume).....	53	47	45	41	41	37	39	32	39	49	57	64	73
Number of payments ¹²	125	110	86	98	85	90	79	77	99	118	138	137	173
Average amount of benefit payment ¹³	\$80.49	\$79.04	\$78.60	\$77.05	\$76.90	\$77.96	\$76.07	\$73.87	\$74.44	\$77.11	\$80.24	\$80.58	\$79.97
Total benefits paid ¹⁴	\$9,930	\$8,590	\$6,672	\$7,475	\$6,416	\$6,906	\$5,852	\$5,563	\$7,333	\$9,005	\$11,004	\$10,881	\$13,732
All programs: ¹⁵													
Insured unemployment ⁵	2,563	2,122	1,686	1,476	1,408	1,568	1,651	1,628	1,799	2,089	2,465	2,726	2,778

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 State insured unemployment include data under the program for Puerto Rican sugar cane workers.

⁷ The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.

⁸ Excludes data on claims and payments made jointly with other programs.

⁹ Includes the Virgin Islands.

¹⁰ Excludes data on claims and payments made jointly with State programs.

¹¹ An application for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year.

¹² Payments are for unemployment in 14-day registration periods.

¹³ The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.

¹⁴ Adjusted for recovery of overpayments and settlement of underpayments.

¹⁵ Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs and the Railroad Unemployment Insurance Act.

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 group¹

[Per 100 employees]

Revised series; see box, p. 470.

Major industry group	1964		1963										Annual average		
	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1963	1962
Accessions: Total															
Manufacturing:															
Actual.....	3.4	2.5	2.9	3.9	4.8	4.8	4.3	4.8	4.0	3.9	3.5	3.3	3.6	3.9	4.1
Seasonally adjusted.....	2.5	3.9	3.6	3.9	3.9	3.7	4.0	3.9	3.8	4.1	3.8	3.9	3.7		
Durable goods.....	3.3	2.4	2.7	3.6	4.5	4.2	3.7	4.2	3.8	3.8	3.5	3.2	3.5	3.6	3.8
Ordnance and accessories.....	1.6	1.6	2.0	2.7	2.8	2.7	2.6	2.9	2.5	2.3	2.1	2.2	2.5	2.4	2.9
Lumber and wood products, except furniture.....	4.4	2.8	3.5	4.9	6.3	6.8	5.7	7.9	7.3	6.6	6.0	4.4	4.6	5.6	5.5
Furniture and fixtures.....	4.0	2.7	3.3	4.8	5.6	5.9	5.5	4.8	4.5	4.4	3.8	3.9	4.1	4.4	4.5
Stone, clay, and glass products.....	3.4	2.0	2.5	3.1	3.4	3.8	4.2	5.1	4.4	5.7	4.7	3.5	3.6	3.8	3.8
Primary metal industries.....	3.1	2.6	2.5	2.6	2.5	2.4	2.4	3.3	3.5	3.8	3.6	3.6	3.4	3.0	2.8
Fabricated metal products.....	3.7	2.6	3.0	4.0	4.9	4.9	4.3	4.9	4.2	4.2	3.8	3.2	3.7	4.0	4.1
Machinery.....	2.8	2.4	2.6	2.9	3.4	3.0	2.9	3.4	2.7	2.7	2.6	2.7	3.0	2.9	3.0
Electrical equipment and supplies.....	3.0	2.2	2.5	3.2	3.7	3.7	3.2	3.6	2.9	2.9	2.7	2.7	3.0	3.0	3.6
Transportation equipment.....	3.3	2.5	2.9	4.0	7.0	5.5	3.6	4.1	3.8	3.8	3.5	3.3	3.8	4.0	4.7
Instruments and related products.....	2.7	2.0	2.0	2.7	3.4	3.1	3.4	3.9	3.1	2.6	2.5	2.4	2.7	2.8	2.7
Miscellaneous manufacturing industries.....	5.5	2.4											5.4		
Nondurable goods.....	3.6	2.5		3.7	5.6	6.8	6.6	7.0	5.5	5.2	5.7	5.1	5.0	6.2	5.6
Food and kindred products.....	3.6	3.0	3.9	6.5	8.1	9.1	7.5	8.9	5.6	4.9	4.8	3.8	4.2	5.8	6.4
Tobacco manufactures.....	4.7	7.0	4.4	5.9	13.1	24.5	8.3	3.1	2.4	1.8	2.6	2.6	3.6	6.6	6.4
Textile mill products.....	3.5	2.2	3.0	4.0	4.2	4.3	4.0	4.0	3.9	3.6	3.5	3.3	3.3	3.6	3.6
Apparel and related products.....	5.7	3.3	4.5	5.0	5.5	5.8	7.1	5.7	5.9	5.1	4.7	5.4	5.9	5.3	5.5
Paper and allied products.....	2.3	1.8	2.0	2.6	3.0	2.9	2.9	4.0	2.7	2.7	2.4	2.2	2.3	2.6	2.6
Printing, publishing, and allied industries.....	2.8	2.1	2.5	3.0	3.5	3.2	3.2	4.0	2.8	2.8	2.6	2.6	2.9	2.9	3.0
Chemicals and allied products.....	1.9	1.3	1.3	1.8	2.2	1.9	2.2	3.3	2.0	2.6	2.4	1.9	2.0	2.1	2.1
Petroleum refining and related industries.....	1.5	.7	.9	1.2	1.4	1.3	1.9	3.0	2.0	2.1	1.6	.9	1.3	1.5	1.4
Rubber and miscellaneous plastic products.....	3.6	2.3	2.6	3.8	4.3	4.3	4.5	4.0	3.7	3.8	3.4	3.0	3.2	3.6	3.8
Leather and leather products.....	5.5	3.5	4.1	4.8	4.3	5.4	6.6	6.3	5.6	4.4	4.1	4.2	5.9	5.0	5.0
Nonmanufacturing:															
Metal mining.....	2.8	1.8	2.5	2.7	2.6	2.8	2.7	3.8	3.6	5.7	2.9	2.8	3.2	3.1	2.9
Coal mining.....	2.4	1.4	1.7	1.8	2.3	2.9	2.1	1.5	2.1	2.2	2.5	2.2	2.2	2.1	1.7
Accessions: New hires															
Manufacturing:															
Actual.....	1.9	1.4	1.8	2.6	3.1	3.2	2.7	3.3	2.5	2.3	2.0	1.8	1.9	2.4	2.5
Seasonally adjusted.....	2.3	2.5	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.6	2.4	2.2	2.3		
Durable goods.....	1.8	1.3	1.7	2.4	2.8	2.6	2.3	2.9	2.3	2.2	1.8	1.7	1.7	2.1	2.3
Ordnance and accessories.....	.6	1.0	1.3	1.8	2.0	1.9	1.7	1.9	1.4	1.3	1.1	1.3	1.4	1.5	2.0
Lumber and wood products, except furniture.....	2.8	2.0	2.9	4.2	5.5	5.9	4.7	6.3	5.5	4.6	3.7	2.9	2.6	4.2	3.9
Furniture and fixtures.....	2.9	1.8	2.7	4.0	4.8	4.9	4.4	4.0	3.5	3.3	2.7	2.7	2.7	3.5	3.5
Stone, clay, and glass products.....	1.4	1.1	1.5	2.0	2.4	2.8	3.0	3.7	2.8	2.8	2.1	1.6	1.3	2.3	2.2
Primary metal industries.....	1.2	.8	.8	1.1	1.3	1.2	1.2	2.1	1.7	1.4	1.0	.9	.9	1.2	1.1
Fabricated metal products.....	2.1	1.5	2.0	2.9	3.5	3.2	2.8	3.2	2.6	2.4	2.0	1.8	1.9	2.5	2.4
Machinery.....	2.1	1.6	1.7	2.0	2.2	1.9	1.9	2.5	1.9	1.9	1.8	1.8	1.9	1.9	2.0
Electrical equipment and supplies.....	1.7	1.3	1.6	2.2	2.6	2.3	1.9	2.4	1.7	1.6	1.5	1.5	1.6	1.9	2.3
Transportation equipment.....	1.7	1.2	1.6	2.3	2.5	1.9	1.8	2.4	1.8	1.9	1.7	1.6	1.6	1.9	2.1
Instruments and related products.....	1.7	1.3	1.4	2.0	2.4	2.1	2.2	3.1	2.0	1.8	1.7	1.6	1.9	2.0	2.0
Miscellaneous manufacturing industries.....	2.5	1.5	2.7	4.4	6.2	4.8	4.1	3.7	3.2	3.2	2.6	2.7	2.6	3.4	3.8
Nondurable goods.....	2.0	1.4	1.9	2.9	3.5	3.8	3.2	3.8	2.7	2.4	2.2	2.0	2.1	2.7	2.8
Food and kindred products.....	1.8	1.6	2.3	4.0	5.3	6.5	4.6	5.9	3.5	2.8	2.2	1.9	2.1	3.6	3.8
Tobacco manufactures.....	1.7	4.0	2.3	3.8	8.5	14.4	3.3	1.8	1.3	1.1	1.6	1.1	1.9	3.8	3.2
Textile mill products.....	2.1	1.4	2.1	2.9	3.1	3.2	2.8	3.0	2.8	2.5	2.2	2.0	1.9	2.5	2.5
Apparel and related products.....	2.9	1.6	2.4	3.4	3.8	3.9	4.0	3.6	3.6	3.4	3.2	3.1	3.2	3.3	3.5
Paper and allied products.....	1.4	1.1	1.3	2.1	2.4	2.2	2.1	3.1	1.9	1.7	1.5	1.3	1.3	1.8	1.8
Printing, publishing, and allied industries.....	2.1	1.5	1.9	2.4	2.9	2.5	2.5	3.0	2.1	2.0	1.9	1.8	2.1	2.2	2.3
Chemicals and allied products.....	1.1	.8	.9	1.3	1.6	1.4	1.6	2.6	1.4	1.8	1.6	1.2	1.2	1.5	1.5
Petroleum refining and related industries.....	.6	.5	.7	.8	1.1	1.0	1.6	2.4	1.5	1.3	.9	.5	.7	1.1	1.0
Rubber and miscellaneous plastic products.....	1.7	1.3	1.7	2.8	3.2	2.9	2.6	2.7	2.4	2.1	1.9	1.8	1.7	2.3	2.4
Leather and leather products.....	3.3	2.3	2.6	3.4	3.6	3.9	4.2	3.9	3.2	2.6	2.3	2.4	3.3	3.1	3.1
Nonmanufacturing:															
Metal mining.....	1.2	1.0	1.3	1.7	1.9	1.8	1.5	2.7	1.6	1.7	1.5	1.4	1.7	1.7	1.5
Coal mining.....	1.0	.7	.8	1.0	1.2	1.1	.9	.7	.8	.8	.8	.9	.6	.9	.5

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group ¹—Continued

Major industry group	[Per 100 employees]													Revised series; see box, p. 470.	
	1964	1963												Annual average	
	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1963	1962
	Separations: Total														
Manufacturing:															
Actual.....	3.8	3.7	3.8	4.1	4.9	4.7	4.1	3.4	3.6	3.6	3.5	3.2	4.0	3.9	4.1
Seasonally adjusted.....	3.8	3.7	3.7	3.7	3.9	4.2	4.0	3.3	4.0	4.0	3.8	3.7	4.0	3.9	4.1
Durable goods.....	3.7	3.4	3.5	3.7	4.3	4.7	4.0	3.2	3.3	3.3	3.3	3.1	3.7	3.6	3.8
Ordnance and accessories.....	4.3	2.1	2.4	2.5	3.2	2.8	2.2	2.4	2.3	2.4	4.2	3.1	3.2	2.7	2.7
Lumber and wood products, except furniture.....	5.2	4.9	5.8	5.5	7.1	7.3	5.2	5.1	5.0	5.2	5.4	4.7	5.0	5.5	5.6
Furniture and fixtures.....	4.5	3.8	4.0	4.9	5.0	5.3	4.3	4.2	4.4	4.5	4.5	3.9	4.5	4.4	4.6
Stone, clay, and glass products.....	4.5	4.9	4.0	3.9	4.6	4.3	3.3	3.2	3.1	3.0	2.9	3.4	4.9	3.8	4.1
Primary metal industries.....	2.2	2.2	2.7	3.5	4.1	4.1	3.6	2.0	2.1	2.1	2.1	2.2	2.6	2.8	3.3
Fabricated metal products.....	4.1	3.7	4.0	4.3	4.8	4.5	4.6	3.5	3.7	3.5	3.8	3.6	4.2	4.0	4.2
Machinery.....	2.5	1.9	2.3	2.7	3.3	3.4	2.8	2.8	3.0	2.6	2.5	2.3	2.8	2.7	2.8
Electrical equipment and supplies.....	3.6	3.0	3.5	3.4	4.0	3.6	3.2	3.1	3.0	3.1	3.6	3.1	3.7	3.4	3.3
Transportation equipment.....	4.1	3.6	3.1	3.5	3.9	7.5	5.9	3.5	3.7	3.9	3.5	3.3	3.7	4.1	4.6
Instruments and related products.....	3.2	2.5	2.4	2.7	3.7	3.0	3.0	2.3	2.7	2.3	2.4	2.4	2.9	2.7	2.6
Miscellaneous manufacturing industries.....	5.7	10.4	7.2	5.3	5.4	5.5	5.2	4.2	4.5	4.8	4.2	3.8	5.5	5.5	6.0
Nondurable goods.....	4.0	4.1	4.3	4.7	5.6	4.8	4.3	3.8	4.0	3.9	3.7	3.4	4.3	4.2	4.4
Food and kindred products.....	5.2	5.5	6.6	7.5	9.2	6.5	5.8	4.8	4.6	4.8	4.9	4.7	6.4	5.9	6.2
Tobacco manufactures.....	6.5	11.0	11.9	8.6	4.2	4.3	2.6	2.2	4.0	3.9	7.0	9.2	6.8	6.3	6.7
Textile mill products.....	3.7	3.3	3.6	4.0	4.5	4.6	3.8	3.3	3.9	3.7	3.5	3.1	3.9	3.8	3.7
Apparel and related products.....	5.1	5.7	5.3	5.5	5.8	5.8	6.4	5.6	5.8	6.0	4.8	4.2	5.5	5.5	5.8
Paper and allied products.....	2.8	2.6	2.7	2.8	4.2	3.4	2.5	2.2	2.5	2.5	2.5	2.3	2.9	2.8	2.8
Printing, publishing, and allied industries.....	3.2	2.5	2.7	3.1	3.8	3.5	2.6	3.0	3.0	2.6	2.7	2.3	3.0	2.9	2.9
Chemicals and allied products.....	1.9	1.7	1.8	2.0	3.1	2.5	1.8	2.1	2.6	1.9	1.7	1.4	1.7	2.0	2.1
Petroleum refining and related industries.....	1.4	2.3	1.8	1.8	3.1	2.1	1.7	1.8	1.7	1.6	1.8	1.9	1.8	2.0	1.8
Rubber and miscellaneous plastic products.....	4.0	3.9	3.7	3.7	4.4	4.1	4.3	3.3	3.5	3.2	3.7	3.0	3.6	3.7	3.6
Leather and leather products.....	5.5	5.3	4.1	4.8	5.8	5.9	5.6	4.1	4.9	5.9	4.7	3.8	5.2	5.0	5.2
Nonmanufacturing:															
Metal mining.....	2.7	3.1	3.3	3.1	3.9	2.9	2.6	2.5	3.1	3.0	3.1	2.6	3.6	3.1	3.5
Coal mining.....	2.7	2.0	1.5	1.4	1.9	1.8	2.6	1.8	2.2	2.8	2.5	2.0	2.1	2.1	2.8
	Separations: Quits														
Manufacturing:															
Actual.....	1.1	.8	1.1	1.5	2.4	2.1	1.4	1.4	1.4	1.3	1.2	1.0	1.1	1.4	1.4
Seasonally adjusted.....	1.4	1.3	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.3	1.4	1.4	1.4
Durable goods.....	1.0	.7	1.0	1.3	2.0	1.8	1.2	1.2	1.3	1.1	1.0	.9	.9	1.2	1.2
Ordnance and accessories.....	1.2	.6	.7	1.0	1.7	1.3	1.0	1.0	1.0	.8	.9	.9	1.0	1.0	1.2
Lumber and wood products, except furniture.....	1.7	1.5	2.1	2.9	4.5	4.9	2.9	3.0	3.0	2.6	2.2	1.6	1.7	2.7	2.4
Furniture and fixtures.....	1.9	1.2	1.7	2.3	3.0	3.1	2.1	1.9	2.3	2.2	1.9	1.5	1.7	2.1	2.1
Stone, clay, and glass products.....	.9	.6	1.0	1.2	2.2	1.9	1.3	1.3	1.3	1.1	.9	.7	.8	1.2	1.2
Primary metal industries.....	.5	.4	.5	.6	1.2	1.1	.7	.6	.7	.6	.5	.4	.4	.6	.6
Fabricated metal products.....	1.1	.8	1.0	1.4	2.2	1.9	1.2	1.2	1.3	1.2	1.1	.8	.9	1.3	1.3
Machinery.....	.9	.6	.8	1.0	1.6	1.4	.9	.9	1.0	1.0	.9	.7	.8	1.0	1.0
Electrical equipment and supplies.....	1.1	.9	1.1	1.3	2.0	1.7	1.2	1.2	1.2	1.1	1.1	1.0	1.0	1.2	1.4
Transportation equipment.....	.8	.6	.7	.9	1.5	1.2	.9	.9	.9	.8	.8	.7	.7	.9	1.0
Instruments and related products.....	1.1	.8	.9	1.1	2.0	1.6	1.2	1.1	1.3	1.0	1.0	1.0	1.1	1.2	1.2
Miscellaneous manufacturing industries.....	1.3	1.1	1.6	2.3	3.0	2.9	1.8	1.8	1.8	1.6	1.5	1.3	1.3	1.8	2.0
Nondurable goods.....	1.3	1.0	1.3	1.8	2.8	2.4	1.7	1.6	1.7	1.5	1.4	1.2	1.3	1.6	1.7
Food and kindred products.....	1.2	1.0	1.5	2.2	3.8	2.8	1.9	1.7	1.6	1.4	1.4	1.2	1.3	1.8	1.9
Tobacco manufactures.....	.9	.7	.8	1.0	1.3	1.5	.8	.7	.8	.8	.7	.7	.9	.9	.9
Textile mill products.....	1.6	1.1	1.6	2.2	2.8	2.8	2.1	1.9	2.1	2.0	1.7	1.4	1.6	1.9	1.9
Apparel and related products.....	1.9	1.3	1.8	2.3	2.8	3.1	2.5	2.2	2.4	2.3	2.0	1.8	2.0	2.2	2.3
Paper and allied products.....	.9	.7	.9	1.2	2.6	1.9	1.0	1.0	1.0	1.0	.9	.7	.8	1.1	1.1
Printing, publishing, and allied industries.....	1.5	1.0	1.1	1.4	2.2	2.0	1.3	1.5	1.5	1.3	1.2	1.1	1.2	1.4	1.5
Chemicals and allied products.....	.6	.4	.5	.7	1.9	1.3	.7	.7	.8	.7	.6	.5	.6	.8	.8
Petroleum refining and related industries.....	.4	.3	.4	.6	1.7	1.1	.7	.8	.7	.6	.5	.5	.4	.7	.7
Rubber and miscellaneous plastic products.....	1.1	.8	1.1	1.6	2.3	2.0	1.4	1.4	1.4	1.3	1.1	1.0	1.1	1.4	1.4
Leather and leather products.....	2.1	1.5	1.9	2.5	3.1	3.3	2.5	2.2	2.4	2.3	2.0	1.6	2.0	2.3	2.3
Nonmanufacturing:															
Metal mining.....	1.2	.7	.8	1.2	2.3	1.9	1.3	1.4	1.5	1.4	1.2	1.2	1.2	1.3	1.2
Coal mining.....	.4	.3	.4	.5	.6	.6	.5	.3	.4	.5	.4	.3	.3	.4	.4

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group¹—Continued

[Per 100 employees]

Revised series; see box, p. 470.

Major industry group	1964	1963												Annual average	
	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1963	1962
	Separations: Layoffs														
Manufacturing:															
Actual.....	2.0	2.3	2.1	1.9	1.8	1.9	2.0	1.4	1.5	1.6	1.7	1.6	2.2	1.8	2.0
Seasonally adjusted.....	1.8	1.8	1.8	1.7	1.8	2.0	1.9	1.7	1.8	1.8	1.8	1.8	2.0	1.8	2.0
Durable goods.....	1.9	2.1	1.8	1.6	1.4	2.1	2.1	1.3	1.3	1.4	1.6	1.6	2.0	1.7	1.9
Ordnance and accessories.....	2.4	1.0	1.1	.9	1.0	.9	.7	.9	.8	1.1	2.7	1.8	1.7	1.2	.9
Lumber and wood products, except furniture.....	2.8	2.7	2.9	1.7	1.5	1.4	1.5	1.2	1.1	1.8	2.5	2.3	2.6	1.9	2.4
Furniture and fixtures.....	2.0	2.0	1.6	1.7	1.1	1.3	1.4	1.6	1.3	1.5	1.8	1.7	2.1	1.6	1.8
Stone, clay, and glass products.....	3.1	3.7	2.4	2.0	1.7	1.6	1.2	1.2	1.2	1.4	2.1	2.1	3.4	1.9	2.2
Primary metal industries.....	1.0	1.3	1.6	2.1	2.2	2.3	2.2	.7	.8	.8	1.0	1.1	1.4	1.5	2.1
Fabricated metal products.....	2.3	2.3	2.3	2.1	1.8	1.7	2.6	1.5	1.7	1.7	2.0	2.1	2.5	2.0	2.2
Machinery.....	1.0	.7	.9	1.1	1.0	1.3	1.3	1.2	1.4	1.0	1.0	.9	1.3	1.1	1.2
Electrical equipment and supplies.....	1.8	1.5	1.6	1.2	1.1	1.1	1.3	1.1	1.2	1.3	1.7	1.4	1.8	1.4	1.1
Transportation equipment.....	2.2	2.3	1.7	1.6	1.5	5.4	4.0	1.7	1.9	2.2	1.9	1.9	2.1	2.4	2.8
Instruments and related products.....	1.5	1.2	.9	.9	.8	.8	1.3	.6	.7	.7	.7	.9	1.0	.9	.7
Miscellaneous manufacturing industries.....	3.6	8.6	4.7	2.1	1.6	1.7	2.6	1.7	2.0	2.4	2.0	1.8	3.6	2.9	3.1
Nondurable goods.....	2.1	2.6	2.4	2.3	2.2	1.7	1.9	1.5	1.7	1.8	1.7	1.6	2.4	2.0	2.1
Food and kindred products.....	3.3	3.9	4.5	4.6	4.6	2.9	3.2	2.5	2.4	2.8	2.9	2.9	4.4	3.5	3.7
Tobacco manufactures.....	4.8	9.9	10.7	7.0	2.5	2.2	1.3	1.2	2.7	2.6	5.8	8.1	5.4	5.0	5.3
Textile mill products.....	1.5	1.6	1.5	1.2	1.0	1.1	1.1	.8	1.1	1.1	1.2	1.1	1.7	1.2	1.2
Apparel and related products.....	2.5	3.8	2.8	2.5	2.3	1.9	3.0	2.6	2.6	3.0	2.1	1.8	2.7	2.6	2.7
Paper and allied products.....	1.4	1.4	1.2	.9	.9	.9	.8	.6	.9	.9	1.1	1.2	1.5	1.0	1.0
Printing, publishing, and allied industries.....	1.1	1.2	1.1	1.2	1.0	1.0	.8	.9	1.1	.9	1.0	.8	1.3	1.0	1.0
Chemicals and allied products.....	.8	.9	.9	.7	.7	.7	.7	.9	1.4	.8	.6	.5	.7	.8	.8
Petroleum refining and related industries.....	.5	1.5	1.0	.8	.8	.6	.4	.3	.5	.5	.7	.9	.8	.7	.6
Rubber and miscellaneous plastic products.....	2.1	2.4	2.0	1.2	1.3	1.4	2.1	1.2	1.3	1.2	1.8	1.3	1.8	1.6	1.5
Leather and leather products.....	2.6	3.2	1.5	1.7	1.9	1.6	2.3	1.1	1.7	2.9	2.0	1.6	2.5	2.0	2.1
Nonmanufacturing:															
Metal mining.....	.9	1.9	1.9	1.2	.8	.5	.6	.4	.8	.9	1.4	.9	1.3	1.1	1.5
Coal mining.....	1.5	1.4	.7	.5	.8	.7	1.6	1.0	1.4	1.8	1.6	1.3	1.4	1.2	1.9

¹ For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2.

Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series for the following reasons: (1) the labor turnover series measures changes

during the calendar month, while the employment series measures changes from midmonth to midmonth; and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

² Preliminary.

C.—Earnings and Hours

TABLE C-1. Gross hours and earnings of production workers,¹ by industry

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Mining.....	\$115.36	\$116.48	\$113.99	\$116.75	\$117.04	\$115.08	\$112.06	\$117.85	\$114.39	\$112.75	\$110.97	\$112.48	\$114.40	\$110.70	
Metal mining.....	122.80	122.51	119.89	120.60	121.06	118.08	116.09	118.85	117.71	117.50	118.37	117.14	118.66	117.45	
Iron ores.....	129.27	127.93	120.43	120.43	127.20	119.65	119.50	124.14	120.08	117.80	116.73	118.05	120.96	122.19	
Copper ores.....	128.30	126.69	128.17	130.23	124.66	125.27	121.98	122.69	122.55	124.12	125.71	121.69	124.56	120.70	
Coal mining.....	126.01	125.85	117.94	121.68	123.48	118.18	108.19	128.74	122.14	117.73	113.77	121.29	119.95	113.09	
Bituminous.....	127.83	128.40	119.45	123.48	124.97	119.32	110.21	130.60	124.66	119.81	114.56	122.77	121.59	114.50	
Crude petroleum and natural gas.....	112.56	113.79	113.10	113.05	113.67	113.32	112.36	113.36	110.62	111.45	110.77	110.51	111.99	109.20	
Crude petroleum and natural gas fields.....	122.43	121.54	120.54	119.43	122.07	119.31	120.30	123.31	117.74	120.30	118.26	118.15	120.01	115.46	
Oil and gas field services.....	104.73	107.75	106.46	108.43	106.64	107.56	105.46	105.04	104.49	103.52	104.25	103.76	105.35	103.63	
Quarrying and nonmetallic mining.....	102.09	105.33	108.24	115.04	114.50	114.33	113.83	112.91	110.32	106.56	102.00	98.77	109.03	105.43	
Contract construction.....	122.06	124.96	125.58	134.98	132.90	132.70	130.90	129.79	128.06	124.58	122.72	118.33	127.57	122.47	
General building contractors.....	112.16	115.93	116.53	124.58	121.88	122.02	120.62	118.58	117.85	115.84	113.34	108.85	117.72	112.50	
Heavy construction.....	118.30	118.17	124.00	138.65	136.85	137.03	135.22	132.13	126.96	122.36	117.80	110.70	128.03	122.31	
Highway and street construction.....	112.94	109.08	119.99	137.81	135.96	134.67	133.62	130.09	123.68	117.74	109.42	99.72	125.16	118.37	
Other heavy construction.....	122.64	126.92	128.38	140.34	137.78	140.63	136.92	134.60	131.02	127.98	123.80	119.19	131.54	126.43	
Special trade contractors.....	129.24	133.48	131.38	138.49	137.64	137.25	136.14	135.75	134.67	131.40	130.31	125.93	133.59	128.50	
Manufacturing.....	\$101.15	99.90	102.41	100.85	100.53	100.53	98.42	99.23	100.37	99.23	97.36	98.09	97.20	99.38	96.56
Durable goods.....	110.29	109.21	111.90	109.71	109.45	107.01	108.09	109.82	108.36	106.37	106.49	106.23	108.09	104.70	
Nondurable goods.....	89.04	87.85	90.17	89.10	88.98	89.38	88.40	88.36	88.36	87.52	85.97	86.68	85.85	87.91	85.54
Average weekly hours															
Mining.....	41.2	41.6	41.3	42.3	42.1	42.0	41.2	42.7	41.9	41.3	40.5	40.9	41.6	41.0	
Metal mining.....	42.2	42.1	41.2	41.3	41.6	41.0	40.8	41.7	41.3	40.8	41.1	41.1	41.2	41.5	
Iron ores.....	41.7	41.4	39.1	39.1	41.3	39.1	38.8	40.7	39.5	38.0	37.9	37.8	39.4	39.8	
Copper ores.....	43.2	42.8	43.3	43.7	42.4	42.9	42.8	42.9	43.0	43.4	43.8	43.0	43.1	42.8	
Coal mining.....	39.5	39.7	37.8	39.0	39.2	38.0	38.0	41.0	39.4	38.1	36.7	39.0	38.8	36.6	
Bituminous.....	39.7	40.0	37.8	39.2	39.3	38.0	38.0	41.2	39.7	38.4	36.6	39.1	38.9	36.7	
Crude petroleum and natural gas.....	42.0	42.3	42.2	42.5	42.1	42.6	42.4	42.3	41.9	41.9	41.8	41.7	42.1	42.0	
Crude petroleum and natural gas fields.....	41.5	41.2	41.0	40.9	41.1	41.0	41.2	41.8	40.6	41.2	40.5	40.6	41.1	40.8	
Oil and gas field services.....	42.4	43.1	43.1	43.9	43.0	43.9	43.4	42.7	43.0	42.6	42.9	42.7	43.0	43.0	
Quarrying and nonmetallic mining.....	41.0	42.3	44.0	46.2	45.8	46.1	45.9	45.9	45.4	44.4	42.5	41.5	44.5	44.3	
Contract construction.....	34.0	35.3	36.4	38.9	38.3	38.8	38.5	38.4	38.0	37.3	36.2	34.7	37.3	37.0	
General building contractors.....	32.7	34.3	35.1	37.3	36.6	37.2	37.0	36.6	36.6	36.2	35.2	33.7	36.0	35.6	
Heavy construction.....	36.4	36.7	40.0	43.6	42.9	43.5	43.2	42.9	41.9	41.2	39.1	36.9	41.3	40.5	
Highway and street construction.....	36.2	35.3	40.4	44.6	44.0	44.3	44.1	43.8	42.5	41.9	38.8	36.0	42.0	41.1	
Other heavy construction.....	36.5	38.0	39.5	42.4	41.5	42.5	42.0	41.8	41.2	40.5	39.3	37.6	40.6	39.9	
Special trade contractors.....	34.1	35.5	35.7	37.7	37.2	37.5	37.4	37.5	37.1	36.5	35.8	34.5	36.5	36.3	
Manufacturing.....	40.3	39.8	40.8	40.5	40.7	40.7	40.5	40.5	40.8	40.5	39.9	40.2	40.0	40.4	
Durable goods.....	41.0	40.6	41.6	41.2	41.4	41.3	41.0	41.1	41.6	41.2	40.6	40.7	40.7	41.1	40.9
Nondurable goods.....	39.4	38.7	39.9	39.6	39.9	39.9	40.0	39.8	39.6	39.6	38.9	39.4	39.2	39.6	
Average hourly earnings															
Mining.....	\$2.80	\$2.80	\$2.76	\$2.76	\$2.78	\$2.74	\$2.72	\$2.76	\$2.73	\$2.73	\$2.74	\$2.75	\$2.75	\$2.70	
Metal mining.....	2.91	2.91	2.91	2.92	2.91	2.88	2.86	2.85	2.85	2.88	2.88	2.88	2.85	2.88	2.83
Iron ores.....	3.10	3.09	3.08	3.08	3.08	3.06	3.08	3.05	3.04	3.10	3.08	3.07	3.07	3.07	
Copper ores.....	2.97	2.96	2.96	2.98	2.94	2.92	2.85	2.86	2.85	2.86	2.87	2.83	2.89	2.82	
Coal mining.....	3.19	3.17	3.12	3.12	3.15	3.11	3.14	3.14	3.10	3.09	3.10	3.11	3.12	3.09	
Bituminous.....	3.22	3.21	3.16	3.15	3.18	3.14	3.14	3.17	3.14	3.12	3.13	3.14	3.15	3.12	
Crude petroleum and natural gas.....	2.68	2.69	2.68	2.66	2.70	2.66	2.65	2.68	2.64	2.66	2.65	2.65	2.66	2.60	
Crude petroleum and natural gas fields.....	2.95	2.95	2.94	2.92	2.97	2.91	2.92	2.95	2.90	2.92	2.92	2.91	2.92	2.83	
Oil and gas field services.....	2.47	2.50	2.47	2.47	2.48	2.45	2.43	2.46	2.43	2.43	2.43	2.43	2.45	2.41	
Quarrying and nonmetallic mining.....	2.49	2.49	2.46	2.49	2.50	2.48	2.48	2.46	2.43	2.40	2.40	2.38	2.45	2.38	
Contract construction.....	3.59	3.54	3.45	3.47	3.47	3.42	3.40	3.38	3.37	3.34	3.39	3.41	3.42	3.31	
General building contractors.....	3.43	3.38	3.32	3.34	3.33	3.28	3.26	3.24	3.22	3.20	3.22	3.23	3.27	3.16	
Heavy construction.....	3.25	3.22	3.10	3.18	3.19	3.15	3.13	3.08	3.03	2.97	3.00	3.00	3.10	3.02	
Highway and street construction.....	3.12	3.09	2.97	3.09	3.09	3.04	3.03	2.97	2.91	2.81	2.82	2.77	2.98	2.88	
Other heavy construction.....	3.36	3.34	3.25	3.31	3.32	3.31	3.26	3.22	3.18	3.16	3.15	3.17	3.24	3.17	
Special trade contractors.....	3.79	3.76	3.68	3.70	3.70	3.66	3.64	3.62	3.63	3.60	3.64	3.65	3.66	3.54	
Manufacturing.....	\$2.51	2.51	2.49	2.47	2.47	2.43	2.45	2.46	2.45	2.44	2.44	2.43	2.46	2.39	
Durable goods.....	2.69	2.69	2.67	2.65	2.65	2.61	2.63	2.64	2.63	2.62	2.61	2.61	2.63	2.56	
Nondurable goods.....	2.26	2.27	2.26	2.25	2.23	2.24	2.21	2.22	2.22	2.21	2.21	2.20	2.22	2.16	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Durable goods</i>															
Ordnance and accessories.....	\$119.29	\$119.99	\$123.26	\$120.36	\$121.13	\$121.01	\$119.31	\$117.74	\$118.24	\$117.67	\$115.14	\$118.20	\$119.65	\$119.60	\$116.31
Ammunition, except for small arms.....	120.30	121.91	125.63	122.51	122.89	121.77	121.95	118.98	119.65	117.50	116.24	117.86	119.31	120.25	116.69
Sighting and fire control equipment.....		126.72	129.78	128.75	129.48	129.36	123.83	121.09	120.10	122.01	119.20	127.98	128.29	125.36	126.18
Other ordnance and accessories.....	114.33	114.74	117.29	114.77	116.05	116.90	114.24	114.93	115.36	116.90	112.19	116.05	117.59	115.77	112.34
Lumber and wood products, except furniture.....	81.97	79.70	83.20	82.97	85.68	86.50	84.45	82.42	82.62	80.60	78.41	77.81	77.22	81.80	79.20
Sawmills and planing mills.....	75.47	72.94	76.03	76.02	78.34	79.15	77.36	74.96	76.07	73.97	71.82	71.16	70.62	74.80	71.71
Millwork, plywood, and related products.....	91.69	88.62	91.72	90.83	90.64	91.27	90.06	89.66	90.29	90.07	87.94	87.94	86.88	89.40	87.12
Wooden containers.....	66.74	64.67	68.17	67.49	70.18	70.00	69.64	70.14	69.14	68.51	66.73	65.01	64.91	68.04	66.17
Miscellaneous wood products.....	76.70	73.87	76.14	75.74	76.07	76.45	74.89	74.85	74.85	73.89	72.36	73.12	72.90	74.30	72.54
Furniture and fixtures.....	82.82	79.59	85.06	83.43	84.03	84.03	83.20	81.19	81.39	79.60	78.01	79.19	79.19	81.39	79.37
Household furniture.....	79.32	75.25	81.87	79.68	80.26	80.06	78.62	76.52	76.70	74.99	74.21	75.36	74.96	77.30	75.07
Office furniture.....		94.40	99.17	94.37	97.34	98.47	96.23	94.71	96.93	94.71	92.63	93.15	92.29	95.35	92.57
Partitions, office and store fixtures.....		99.97	102.26	101.89	104.38	105.67	109.10	107.64	105.37	101.75	98.39	101.20	100.58	103.42	103.57
Other furniture and fixtures.....	87.31	83.92	87.56	86.30	85.68	86.11	85.90	82.21	82.82	82.42	81.19	79.98	81.18	83.64	81.41
Average weekly hours															
Ordnance and accessories.....	40.3	40.4	41.5	40.8	41.2	41.3	41.0	40.6	41.2	41.0	40.4	40.9	41.4	41.1	41.1
Ammunition, except for small arms.....	40.1	40.5	41.6	40.7	41.1	41.0	41.2	40.6	41.4	40.8	40.5	40.5	41.0	40.9	40.8
Sighting and fire control equipment.....		40.1	41.2	41.4	41.5	42.0	40.6	39.7	39.9	40.4	39.6	42.1	42.2	41.1	42.2
Other ordnance and accessories.....	40.4	40.4	41.3	40.7	41.3	41.6	40.8	40.9	41.2	41.6	40.5	41.3	41.7	41.2	41.3
Lumber and wood products, except furniture.....	39.6	38.5	40.0	39.7	40.8	40.8	40.6	40.6	40.9	39.9	39.6	39.3	39.4	40.1	39.8
Sawmills and planing mills.....	38.7	37.6	39.6	39.8	40.8	40.8	40.5	40.3	40.9	40.2	39.9	39.1	38.8	40.0	39.4
Millwork, plywood, and related products.....	41.3	40.1	41.5	41.1	41.2	41.3	41.5	41.7	41.8	41.7	40.9	40.9	40.6	41.2	40.9
Wooden containers.....	38.8	37.6	40.1	39.7	40.8	40.7	41.7	42.0	41.4	41.4	40.2	39.4	39.1	40.5	40.1
Miscellaneous wood products.....	40.8	39.5	40.5	40.5	40.9	41.1	40.7	40.7	40.9	40.6	40.2	40.4	40.5	40.6	40.3
Furniture and fixtures.....	40.8	39.4	41.9	41.3	41.6	41.6	41.6	40.8	40.9	40.2	39.8	40.2	40.2	40.9	40.7
Household furniture.....	41.1	39.4	42.2	41.5	41.8	41.7	41.6	40.7	40.8	40.1	39.9	40.3	40.3	40.9	40.8
Office furniture.....		40.0	42.2	40.5	41.6	41.9	41.3	41.0	41.6	41.0	40.1	40.5	40.3	41.1	40.6
Partitions, office and store fixtures.....		38.6	40.1	39.8	40.3	40.8	41.8	41.4	41.0	39.9	39.2	40.0	39.6	40.4	41.1
Other furniture and fixtures.....	40.8	39.4	41.3	40.9	40.8	41.4	41.9	40.3	40.8	40.4	39.8	39.4	39.6	40.6	40.3
Average hourly earnings															
Ordnance and accessories.....	\$2.96	\$2.97	\$2.97	\$2.95	\$2.94	\$2.93	\$2.91	\$2.90	\$2.87	\$2.87	\$2.85	\$2.89	\$2.89	\$2.91	\$2.83
Ammunition, except for small arms.....	3.00	3.01	3.02	3.01	2.99	2.97	2.96	2.93	2.89	2.88	2.87	2.91	2.91	2.94	2.86
Sighting and fire control equipment.....		3.16	3.15	3.11	3.12	3.08	3.05	3.05	3.01	3.02	3.01	3.04	3.04	3.05	2.99
Other ordnance and accessories.....	2.83	2.84	2.84	2.82	2.81	2.81	2.80	2.81	2.80	2.81	2.77	2.81	2.82	2.81	2.72
Lumber and wood products, except furniture.....	2.07	2.07	2.08	2.09	2.10	2.12	2.08	2.03	2.02	2.02	1.98	1.98	1.96	2.04	1.99
Sawmills and planing mills.....	1.95	1.94	1.92	1.91	1.92	1.94	1.91	1.86	1.86	1.84	1.80	1.82	1.82	1.87	1.82
Millwork, plywood, and related products.....	2.22	2.21	2.21	2.21	2.20	2.21	2.17	2.15	2.15	2.16	2.15	2.15	2.14	2.17	2.13
Wooden containers.....	1.72	1.70	1.70	1.70	1.72	1.72	1.67	1.67	1.67	1.65	1.66	1.65	1.66	1.68	1.65
Miscellaneous wood products.....	1.88	1.87	1.88	1.87	1.86	1.86	1.84	1.83	1.83	1.82	1.80	1.81	1.80	1.83	1.80
Furniture and fixtures.....	2.03	2.02	2.03	2.02	2.02	2.02	2.00	1.99	1.99	1.98	1.96	1.97	1.97	1.99	1.95
Household furniture.....	1.93	1.91	1.94	1.92	1.92	1.92	1.89	1.88	1.88	1.87	1.86	1.87	1.86	1.89	1.84
Office furniture.....		2.36	2.35	2.33	2.34	2.35	2.33	2.31	2.33	2.31	2.31	2.30	2.29	2.32	2.28
Partitions, office and store fixtures.....		2.59	2.55	2.56	2.59	2.59	2.61	2.60	2.57	2.55	2.51	2.52	2.54	2.56	2.52
Other furniture and fixtures.....	2.14	2.13	2.12	2.11	2.10	2.08	2.05	2.04	2.03	2.04	2.04	2.03	2.05	2.06	2.02

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Stone, clay, and glass products.....	\$100.69	\$99.50	\$101.50	\$103.75	\$105.67	\$104.50	\$104.33	\$104.33	\$104.41	\$103.07	\$101.11	\$99.47	\$97.36	\$102.42	\$98.57
Flat glass.....	-----	137.90	135.74	143.45	142.35	139.06	133.00	133.45	139.40	133.51	131.66	130.65	127.92	135.20	126.01
Glass and glassware, pressed or blown.....	100.10	99.54	98.39	100.50	100.50	98.85	100.90	100.25	101.00	100.10	98.00	100.40	100.65	99.75	98.33
Cement, hydraulic.....	112.75	117.22	117.26	120.30	117.83	118.28	116.47	118.86	116.05	116.48	119.99	112.87	111.63	116.60	112.75
Structural clay products.....	83.13	84.46	88.29	90.45	91.12	90.45	90.69	90.71	90.92	90.71	90.27	86.67	84.77	89.40	86.69
Pottery and related products.....	-----	90.64	92.10	92.23	90.09	89.54	87.85	89.01	90.16	90.46	88.37	89.31	88.14	89.77	86.85
Concrete, gypsum, and plaster products.....	95.98	95.06	100.86	105.78	112.50	111.05	111.15	110.45	110.01	108.62	103.92	99.48	93.93	105.65	100.96
Other stone and mineral products.....	105.75	102.82	104.33	103.75	104.92	104.25	103.25	104.00	102.92	102.26	100.61	100.12	99.23	102.18	98.33
Primary metal industries.....	126.48	126.18	126.38	123.42	122.41	123.73	123.02	125.77	129.55	127.30	127.82	122.91	122.21	124.64	119.80
Blast furnace and basic steel products.....	133.53	132.47	131.41	128.58	127.59	130.35	130.28	135.20	140.70	138.28	141.70	131.27	129.89	133.06	127.40
Iron and steel foundries.....	119.56	118.58	120.81	116.20	115.08	114.39	111.49	111.78	115.45	112.98	110.15	110.15	110.83	113.01	106.52
Nonferrous smelting and refining.....	119.99	119.83	119.97	119.39	118.98	120.25	119.11	118.12	117.45	118.43	120.12	117.31	116.33	118.56	114.95
Nonferrous rolling, drawing, and extruding.....	118.16	121.27	123.12	120.56	119.14	119.43	118.44	119.00	120.83	118.72	115.23	116.34	116.34	118.72	116.05
Nonferrous foundries.....	110.09	109.03	110.77	108.62	108.21	107.42	106.71	105.41	107.38	106.46	105.01	106.45	106.45	107.12	104.55
Miscellaneous primary metal industries.....	133.98	130.41	134.19	130.73	130.21	130.52	125.56	128.44	129.16	127.10	125.05	126.99	127.60	128.54	124.50
Average weekly hours															
Stone, clay, and glass products.....	40.6	39.8	40.6	41.5	42.1	41.8	41.9	41.9	42.1	41.9	41.1	40.6	39.9	41.3	40.9
Flat glass.....	-----	40.8	40.4	41.7	41.5	40.9	39.7	39.6	41.0	39.5	39.3	39.0	38.3	40.0	38.3
Glass and glassware, pressed or blown.....	40.2	40.3	39.2	40.2	40.2	39.7	40.2	40.1	40.4	40.2	39.2	40.0	40.1	39.9	40.3
Cement, hydraulic.....	39.7	40.7	41.0	41.2	41.2	41.5	41.3	42.0	41.3	41.6	42.0	40.6	40.3	41.2	41.0
Structural clay products.....	40.8	39.1	40.5	41.3	41.8	41.3	41.6	41.8	41.9	41.8	41.6	40.5	39.8	41.2	40.7
Pottery and related products.....	-----	38.9	39.7	40.1	39.0	39.1	38.7	38.7	39.2	39.5	39.1	39.0	39.0	39.2	39.3
Concrete, gypsum, and plaster products.....	40.9	38.8	41.0	43.0	45.0	44.6	45.0	44.9	44.9	44.7	43.3	41.8	39.8	43.3	42.6
Other stone and mineral products.....	41.8	40.8	41.4	41.5	41.8	41.7	41.3	41.6	41.5	41.4	40.9	40.7	40.5	41.2	40.8
Primary metal industries.....	41.2	41.1	41.3	40.6	40.4	40.7	40.6	41.1	42.2	41.6	41.5	40.7	40.6	41.0	40.2
Blast furnace and basic steel products.....	40.1	39.9	39.7	39.2	38.9	39.5	39.6	40.6	42.0	41.4	41.8	39.9	39.6	40.2	39.2
Iron and steel foundries.....	42.7	42.5	43.3	42.1	42.0	41.9	41.6	41.4	42.6	42.0	41.1	41.1	41.2	41.7	40.5
Nonferrous smelting and refining.....	42.1	41.9	41.8	41.6	41.6	41.9	41.5	41.3	41.5	41.7	42.0	41.6	41.4	41.6	41.2
Nonferrous rolling, drawing, and extruding.....	41.9	42.7	43.2	42.6	42.4	42.5	42.3	42.5	43.0	42.4	41.6	42.0	42.0	42.4	42.2
Nonferrous foundries.....	41.7	41.3	41.8	41.3	41.3	41.0	41.2	40.7	41.3	41.1	40.7	41.1	41.1	41.2	41.0
Miscellaneous primary metal industries.....	42.4	41.4	42.6	41.9	41.6	41.7	40.9	41.3	41.8	41.4	41.0	41.5	41.7	41.6	41.5
Average hourly earnings															
Stone, clay, and glass products.....	\$2.48	\$2.50	\$2.50	\$2.50	\$2.51	\$2.50	\$2.49	\$2.49	\$2.48	\$2.46	\$2.49	\$2.45	\$2.44	\$2.48	\$2.41
Flat glass.....	-----	3.38	3.36	3.44	3.43	3.40	3.35	3.37	3.40	3.38	3.35	3.35	3.34	3.38	3.29
Glass and glassware, pressed or blown.....	2.49	2.47	2.51	2.50	2.50	2.49	2.51	2.50	2.50	2.49	2.50	2.51	2.51	2.50	2.44
Cement, hydraulic.....	2.84	2.88	2.86	2.92	2.86	2.85	2.82	2.83	2.81	2.80	2.85	2.78	2.77	2.83	2.75
Structural clay products.....	2.16	2.16	2.18	2.19	2.18	2.19	2.18	2.17	2.17	2.17	2.17	2.14	2.13	2.17	2.13
Pottery and related products.....	-----	2.33	2.32	2.30	2.31	2.29	2.27	2.30	2.30	2.29	2.26	2.29	2.26	2.29	2.21
Concrete, gypsum, and plaster products.....	2.42	2.45	2.46	2.46	2.50	2.49	2.47	2.46	2.45	2.43	2.40	2.38	2.36	2.44	2.37
Other stone and mineral products.....	2.53	2.52	2.52	2.50	2.51	2.50	2.50	2.50	2.48	2.47	2.46	2.46	2.45	2.48	2.41
Primary metal industries.....	3.07	3.07	3.06	3.04	3.03	3.04	3.03	3.06	3.07	3.06	3.08	3.02	3.01	3.04	2.98
Blast furnace and basic steel products.....	3.33	3.32	3.31	3.28	3.28	3.30	3.29	3.33	3.35	3.34	3.39	3.29	3.28	3.31	3.25
Iron and steel foundries.....	2.80	2.79	2.79	2.76	2.74	2.73	2.68	2.70	2.71	2.69	2.68	2.69	2.69	2.71	2.63
Nonferrous smelting and refining.....	2.85	2.86	2.87	2.87	2.86	2.87	2.87	2.86	2.83	2.84	2.86	2.82	2.81	2.85	2.79
Nonferrous rolling, drawing, and extruding.....	2.82	2.84	2.85	2.83	2.81	2.81	2.80	2.80	2.81	2.80	2.77	2.77	2.77	2.80	2.75
Nonferrous foundries.....	2.64	2.64	2.65	2.63	2.62	2.62	2.59	2.59	2.60	2.59	2.58	2.59	2.59	2.60	2.55
Miscellaneous primary metal industries.....	3.16	3.15	3.15	3.12	3.13	3.13	3.07	3.11	3.09	3.07	3.05	3.06	3.06	3.09	3.00

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964			1963										Annual average	
	Feb. ¹	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Fabricated metal products.....	\$108.92	\$108.39	\$111.04	\$109.56	\$109.93	\$110.20	\$108.32	\$107.53	\$108.84	\$108.32	\$104.75	\$105.67	\$105.01	\$108.05	\$104.81
Metal cans.....	128.21	129.13	129.44	129.44	125.63	132.01	135.39	132.07	131.94	128.65	125.14	122.59	120.88	128.17	126.30
Cutlery, hand tools, and general hardware.....	106.19	104.90	109.46	108.42	105.32	104.81	101.50	100.35	103.98	104.24	99.70	101.75	101.69	103.73	99.14
Heating equipment and plumbing fixtures.....	100.84	99.68	102.87	102.62	105.06	104.04	102.82	102.47	103.22	100.15	97.86	98.60	98.95	101.56	98.55
Fabricated structural metal products.....	107.18	105.73	109.03	108.36	109.25	109.93	109.78	108.58	108.84	107.53	104.64	104.12	103.60	107.27	104.60
Screw machine products, bolts, etc.....	110.56	110.83	110.24	107.65	109.56	109.65	108.45	108.75	108.80	108.38	105.08	106.26	107.19	108.03	105.00
Metal stampings.....	121.55	120.70	123.26	119.71	120.25	117.70	112.74	113.98	116.75	116.47	112.06	113.57	113.15	116.47	111.76
Coating, engraving, and allied services.....	94.87	96.15	97.34	96.64	96.74	98.05	94.89	93.73	95.63	95.63	92.80	94.12	91.53	94.94	93.34
Miscellaneous fabricated wire products.....	96.56	97.20	99.84	97.58	97.82	98.71	96.52	96.22	97.64	97.58	95.51	97.34	96.93	97.58	96.64
Miscellaneous fabricated metal products.....	104.52	103.74	106.75	104.90	107.53	108.05	106.08	105.71	105.93	106.45	104.23	104.86	104.09	105.67	103.53
Machinery	120.27	118.43	120.70	117.88	117.04	117.32	115.23	115.51	117.04	115.79	113.85	115.51	114.82	116.20	113.01
Engines and turbines.....	125.15	123.20	129.79	127.20	123.93	126.48	121.50	122.21	123.73	122.41	119.30	124.23	123.11	123.73	119.88
Farm machinery and equipment.....	-----	117.16	116.31	112.16	113.00	112.61	110.16	110.28	111.79	109.07	111.66	112.61	113.16	111.93	107.59
Construction and related machinery.....	116.47	116.88	119.56	117.18	116.90	116.90	116.20	115.93	117.18	115.93	113.57	113.85	113.44	115.79	112.34
Metalworking machinery and equipment.....	137.98	134.64	135.28	130.33	128.44	127.71	125.83	128.30	130.52	128.90	128.17	130.52	128.76	129.33	125.57
Special industry machinery.....	111.83	111.72	114.48	110.56	110.56	111.09	108.52	109.20	110.33	109.13	107.17	108.88	107.94	109.98	106.77
General industrial machinery.....	117.73	116.18	120.13	117.03	116.62	117.04	114.40	113.16	114.64	112.61	110.16	110.98	110.70	113.71	110.83
Office, computing, and accounting machines.....	116.40	113.68	115.02	118.78	119.07	119.07	117.14	116.57	115.59	114.33	113.10	114.33	114.90	116.40	113.15
Service industry machines.....	108.34	104.52	106.45	103.57	103.38	104.86	104.60	103.22	103.57	103.98	101.15	102.31	100.90	103.12	100.12
Miscellaneous machinery.....	113.21	112.94	114.01	112.25	112.46	111.51	110.83	110.56	112.99	112.04	109.36	110.72	109.62	111.51	109.13
Average weekly hours															
Fabricated metal products.....	41.1	40.9	41.9	41.5	41.8	41.9	41.5	41.2	41.7	41.5	40.6	40.8	40.7	41.4	41.1
Metal cans.....	41.9	42.2	42.3	42.5	41.6	43.0	44.1	43.3	43.4	42.6	41.3	41.0	40.7	42.3	42.1
Cutlery, hand tools, and general hardware.....	41.0	40.5	42.1	41.7	41.3	41.1	40.6	40.3	41.1	41.2	40.2	40.7	40.8	41.0	40.8
Heating equipment and plumbing fixtures.....	39.7	39.4	40.5	40.4	41.2	40.8	40.8	40.5	40.8	39.9	39.3	39.6	39.9	40.3	39.9
Fabricated structural metal products.....	40.6	40.2	41.3	41.2	41.7	41.8	41.9	41.6	41.7	41.2	40.4	40.2	40.0	41.1	40.7
Screw machine products, bolts, etc.....	42.2	42.3	42.4	41.9	42.3	42.5	42.2	41.7	42.5	42.5	41.7	42.0	42.2	42.2	42.4
Metal stampings.....	42.8	42.5	43.4	42.6	43.1	42.8	41.6	41.6	42.3	42.2	41.2	41.6	41.6	42.2	41.7
Coating, engraving, and allied services.....	40.2	40.4	41.6	41.3	41.7	41.9	40.9	40.4	41.4	41.4	40.7	41.1	40.5	41.1	41.3
Miscellaneous fabricated wire products.....	40.4	40.5	41.6	41.0	41.1	41.3	40.9	40.6	41.2	41.0	40.3	40.9	40.9	41.0	41.3
Miscellaneous fabricated metal products.....	40.2	39.9	40.9	40.5	41.2	41.4	40.8	40.5	40.9	41.1	40.4	40.8	40.5	40.8	40.6
Machinery	42.2	41.7	42.5	41.8	41.8	41.9	41.6	41.7	42.1	41.8	41.4	41.7	41.6	41.8	41.7
Engines and turbines.....	40.5	40.0	41.6	40.9	40.5	41.2	40.1	40.6	40.7	40.4	39.9	41.0	40.9	40.7	40.5
Farm machinery and equipment.....	-----	41.4	41.1	40.2	40.5	40.8	40.5	40.1	40.8	40.1	40.9	41.1	41.3	40.7	40.6
Construction and related machinery.....	41.3	41.3	42.1	41.7	41.6	41.6	41.5	41.7	42.0	41.7	41.0	41.1	41.1	41.5	41.3
Metalworking machinery and equipment.....	44.8	44.0	44.5	43.3	43.1	43.0	42.8	43.2	43.8	43.4	43.3	43.8	43.5	43.4	43.3
Special industry machinery.....	42.2	42.0	43.2	42.2	42.2	42.4	41.9	42.0	42.6	42.3	41.7	42.2	42.0	42.3	42.2
General industrial machinery.....	41.6	41.2	42.3	41.5	41.5	41.8	41.3	41.0	41.5	41.1	40.5	40.8	40.7	41.2	41.2
Office, computing, and accounting machines.....	40.0	39.2	39.8	41.1	41.2	41.2	40.9	41.1	40.9	40.7	40.4	40.6	40.6	40.7	40.7
Service industry machines.....	40.9	40.2	41.1	40.3	40.4	40.8	40.7	40.8	41.1	41.1	40.3	40.6	40.2	40.6	40.7
Miscellaneous machinery.....	42.4	42.3	42.7	42.2	42.6	42.4	42.3	42.2	42.8	42.6	41.9	42.1	42.0	42.4	42.3
Average hourly earnings															
Fabricated metal products.....	\$2.65	\$2.65	\$2.65	\$2.64	\$2.63	\$2.63	\$2.61	\$2.61	\$2.61	\$2.61	\$2.58	\$2.59	\$2.58	\$2.61	\$2.55
Metal cans.....	3.06	3.06	3.06	3.06	3.02	3.07	3.07	3.05	3.04	3.02	3.03	2.99	2.97	3.03	3.00
Cutlery, hand tools, and general hardware.....	2.59	2.59	2.60	2.60	2.55	2.55	2.50	2.49	2.53	2.53	2.48	2.50	2.49	2.53	2.43
Heating equipment and plumbing fixtures.....	2.54	2.53	2.54	2.54	2.55	2.55	2.52	2.53	2.53	2.51	2.49	2.49	2.48	2.52	2.47
Fabricated structural metal products.....	2.64	2.63	2.64	2.63	2.62	2.63	2.62	2.61	2.61	2.61	2.59	2.59	2.59	2.61	2.57
Screw machine products, bolts, etc.....	2.62	2.62	2.60	2.57	2.59	2.58	2.57	2.56	2.56	2.55	2.52	2.53	2.54	2.56	2.50
Metal stampings.....	2.84	2.84	2.84	2.81	2.79	2.75	2.71	2.74	2.76	2.76	2.72	2.73	2.72	2.76	2.68
Coating, engraving, and allied services.....	2.36	2.38	2.34	2.34	2.32	2.34	2.32	2.32	2.31	2.31	2.28	2.29	2.26	2.31	2.26
Miscellaneous fabricated wire products.....	2.39	2.40	2.40	2.38	2.38	2.39	2.36	2.37	2.37	2.38	2.37	2.38	2.37	2.38	2.34
Miscellaneous fabricated metal products.....	2.60	2.60	2.61	2.59	2.61	2.61	2.60	2.61	2.59	2.59	2.58	2.57	2.57	2.59	2.55
Machinery	2.85	2.84	2.84	2.82	2.80	2.80	2.77	2.77	2.78	2.77	2.75	2.77	2.76	2.78	2.71
Engines and turbines.....	3.09	3.08	3.12	3.11	3.06	3.07	3.03	3.01	3.04	3.03	2.99	3.03	3.01	3.04	2.96
Farm machinery and equipment.....	-----	2.83	2.83	2.70	2.79	2.76	2.72	2.75	2.74	2.72	2.73	2.74	2.74	2.75	2.65
Construction and related machinery.....	2.82	2.83	2.84	2.81	2.81	2.81	2.80	2.78	2.79	2.78	2.77	2.77	2.76	2.79	2.72
Metalworking machinery and equipment.....	3.08	3.06	3.04	3.01	2.98	2.97	2.94	2.97	2.98	2.97	2.96	2.98	2.96	2.98	2.90
Special industry machinery.....	2.65	2.66	2.65	2.62	2.62	2.62	2.59	2.60	2.59	2.58	2.57	2.58	2.57	2.60	2.53
General industrial machinery.....	2.83	2.82	2.84	2.82	2.81	2.80	2.77	2.76	2.76	2.74	2.72	2.72	2.72	2.76	2.69
Office, computing, and accounting machines.....	2.91	2.90	2.89	2.89	2.89	2.89	2.86	2.85	2.85	2.84	2.83	2.84	2.83	2.86	2.78
Service industry machines.....	2.60	2.60	2.59	2.57	2.57	2.57	2.57	2.53	2.52	2.53	2.51	2.52	2.51	2.54	2.46
Miscellaneous machinery.....	2.67	2.67	2.67	2.66	2.64	2.63	2.62	2.62	2.64	2.63	2.61	2.63	2.61	2.63	2.58

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Electrical equipment and supplies.....	\$101.30	\$99.75	\$102.41	\$100.60	\$100.28	\$100.53	\$98.74	\$98.89	\$99.88	\$98.74	\$96.87	\$97.84	\$98.09	\$99.38	\$97.44
Electric distribution equipment.....	112.06	107.33	113.97	109.61	109.33	108.92	109.18	108.11	107.98	106.11	103.84	104.78	104.23	107.04	102.87
Electrical industrial apparatus.....	108.47	105.82	107.79	104.90	104.60	106.20	104.04	105.63	105.73	104.81	102.36	102.97	104.14	104.70	102.00
Household appliances.....	107.87	104.54	109.88	106.93	108.39	110.92	107.71	110.98	111.22	108.29	106.25	107.71	104.82	108.12	104.23
Electric lighting and wiring equipment.....	94.96	93.30	96.70	94.87	94.37	95.06	93.32	92.86	94.02	93.09	90.00	91.14	90.29	93.26	90.85
Radio and TV receiving sets.....	86.19	87.52	87.25	86.63	86.72	86.33	85.72	86.76	86.33	86.46	83.00	85.36	86.02	85.85	85.75
Communication equipment.....	109.21	108.95	110.29	109.08	108.26	108.67	106.67	105.60	106.92	105.99	103.88	106.11	107.30	106.92	106.97
Electronic components and accessories.....	82.82	82.22	84.16	84.19	84.40	82.97	82.37	81.72	82.76	82.97	82.14	83.58	82.35	82.76	82.00
Miscellaneous electrical equipment and supplies.....	111.92	112.47	114.09	111.64	110.39	108.09	100.40	106.49	109.82	106.23	102.94	103.34	107.27	107.83	106.66
Transportation equipment.....	127.41	128.13	133.30	132.68	131.52	127.80	121.58	125.68	126.90	125.76	121.54	123.85	123.14	126.42	122.22
Motor vehicles and equipment.....	133.35	135.15	143.49	142.20	139.60	132.19	122.51	130.54	132.62	131.89	125.44	128.29	127.38	132.68	127.67
Aircraft and parts.....	123.00	123.00	124.92	124.20	124.38	124.68	122.84	122.13	121.72	120.30	118.90	120.18	121.76	122.43	119.97
Ship and boat building and repairing.....	119.90	118.80	120.50	124.01	123.30	124.01	122.10	120.39	121.77	122.01	119.25	119.95	118.55	121.06	114.97
Railroad equipment.....	-----	123.51	124.34	124.22	122.71	124.34	116.79	125.36	122.91	119.80	119.10	121.88	115.84	121.71	118.10
Other transportation equipment.....	-----	88.03	92.21	89.33	93.90	94.78	94.02	94.02	93.86	93.21	91.17	88.66	87.60	91.84	86.22
Average weekly hours															
Electrical equipment and supplies.....	40.2	39.9	40.8	40.4	40.6	40.7	40.3	40.2	40.6	40.3	39.7	40.1	40.2	40.4	40.6
Electric distribution equipment.....	41.2	40.2	41.9	40.9	41.1	41.1	41.2	40.5	40.9	40.5	39.9	40.3	40.4	40.7	40.5
Electrical industrial apparatus.....	41.4	40.7	41.3	40.5	40.7	41.2	40.8	41.1	41.3	41.1	40.3	40.7	41.0	40.9	40.8
Household appliances.....	40.4	39.3	41.0	40.2	40.9	41.7	40.8	41.3	41.5	40.9	40.4	40.8	40.2	40.8	40.4
Electric lighting and wiring equipment.....	39.9	39.2	40.8	40.2	40.5	40.8	40.4	40.2	40.7	40.3	39.3	39.8	39.6	40.2	40.2
Radio and TV receiving sets.....	39.0	39.6	39.3	39.2	39.6	39.6	39.5	39.6	39.6	39.3	37.9	38.8	39.1	39.2	39.7
Communication equipment.....	40.3	40.5	41.0	40.7	40.7	40.7	40.1	40.0	40.5	40.3	39.8	40.5	40.8	40.5	41.3
Electronic components and accessories.....	38.7	38.6	39.7	39.9	40.0	39.7	39.6	39.1	39.6	39.7	39.3	39.8	39.4	39.6	40.0
Miscellaneous electrical equipment and supplies.....	41.3	41.5	42.1	41.5	41.5	41.1	40.0	40.8	41.6	40.7	39.9	39.9	41.1	41.0	41.5
Transportation equipment.....	41.5	41.6	43.0	42.8	42.7	41.9	40.8	42.0	42.3	42.2	41.2	41.7	41.6	42.0	42.0
Motor vehicles and equipment.....	42.2	42.5	44.7	44.3	43.9	42.1	40.3	42.8	43.2	43.1	41.4	42.2	41.9	42.8	42.7
Aircraft and parts.....	41.0	41.0	41.5	41.4	41.6	41.7	41.5	41.4	41.4	41.2	41.0	41.3	41.7	41.5	41.8
Ship and boat building and repairing.....	40.1	40.0	40.3	41.2	41.1	41.2	40.7	40.4	41.0	41.5	40.7	40.8	40.6	40.9	40.2
Railroad equipment.....	-----	40.1	40.5	40.2	40.1	40.9	38.8	41.1	40.7	40.2	40.1	40.9	39.4	40.3	39.9
Other transportation equipment.....	-----	39.3	40.8	39.7	41.6	42.1	41.6	41.6	41.9	41.8	40.7	40.3	40.0	41.0	40.1
Average hourly earnings															
Electrical equipment and supplies.....	\$2.52	\$2.50	\$2.51	\$2.49	\$2.47	\$2.47	\$2.45	\$2.46	\$2.46	\$2.45	\$2.44	\$2.44	\$2.44	\$2.46	\$2.40
Electric distribution equipment.....	2.72	2.67	2.72	2.68	2.66	2.65	2.65	2.62	2.64	2.62	2.59	2.60	2.58	2.63	2.54
Electrical industrial apparatus.....	2.62	2.60	2.61	2.59	2.57	2.58	2.55	2.57	2.56	2.55	2.54	2.53	2.54	2.56	2.50
Household appliances.....	2.67	2.66	2.68	2.66	2.65	2.66	2.64	2.68	2.68	2.65	2.63	2.64	2.60	2.65	2.58
Electric lighting and wiring equipment.....	2.38	2.38	2.37	2.36	2.33	2.33	2.31	2.31	2.31	2.31	2.29	2.29	2.28	2.32	2.26
Radio and TV receiving sets.....	2.21	2.21	2.22	2.21	2.19	2.18	2.17	2.18	2.18	2.20	2.19	2.20	2.20	2.19	2.16
Communication equipment.....	2.71	2.69	2.69	2.68	2.66	2.67	2.66	2.64	2.64	2.63	2.61	2.62	2.63	2.64	2.59
Electronic components and accessories.....	2.14	2.13	2.12	2.11	2.11	2.09	2.08	2.09	2.09	2.09	2.09	2.10	2.09	2.09	2.05
Miscellaneous electrical equipment and supplies.....	2.71	2.71	2.71	2.69	2.66	2.63	2.51	2.61	2.64	2.61	2.58	2.59	2.61	2.63	2.57
Transportation equipment.....	3.07	3.08	3.10	3.10	3.08	3.05	2.98	2.99	3.00	2.98	2.95	2.97	2.96	3.01	2.91
Motor vehicles and equipment.....	3.16	3.18	3.21	3.21	3.18	3.14	3.04	3.05	3.07	3.06	3.03	3.04	3.04	3.10	2.99
Aircraft and parts.....	3.00	3.00	3.01	3.00	2.99	2.99	2.96	2.95	2.94	2.92	2.90	2.91	2.92	2.95	2.87
Ship and boat building and repairing.....	2.99	2.97	2.99	3.01	3.00	3.01	3.00	2.98	2.97	2.94	2.93	2.94	2.92	2.96	2.86
Railroad equipment.....	-----	3.08	3.07	3.09	3.06	3.04	3.01	3.05	3.02	2.98	2.97	2.98	2.94	3.02	2.96
Other transportation equipment.....	-----	2.24	2.26	2.25	2.25	2.25	2.26	2.26	2.24	2.23	2.24	2.20	2.19	2.24	2.15

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964			1963										Annual average	
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Instruments and related products.....	\$101.75	\$100.40	\$102.91	\$102.91	\$102.75	\$102.75	\$101.24	\$100.94	\$101.84	\$100.94	\$99.14	\$101.18	\$101.18	\$101.59	\$99.80
Engineering and scientific instruments.....	-----	115.49	120.06	119.65	120.22	19.65	118.94	116.85	119.11	115.87	114.86	118.69	119.26	118.53	115.64
Mechanical measuring and control devices.....	103.12	100.55	103.48	104.24	104.14	104.24	102.41	101.50	103.07	102.56	100.10	101.09	99.70	102.16	98.98
Optical and ophthalmic goods.....	94.73	93.30	95.15	94.05	95.15	94.28	92.32	92.13	93.44	94.08	93.02	93.66	93.02	93.86	89.62
Surgical, medical, and dental equipment.....	86.05	83.42	86.00	86.00	85.60	87.10	85.22	85.65	86.30	84.21	82.58	83.39	83.70	85.01	84.45
Photographic equipment and supplies.....	-----	116.47	118.71	117.31	117.31	116.33	113.70	114.80	113.40	113.15	114.26	115.51	115.08	114.26	114.26
Watches and clocks.....	-----	81.62	83.16	81.93	82.78	83.79	83.85	82.32	82.50	84.14	82.50	83.53	83.74	83.13	83.87
Miscellaneous manufacturing industries.....	82.78	79.87	82.39	81.59	81.40	80.60	79.60	79.18	80.19	79.40	79.17	80.39	80.19	80.39	78.21
Jewelry, silverware, and plated ware.....	88.26	83.98	94.30	92.06	92.13	90.20	87.23	86.29	88.70	87.02	85.54	86.40	85.36	88.70	84.82
Toys, amusement, and sporting goods.....	-----	71.97	72.39	73.14	73.68	72.71	71.74	71.42	72.17	72.37	71.63	73.14	73.34	72.37	71.37
Pens, pencils, office and art materials.....	-----	75.83	78.39	78.00	78.76	76.64	79.38	77.81	79.38	77.41	76.43	77.02	78.50	78.00	74.82
Costume jewelry, buttons, and notions.....	-----	72.77	76.57	75.01	75.76	75.55	73.23	71.16	74.19	72.89	71.97	73.05	72.65	73.45	71.68
Other manufacturing industries.....	89.24	86.85	89.02	87.82	88.04	87.20	85.80	86.15	86.53	86.00	85.10	86.40	85.97	86.58	84.82
Average weekly hours															
Instruments and related products.....	40.7	40.0	41.0	41.0	41.1	41.1	40.7	40.7	40.9	40.7	40.3	40.8	40.8	40.8	40.9
Engineering and scientific instruments.....	-----	40.1	41.4	41.4	41.6	41.4	41.3	41.0	41.5	40.8	40.3	41.5	41.7	41.3	41.3
Mechanical measuring and control devices.....	40.6	39.9	40.9	41.2	41.0	41.2	40.8	40.6	40.9	40.7	40.2	40.6	40.2	40.7	40.4
Optical and ophthalmic goods.....	42.1	41.1	42.1	41.8	42.1	41.9	41.4	41.5	41.9	42.0	41.9	42.0	41.9	41.9	41.3
Surgical, medical, and dental equipment.....	40.4	38.8	40.0	40.0	40.0	40.7	40.2	40.4	40.9	40.1	39.7	39.9	39.9	40.1	40.6
Photographic equipment and supplies.....	-----	41.3	41.8	41.6	41.6	41.4	40.9	41.0	40.5	40.7	40.5	41.1	41.4	41.1	41.7
Watches and clocks.....	-----	38.5	39.6	39.2	39.8	39.9	39.5	39.2	39.1	39.5	39.1	39.4	39.5	39.4	39.7
Miscellaneous manufacturing industries.....	39.8	38.4	39.8	39.8	40.1	39.9	39.8	39.2	39.7	39.5	39.0	39.6	39.5	39.6	39.7
Jewelry, silverware, and plated ware.....	40.3	38.7	42.1	41.1	41.5	41.0	40.2	39.4	40.5	40.1	39.6	40.0	39.7	40.5	40.2
Toys, amusement, and sporting goods.....	-----	37.1	38.1	38.7	38.4	39.3	39.2	38.4	38.8	38.7	38.1	38.7	38.4	38.7	39.0
Pens, pencils, office and art materials.....	-----	38.3	40.2	40.0	40.6	39.1	40.5	39.7	40.5	39.9	39.6	39.7	40.3	40.0	39.8
Costume jewelry, buttons, and notions.....	-----	37.9	40.3	39.9	40.3	40.4	39.8	39.1	40.1	39.4	38.9	39.7	39.7	39.7	39.6
Other manufacturing industries.....	40.2	39.3	40.1	40.1	40.2	40.0	40.0	39.7	39.9	40.0	39.4	40.0	39.8	39.9	40.2
Average hourly earnings															
Instruments and related products.....	\$2.50	\$2.51	\$2.51	\$2.51	\$2.50	\$2.50	\$2.49	\$2.48	\$2.49	\$2.48	\$2.46	\$2.48	\$2.48	\$2.49	\$2.44
Engineering and scientific instruments.....	-----	2.88	2.90	2.89	2.89	2.89	2.88	2.85	2.87	2.84	2.85	2.86	2.86	2.87	2.80
Mechanical measuring and control devices.....	2.54	2.52	2.53	2.53	2.54	2.53	2.51	2.50	2.52	2.52	2.40	2.49	2.48	2.51	2.45
Optical and ophthalmic goods.....	2.25	2.27	2.26	2.25	2.26	2.25	2.23	2.22	2.23	2.24	2.22	2.23	2.22	2.24	2.17
Surgical, medical, and dental equipment.....	2.13	2.15	2.15	2.15	2.14	2.14	2.12	2.12	2.11	2.10	2.08	2.09	2.10	2.12	2.08
Photographic equipment and supplies.....	-----	2.82	2.84	2.82	2.82	2.81	2.78	2.80	2.80	2.78	2.76	2.78	2.79	2.80	2.74
Watches and clocks.....	-----	2.12	2.10	2.09	2.08	2.10	2.11	2.10	2.11	2.13	2.11	2.12	2.12	2.11	2.10
Miscellaneous manufacturing industries.....	2.08	2.08	2.07	2.05	2.03	2.02	2.00	2.02	2.02	2.01	2.03	2.03	2.03	2.03	1.97
Jewelry, silverware, and plated ware.....	2.19	2.17	2.24	2.24	2.22	2.20	2.17	2.19	2.19	2.17	2.16	2.16	2.15	2.19	2.11
Toys, amusement, and sporting goods.....	-----	1.94	1.90	1.89	1.87	1.85	1.83	1.86	1.86	1.87	1.88	1.89	1.91	1.87	1.83
Pens, pencils, office and art materials.....	-----	1.98	1.95	1.95	1.94	1.96	1.96	1.96	1.96	1.94	1.93	1.94	1.95	1.95	1.88
Costume jewelry, buttons, and notions.....	-----	1.92	1.90	1.88	1.88	1.87	1.84	1.82	1.85	1.85	1.85	1.84	1.83	1.85	1.81
Other manufacturing industries.....	2.22	2.21	2.22	2.19	2.19	2.18	2.17	2.17	2.17	2.15	2.16	2.16	2.16	2.17	2.11

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
Average weekly earnings															
<i>Nondurable goods</i>															
Food and kindred products.....	\$95.44	\$95.68	\$96.59	\$95.94	\$94.35	\$95.68	\$93.98	\$95.63	\$95.17	\$94.66	\$92.40	\$93.32	\$92.63	\$94.48	\$91.62
Meat products.....	100.73	104.45	108.20	107.95	101.84	104.58	99.22	100.94	101.43	101.11	97.66	98.85	97.46	101.93	98.66
Dairy products.....	100.74	100.26	100.32	99.66	99.48	101.15	98.79	99.92	99.92	98.33	97.02	97.48	96.79	98.75	96.05
Canned and preserved food, except meats.....		74.10	73.63	71.39	77.03	80.40	78.38	75.08	73.06	74.03	72.96	74.84	73.26	75.45	73.53
Grain mill products.....	105.27	107.89	106.28	108.38	108.31	107.81	105.73	107.87	105.33	103.01	99.49	101.99	102.93	105.02	101.92
Bakery products.....	94.00	92.98	95.34	94.64	94.71	95.34	94.37	96.17	95.53	94.19	92.00	91.37	91.31	93.90	91.30
Sugar.....		97.20	95.90	94.61	94.50	104.09	107.87	107.26	104.49	110.14	105.18	104.75	101.18	100.74	97.75
Confectionery and related products.....	79.40	76.42	78.21	77.81	80.19	82.00	79.79	79.60	81.00	77.62	75.64	77.62	76.64	78.80	76.61
Beverages.....	106.00	103.62	106.13	107.20	108.26	107.59	108.73	112.25	111.25	107.30	106.11	105.46	102.05	107.18	103.31
Miscellaneous food and kindred products.....	95.82	95.40	96.13	96.78	95.27	94.37	94.53	93.66	92.57	92.60	90.67	91.78	92.86	93.70	91.38
Tobacco manufactures.....	67.97	73.11	74.86	73.13	71.46	71.46	73.57	78.76	81.81	78.17	68.71	73.11	69.70	73.73	71.41
Cigarettes.....		91.26	93.67	96.82	89.55	93.06	97.06	93.87	98.75	96.29	82.95	88.22	85.51	92.20	89.54
Cigars.....		57.75	63.24	63.18	63.73	61.85	61.89	60.42	61.44	58.46	53.72	58.56	58.99	60.64	57.82
Textile mill products.....	71.98	70.00	72.69	72.28	71.04	69.83	69.19	68.68	69.70	69.02	67.26	68.51	68.00	69.43	68.21
Cotton broad woven fabrics.....	72.56	72.31	73.78	73.35	69.97	67.40	67.65	66.66	67.32	66.99	66.50	66.33	65.84	68.30	66.75
Silk and synthetic broad woven fabrics.....	77.22	76.50	79.20	78.84	75.52	74.30	4.04	73.10	74.39	74.91	72.49	73.35	73.35	74.65	73.44
Weaving and finishing broad woollens.....	75.44	75.30	75.81	71.94	73.71	74.85	73.89	76.49	77.04	76.31	74.21	76.86	76.49	75.40	77.17
Narrow fabrics and smallwares.....	73.81	69.56	73.46	72.51	72.10	71.58	70.47	71.28	72.04	71.28	69.26	69.77	70.18	71.34	70.93
Knitting.....	65.02	60.45	62.79	64.30	65.30	64.80	63.90	62.76	63.41	62.37	59.94	61.07	60.59	62.65	61.44
Finishing textiles, except wool and knit.....	84.05	78.17	84.44	83.76	80.51	78.73	78.02	75.89	80.89	79.29	78.95	80.09	79.15	79.76	78.07
Floor covering.....		72.14	77.83	77.74	75.17	78.01	75.60	73.75	75.30	72.67	71.73	76.50	74.80	75.18	73.04
Yarn and thread.....	65.37	64.40	66.33	66.08	64.94	63.67	63.43	68.90	64.53	63.65	62.16	62.56	61.54	63.59	62.22
Miscellaneous textile goods.....	80.18	80.39	83.80	83.20	82.96	80.95	80.75	80.95	83.95	80.95	78.76	79.73	79.73	81.14	78.91
Average weekly hours															
Food and kindred products.....	40.1	40.2	41.1	41.0	41.2	41.6	41.4	41.4	41.2	40.8	40.0	40.4	40.1	40.9	40.9
Meat products.....	39.5	40.8	42.6	42.5	41.4	42.0	41.0	41.2	41.4	41.1	39.7	39.7	39.3	41.1	40.6
Dairy products.....	41.8	41.6	41.8	41.7	41.8	42.5	42.4	42.7	42.7	42.2	42.0	42.2	41.9	42.2	42.5
Canned and preserved food, except meats.....		36.5	37.0	36.8	39.1	40.4	40.4	38.9	36.9	37.2	36.3	37.8	37.0	38.3	38.7
Grain mill products.....	43.5	44.4	44.1	44.6	45.7	45.3	44.8	45.9	45.4	44.4	42.7	43.4	43.8	44.5	44.7
Bakery products.....	40.0	39.4	40.4	40.1	40.3	40.4	40.5	41.1	41.0	40.6	40.0	39.9	39.7	40.3	40.4
Sugar.....		40.5	43.2	43.2	42.0	40.5	42.3	41.9	41.3	42.2	40.3	41.9	40.8	41.8	42.5
Confectionery and related products.....	39.7	38.4	39.7	39.7	40.5	41.0	40.3	39.6	40.5	39.2	38.2	39.6	39.3	39.8	39.9
Beverages.....	39.7	39.1	39.6	40.0	40.7	40.6	41.5	42.2	42.3	40.8	40.5	40.1	39.4	40.6	40.2
Miscellaneous food and kindred products.....	42.4	42.4	43.3	43.4	43.5	42.7	42.2	42.0	41.7	41.9	41.4	41.9	42.4	42.4	42.7
Tobacco manufactures.....	34.5	37.3	39.4	38.9	39.7	39.7	40.2	38.8	40.3	38.7	34.7	37.3	36.3	38.6	38.6
Cigarettes.....		39.0	40.2	41.2	38.6	39.6	41.3	39.9	42.2	40.8	35.6	37.7	36.7	39.4	39.1
Cigars.....		35.0	38.8	39.0	39.1	38.9	38.8	38.0	38.4	37.0	34.0	37.3	37.1	37.9	37.3
Textile mill products.....	40.9	40.0	41.3	41.3	41.3	40.6	40.7	40.4	41.0	40.6	39.8	40.3	40.0	40.6	40.6
Cotton broad woven fabrics.....	41.7	41.8	42.4	42.4	41.9	40.6	41.0	40.4	40.8	40.6	40.3	40.2	39.9	40.9	40.7
Silk and synthetic broad woven fabrics.....	42.9	42.5	44.0	43.8	43.4	42.7	42.8	42.5	43.0	43.3	41.9	42.4	42.4	42.9	42.7
Weaving and finishing broad woollens.....	41.0	40.7	41.2	39.1	40.5	40.9	40.6	41.8	42.1	41.7	41.0	42.0	41.8	41.2	42.4
Narrow fabrics and smallwares.....	41.7	39.3	41.5	41.2	41.2	40.9	40.5	41.2	41.4	41.2	40.5	40.8	40.8	41.0	41.0
Knitting.....	38.7	36.2	37.6	38.5	39.1	38.8	39.2	38.5	38.9	38.5	37.0	37.7	37.4	38.2	38.4
Finishing textiles, except wool and knit.....	43.1	40.5	43.3	43.4	42.6	42.1	41.5	40.8	42.8	42.4	41.9	42.6	42.1	42.2	42.2
Floor covering.....		40.3	43.0	43.5	43.1	43.1	42.0	41.2	41.6	40.6	40.3	42.5	42.5	42.0	41.5
Yarn and thread.....	40.6	40.0	41.2	41.3	41.1	40.3	40.4	40.7	41.1	40.8	40.1	40.1	39.7	40.5	40.4
Miscellaneous textile goods.....	40.7	40.6	41.9	41.6	41.9	41.3	41.2	41.3	42.4	41.3	40.6	41.1	41.1	41.4	41.1
Average hourly earnings															
Food and kindred products.....	\$2.38	\$2.38	\$2.35	\$2.34	\$2.29	\$2.30	\$2.27	\$2.31	\$2.31	\$2.32	\$2.31	\$2.31	\$2.31	\$2.31	\$2.24
Meat products.....	2.55	2.56	2.54	2.54	2.46	2.49	2.42	2.45	2.45	2.46	2.46	2.49	2.48	2.48	2.43
Dairy products.....	2.41	2.41	2.40	2.39	2.38	2.38	2.33	2.34	2.34	2.33	2.31	2.31	2.31	2.34	2.26
Canned and preserved food, except meats.....		2.03	1.99	1.94	1.97	1.99	1.94	1.93	1.98	1.99	2.01	1.98	1.98	1.97	1.90
Grain mill products.....	2.42	2.43	2.41	2.43	2.37	2.38	2.36	2.35	2.32	2.32	2.33	2.35	2.35	2.36	2.28
Bakery products.....	2.35	2.36	2.36	2.36	2.35	2.36	2.33	2.34	2.33	2.32	2.30	2.29	2.30	2.33	2.26
Sugar.....		2.40	2.22	2.19	2.25	2.57	2.55	2.56	2.53	2.61	2.61	2.50	2.48	2.41	2.30
Confectionery and related products.....	2.00	1.99	1.97	1.96	1.98	2.00	1.98	2.01	2.00	1.98	1.98	1.96	1.95	1.98	1.92
Beverages.....	2.67	2.65	2.68	2.68	2.66	2.65	2.62	2.66	2.63	2.63	2.62	2.63	2.59	2.64	2.57
Miscellaneous food and kindred products.....	2.26	2.25	2.22	2.23	2.19	2.21	2.24	2.23	2.22	2.21	2.19	2.19	2.19	2.21	2.14
Tobacco manufactures.....	1.97	1.96	1.90	1.88	1.80	1.80	1.83	2.03	2.03	2.02	1.98	1.96	1.92	1.91	1.85
Cigarettes.....		2.34	2.33	2.35	2.32	2.35	2.35	2.34	2.34	2.36	2.33	2.34	2.33	2.34	2.29
Cigars.....		1.65	1.63	1.62	1.63	1.59	1.59	1.59	1.60	1.58	1.58	1.57	1.59	1.60	1.55
Textile mill products.....	1.76	1.75	1.76	1.75	1.72	1.72	1.70	1.70	1.70	1.70	1.69	1.70	1.70	1.71	1.68
Cotton broad woven fabrics.....	1.74	1.73	1.74	1.73	1.67	1.66	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.67	1.64
Silk and synthetic broad woven fabrics.....	1.80	1.80	1.80	1.80	1.74	1.74	1.73	1.72	1.73	1.73	1.73	1.73	1.73	1.74	1.72
Weaving and finishing broad woollens.....	1.84	1.85	1.84	1.84	1.82	1.83	1.82	1.83	1.83	1.83	1.81	1.83	1.83	1.83	1.82
Narrow fabrics and smallwares.....	1.77	1.77	1.77	1.76	1.75	1.75	1.74	1.73	1.74	1.73	1.71	1.71	1.72	1.74	1.73
Knitting.....	1.68	1.67	1.67	1.67	1.67	1.67	1.63	1.63	1.63	1.62	1.62	1.62	1.62	1.64	1.60
Finishing textiles, except wool and knit.....	1.95	1.93	1.95	1.93	1.89	1.87	1.88	1.86	1.89	1.87	1.87	1.88	1.88	1.89	1.85
Floor covering.....		1.79	1.81	1.81	1.79	1.81	1.80	1.79	1.81	1.79	1.78	1.80	1.76	1.79	1.76
Yarn and thread.....	1.61	1.61	1.61	1.60	1.58	1.58	1.57	1.57	1.57	1.56	1.55	1.56	1.55	1.57	1.54
Miscellaneous textile goods.....	1.97	1.98	2.00	2.00	1.98	1.96	1.96	1.96	1.98	1.96	1.94	1.94			

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
Nondurable goods—Continued															
Average weekly earnings															
Apparel and related products.....	\$65.15	\$59.83	\$63.54	\$63.01	\$64.25	\$64.25	\$63.30	\$61.71	\$61.35	\$61.52	\$60.16	\$62.59	\$61.54	\$62.09	\$61.18
Men's and boys' suits and coats.....	77.12	73.57	77.70	76.59	77.38	76.38	77.07	74.37	78.17	74.03	70.76	73.43	72.93	74.87	72.54
Men's and boys' furnishings.....	57.22	53.20	55.57	54.96	55.87	56.17	55.01	54.58	54.05	53.91	52.48	53.28	52.91	54.31	53.53
Women's, misses', and juniors' outerwear.....	68.80	61.30	64.80	63.74	67.18	67.18	66.97	65.17	62.68	64.33	64.67	68.35	66.28	65.32	64.45
Women's and children's undergarments.....	59.09	53.94	58.60	60.00	60.58	60.64	58.59	55.94	56.00	56.15	53.86	56.52	55.02	57.41	55.48
Hats, caps, and millinery.....	64.60	65.68	64.07	67.10	67.26	68.07	66.79	64.79	62.48	60.16	69.38	66.76	65.69	65.52	65.52
Girls' and children's outerwear.....	59.41	52.79	55.54	56.25	58.08	57.32	56.27	56.15	56.61	55.85	52.44	55.54	55.85	55.80	54.72
Fur goods and miscellaneous apparel.....	-----	64.14	67.66	69.73	69.55	66.98	65.87	64.62	64.80	63.19	58.47	62.83	61.06	65.16	64.98
Miscellaneous fabricated textile products.....	70.43	66.98	70.41	69.63	69.27	69.60	66.78	64.53	66.85	66.47	64.90	65.02	64.47	66.85	64.28
Paper and allied products.....	106.85	106.34	108.36	107.43	108.43	108.43	107.32	106.82	106.21	104.55	102.24	104.13	102.97	105.90	102.00
Paper and pulp.....	119.41	118.70	119.24	119.41	119.51	119.34	119.34	120.42	117.31	116.87	114.23	116.42	115.02	117.75	112.92
Paperboard.....	122.54	121.28	122.54	120.12	121.76	121.11	121.04	122.03	119.97	117.43	115.01	117.40	115.02	118.90	114.22
Converted paper and paperboard products.....	93.66	94.30	98.18	95.49	95.76	95.99	94.92	92.74	93.60	91.84	90.09	91.43	90.98	93.79	90.64
Paperboard containers and boxes.....	96.35	96.22	98.23	98.05	99.88	99.64	97.67	96.05	97.44	94.99	92.75	94.30	92.97	96.28	94.24
Printing, publishing, and allied industries.....	111.25	110.96	113.98	110.78	111.74	112.71	111.27	110.02	110.69	110.21	109.97	110.21	108.20	110.30	107.62
Newspaper publishing and printing.....	112.05	111.65	118.24	114.61	114.30	113.98	112.89	111.91	113.20	113.52	111.19	109.74	108.42	112.53	110.35
Periodical publishing and printing.....	-----	114.95	116.91	116.51	118.48	120.60	116.95	118.78	115.49	112.58	113.58	116.18	112.97	115.42	111.95
Books.....	104.12	105.01	101.27	104.66	107.94	108.52	105.78	105.97	106.14	103.28	103.57	100.98	104.49	99.85	99.85
Commercial printing.....	113.39	113.00	114.65	112.81	113.68	115.34	112.71	112.03	112.32	112.22	110.58	113.18	110.87	112.61	110.15
Bookbinding and related industries.....	88.78	87.93	90.02	88.46	88.17	88.39	88.08	87.40	88.24	88.69	87.17	87.81	85.95	88.01	85.91
Other publishing and printing industries.....	114.82	115.80	117.41	113.28	113.87	114.43	114.94	113.37	112.60	112.01	111.81	115.71	114.55	113.96	110.59
Average weekly hours															
Apparel and related products.....	36.6	33.8	35.9	35.8	36.3	36.3	36.8	36.3	36.3	36.4	35.6	36.6	36.2	36.1	36.2
Men's and boys' suits and coats.....	36.9	35.2	37.0	36.3	36.5	36.2	36.7	36.1	37.4	37.2	36.1	37.3	37.4	36.7	37.2
Men's and boys' furnishings.....	37.4	35.0	36.8	36.4	37.0	37.2	38.2	37.9	37.8	37.7	36.7	37.0	37.0	37.2	37.7
Women's, misses', and juniors' outerwear.....	35.1	31.6	33.4	33.2	34.1	34.1	34.7	34.3	33.7	34.4	34.4	35.6	34.7	34.2	34.1
Women's and children's undergarments.....	36.7	33.5	36.4	37.5	38.1	37.9	37.8	36.8	36.6	36.7	35.2	36.7	36.2	36.8	36.5
Hats, caps, and millinery.....	34.0	35.5	35.4	35.4	35.5	35.4	36.4	36.1	36.4	35.7	33.8	37.1	35.7	35.7	36.2
Girls' and children's outerwear.....	37.6	33.2	35.6	35.6	36.3	35.6	36.3	36.7	37.0	36.5	34.5	36.3	36.5	36.0	36.0
Fur goods and miscellaneous apparel.....	-----	34.3	35.8	36.7	36.8	36.4	36.8	35.9	36.0	35.5	34.6	35.7	35.5	36.0	36.1
Miscellaneous fabricated textile products.....	38.7	36.4	38.9	38.9	38.7	39.1	38.6	37.3	38.2	38.2	37.3	37.8	37.7	38.2	37.8
Paper and allied products.....	42.4	42.2	43.0	42.8	43.2	43.2	43.1	42.9	43.0	42.5	41.9	42.5	42.2	42.7	42.5
Paper and pulp.....	43.9	43.8	44.0	43.9	44.1	44.2	44.2	44.6	44.1	44.1	43.6	44.1	43.9	44.1	43.6
Paperboard.....	44.4	44.1	44.4	44.0	44.6	44.2	44.5	44.7	44.6	44.0	43.4	44.3	43.9	44.2	44.1
Converted paper and paperboard products.....	40.9	41.0	42.5	41.7	42.0	42.1	42.0	41.4	41.6	41.0	40.4	41.0	40.8	41.5	41.2
Paperboard containers and boxes.....	41.0	40.6	41.8	41.9	42.5	42.4	42.1	41.4	42.0	41.3	40.5	41.0	40.6	41.5	41.7
Printing, publishing, and allied industries.....	38.1	38.0	38.9	38.2	38.4	38.6	38.5	38.2	38.3	38.4	38.1	38.4	38.1	38.3	38.3
Newspaper publishing and printing.....	35.8	35.9	37.3	36.5	36.4	36.3	36.3	36.1	36.4	36.5	36.1	36.1	35.9	36.3	36.3
Periodical publishing and printing.....	-----	39.1	39.9	39.9	40.3	40.2	40.2	40.4	40.1	39.5	39.3	40.2	39.5	39.3	39.7
Books.....	40.2	40.7	39.1	40.1	41.2	41.2	41.9	41.0	40.6	41.3	40.5	40.3	39.6	40.5	40.1
Commercial printing.....	38.7	38.7	39.4	38.9	39.2	39.5	39.0	38.9	39.0	39.1	38.8	39.3	38.9	39.1	39.2
Bookbinding and related industries.....	38.6	37.9	38.8	38.8	38.5	38.6	38.8	38.5	38.7	38.9	38.8	38.6	38.2	38.6	38.7
Other publishing and printing industries.....	38.4	38.6	39.4	38.4	38.6	38.4	38.7	38.3	38.3	38.1	37.9	38.7	38.7	38.5	38.4
Average hourly earnings															
Apparel and related products.....	\$1.78	\$1.77	\$1.77	\$1.76	\$1.77	\$1.77	\$1.72	\$1.70	\$1.69	\$1.69	\$1.69	\$1.71	\$1.70	\$1.72	\$1.69
Men's and boys' suits and coats.....	2.09	2.09	2.10	2.11	2.12	2.11	2.10	2.08	2.09	1.99	1.96	1.97	1.95	2.04	1.95
Men's and boys' furnishings.....	1.53	1.52	1.51	1.51	1.51	1.51	1.44	1.44	1.43	1.43	1.43	1.44	1.43	1.46	1.42
Women's, misses', and juniors' outerwear.....	1.96	1.94	1.94	1.92	1.97	1.97	1.93	1.90	1.86	1.87	1.88	1.92	1.91	1.91	1.89
Women's and children's undergarments.....	1.61	1.61	1.61	1.60	1.59	1.60	1.55	1.52	1.53	1.53	1.53	1.54	1.52	1.56	1.52
Hats, caps, and millinery.....	-----	1.90	1.85	1.81	1.89	1.90	1.87	1.85	1.78	1.75	1.78	1.87	1.87	1.84	1.81
Girls' and children's outerwear.....	1.58	1.59	1.56	1.58	1.60	1.61	1.55	1.53	1.53	1.53	1.52	1.53	1.53	1.55	1.52
Fur goods and miscellaneous apparel.....	-----	1.87	1.89	1.90	1.89	1.84	1.79	1.80	1.80	1.78	1.69	1.76	1.72	1.81	1.80
Miscellaneous fabricated textile products.....	1.82	1.84	1.81	1.79	1.79	1.78	1.73	1.73	1.75	1.74	1.74	1.72	1.71	1.75	1.70
Paper and allied products.....	2.52	2.52	2.52	2.51	2.51	2.51	2.49	2.49	2.47	2.46	2.44	2.45	2.44	2.48	2.40
Paper and pulp.....	2.72	2.71	2.71	2.72	2.71	2.70	2.70	2.70	2.66	2.65	2.62	2.64	2.62	2.67	2.59
Paperboard.....	2.76	2.75	2.76	2.73	2.73	2.74	2.72	2.73	2.69	2.67	2.65	2.65	2.62	2.69	2.59
Converted paper and paperboard products.....	2.29	2.30	2.31	2.29	2.28	2.28	2.26	2.24	2.25	2.24	2.23	2.23	2.23	2.26	2.20
Paperboard containers and boxes.....	2.35	2.37	2.35	2.34	2.35	2.35	2.32	2.32	2.32	2.30	2.29	2.30	2.29	2.32	2.26
Printing, publishing, and allied industries.....	2.92	2.92	2.93	2.90	2.91	2.92	2.89	2.88	2.89	2.87	2.86	2.87	2.84	2.88	2.81
Newspaper publishing and printing.....	3.13	3.11	3.17	3.14	3.14	3.14	3.11	3.10	3.11	3.11	3.08	3.04	3.02	3.10	3.04
Periodical publishing and printing.....	-----	2.94	2.93	2.92	2.94	3.00	2.91	2.94	2.88	2.85	2.89	2.89	2.86	2.90	2.82
Books.....	-----	2.59	2.58	2.59	2.61	2.62	2.59	2.58	2.61	2.57	2.55	2.57	2.55	2.58	2.49
Commercial printing.....	2.93	2.92	2.91	2.90	2.90	2.92	2.89	2.88	2.88	2.87	2.85	2.88	2.85	2.88	2.81
Bookbinding and related industries.....	2.30	2.32	2.32	2.28	2.29	2.29	2.27	2.27	2.28	2.28	2.27	2.28	2.25	2.28	2.22
Other publishing and printing industries.....	2.99	3.00	2.98	2.95	2.95	2.98	2.97	2.96	2.94	2.94	2.95	2.99	2.96	2.96	2.88

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued
 Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Manufacturing—Continued															
<i>Nondurable goods—Continued</i>															
Chemicals and allied products.....	\$113.99	\$114.12	\$115.09	\$113.85	\$113.85	\$114.13	\$113.02	\$113.98	\$113.42	\$112.69	\$113.40	\$111.37	\$110.83	\$112.88	\$109.98
Industrial chemicals.....	129.38	129.17	130.42	129.27	129.79	128.96	127.71	128.33	127.60	126.68	130.82	126.46	126.16	128.44	124.68
Plastics and synthetics, except glass.....	113.84	113.15	114.66	112.74	112.47	112.88	112.32	114.09	113.94	111.76	113.55	110.27	109.32	112.32	109.62
Drugs.....	101.75	101.91	101.75	100.60	101.18	100.63	99.63	99.54	100.04	99.88	98.98	100.70	100.45	100.53	98.40
Soap, cleaners, and toilet goods.....	105.59	105.87	107.83	106.86	106.60	108.62	107.68	106.75	107.27	105.41	103.83	104.49	103.86	106.08	103.89
Paints, varnishes, and allied products.....	107.01	105.04	106.45	105.93	106.71	106.14	105.98	107.84	106.50	108.36	103.48	103.38	102.21	105.22	101.69
Agricultural chemicals.....	93.30	93.70	94.79	93.26	93.29	94.16	91.10	91.74	92.44	97.83	99.70	91.08	89.68	93.53	88.39
Other chemical products.....	110.51	110.92	111.83	110.46	109.67	110.20	108.68	109.56	107.94	107.59	105.27	104.45	104.65	108.00	103.75
Petroleum refining and related industries.....	131.84	130.88	132.89	132.39	131.77	134.20	130.21	133.98	133.25	131.57	133.77	128.61	126.36	131.77	126.88
Petroleum refining.....	138.10	137.35	139.86	139.44	136.53	139.70	134.39	138.94	138.53	137.03	140.95	134.97	132.68	137.45	131.43
Other petroleum and coal products.....	104.67	102.81	103.63	105.83	114.04	113.26	115.20	115.28	113.09	110.12	104.83	99.10	97.96	108.28	107.75
Rubber and miscellaneous plastic products.....	99.54	101.25	105.08	102.91	101.93	102.67	100.86	100.04	100.53	99.23	98.25	100.12	99.88	100.78	100.04
Tires and inner tubes.....	129.82	141.19	137.53	134.06	134.97	132.84	130.73	128.88	124.66	126.88	129.36	128.32	131.30	130.47	
Other rubber products.....	98.25	98.42	100.36	98.49	98.81	99.46	96.63	94.40	97.27	96.22	94.40	96.22	96.22	97.27	95.63
Miscellaneous plastic products.....	88.15	87.53	90.09	88.17	87.98	89.25	88.62	87.76	87.56	87.13	85.24	87.13	86.51	87.56	85.90
Leather and leather products.....	68.92	67.13	69.63	66.59	67.66	67.13	67.41	66.12	66.70	64.42	62.13	64.58	64.70	66.00	64.67
Leather tanning and finishing.....	90.52	90.12	94.58	92.57	93.52	91.94	90.23	90.23	93.75	91.76	89.38	88.58	83.36	91.13	87.42
Footwear, except rubber.....	66.64	65.60	67.12	63.51	64.21	64.03	65.15	64.89	64.30	61.20	59.33	61.88	62.33	63.44	62.66
Other leather products.....	66.82	63.00	66.64	66.12	67.86	66.09	65.49	63.07	64.09	62.56	60.52	63.04	62.87	64.30	62.58
Average weekly hours															
Chemicals and allied products.....	41.3	41.2	41.7	41.4	41.4	41.5	41.4	41.6	41.7	41.7	42.0	41.4	41.2	41.5	41.5
Industrial chemicals.....	41.6	41.4	41.8	41.7	41.6	41.6	41.6	41.8	41.7	41.5	42.2	41.6	41.5	41.7	41.7
Plastics and synthetics, except glass.....	41.7	41.6	42.0	41.6	41.5	41.5	41.6	42.1	42.2	41.7	41.9	41.3	41.1	41.6	41.8
Drugs.....	39.9	40.6	40.7	40.4	40.8	40.7	40.5	40.3	40.5	40.4	40.4	41.1	41.0	40.7	41.0
Soap, cleaners, and toilet goods.....	40.3	39.8	41.0	41.1	41.0	41.3	41.1	40.9	41.1	40.7	40.4	40.5	40.1	40.8	40.9
Paints, varnishes, and allied products.....	41.0	40.4	41.1	40.9	41.2	41.3	41.4	41.8	41.6	42.0	40.9	40.7	40.4	41.1	40.8
Agricultural chemicals.....	42.8	42.4	42.7	42.2	42.6	42.8	41.6	41.7	42.6	45.5	48.4	44.0	42.5	43.5	42.7
Other chemical products.....	41.7	41.7	42.2	42.0	41.7	41.9	41.8	42.3	42.0	41.7	41.0	40.8	41.2	41.7	41.5
Petroleum refining and related industries.....	41.2	40.9	41.4	41.5	41.7	42.2	41.6	42.4	42.3	41.9	42.2	40.7	40.5	41.7	41.6
Petroleum refining.....	41.1	41.0	41.5	41.5	41.0	41.7	40.6	41.6	41.6	41.4	42.2	40.9	40.7	41.4	41.2
Other petroleum and coal products.....	41.7	40.6	40.8	41.5	44.2	43.9	45.0	45.2	44.7	43.7	42.1	39.8	39.5	42.8	43.1
Rubber and miscellaneous plastic products.....	40.3	40.5	41.7	41.0	41.1	41.4	41.0	40.5	40.7	40.5	40.1	40.7	40.6	40.8	41.0
Tires and inner tubes.....	39.7	42.4	41.3	41.3	40.5	40.9	40.5	40.1	39.9	39.2	39.9	40.3	40.1	40.4	40.9
Other rubber products.....	40.6	40.5	41.3	40.7	41.0	41.1	40.6	40.0	40.7	40.6	40.0	40.6	40.6	40.7	41.0
Miscellaneous plastic products.....	41.0	40.9	41.9	41.2	41.5	41.9	41.8	41.2	41.3	41.1	40.4	41.1	41.0	41.3	41.1
Leather and leather products.....	38.5	37.5	38.9	37.2	37.8	37.5	38.3	38.0	37.9	36.6	35.5	36.9	37.4	37.5	37.6
Leather tanning and finishing.....	39.7	39.7	41.3	40.6	41.2	40.5	40.1	40.1	41.3	40.6	39.9	39.9	39.8	40.5	40.1
Footwear, except rubber.....	38.3	37.7	38.8	36.5	36.9	36.8	38.1	38.1	37.6	36.0	34.9	36.4	37.1	37.1	37.3
Other leather products.....	38.4	36.0	38.3	38.0	39.0	38.2	38.3	37.1	37.7	36.8	35.6	37.3	37.2	37.6	37.7
Average hourly earnings															
Chemicals and allied products.....	\$2.76	\$2.77	\$2.76	\$2.75	\$2.75	\$2.75	\$2.73	\$2.74	\$2.72	\$2.70	\$2.70	\$2.69	\$2.69	\$2.72	\$2.65
Industrial chemicals.....	3.11	3.12	3.12	3.10	3.12	3.10	3.07	3.07	3.06	3.05	3.10	3.04	3.04	3.08	2.99
Plastics and synthetics, except glass.....	2.73	2.72	2.73	2.71	2.71	2.72	2.70	2.71	2.70	2.68	2.71	2.67	2.66	2.70	2.62
Drugs.....	2.55	2.51	2.50	2.49	2.48	2.47	2.46	2.47	2.47	2.46	2.45	2.45	2.45	2.47	2.40
Soap, cleaners, and toilet goods.....	2.62	2.66	2.63	2.60	2.60	2.63	2.62	2.61	2.61	2.59	2.57	2.58	2.59	2.60	2.64
Paints, varnishes, and allied products.....	2.61	2.60	2.59	2.59	2.59	2.57	2.56	2.58	2.56	2.58	2.53	2.54	2.53	2.56	2.49
Agricultural chemicals.....	2.18	2.21	2.22	2.21	2.19	2.20	2.19	2.20	2.17	2.15	2.06	2.07	2.11	2.15	2.07
Other chemical products.....	2.65	2.66	2.65	2.63	2.63	2.63	2.60	2.59	2.57	2.58	2.57	2.56	2.54	2.59	2.50
Petroleum refining and related industries.....	3.20	3.20	3.21	3.19	3.16	3.18	3.13	3.16	3.15	3.14	3.17	3.16	3.12	3.16	3.05
Petroleum refining.....	3.36	3.35	3.37	3.36	3.33	3.35	3.31	3.34	3.33	3.31	3.34	3.30	3.26	3.32	3.19
Other petroleum and coal products.....	2.51	2.52	2.54	2.55	2.58	2.58	2.56	2.55	2.53	2.52	2.49	2.49	2.48	2.53	2.50
Rubber and miscellaneous plastic products.....	2.47	2.50	2.52	2.51	2.48	2.48	2.46	2.47	2.47	2.45	2.45	2.46	2.46	2.47	2.44
Tires and inner tubes.....	3.27	3.33	3.33	3.33	3.31	3.30	3.28	3.26	3.23	3.18	3.18	3.21	3.20	3.25	3.19
Other rubber products.....	2.42	2.43	2.43	2.42	2.41	2.42	2.38	2.36	2.39	2.37	2.36	2.37	2.37	2.39	2.33
Miscellaneous plastic products.....	2.15	2.14	2.15	2.14	2.12	2.13	2.12	2.13	2.12	2.12	2.11	2.12	2.11	2.12	2.09
Leather and leather products.....	1.79	1.79	1.79	1.79	1.79	1.79	1.76	1.74	1.76	1.76	1.75	1.75	1.73	1.76	1.72
Leather tanning and finishing.....	2.28	2.27	2.29	2.28	2.27	2.27	2.25	2.25	2.27	2.26	2.24	2.22	2.22	2.25	2.18
Footwear, except rubber.....	1.74	1.74	1.73	1.74	1.74	1.74	1.71	1.69	1.71	1.70	1.70	1.70	1.68	1.71	1.68
Other leather products.....	1.74	1.75	1.74	1.74	1.74	1.73	1.71	1.70	1.70	1.70	1.70	1.69	1.71	1.71	1.66

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964				1963								Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ⁴						\$117.04	\$118.53	\$120.18	\$116.48	\$119.46	\$118.25	\$114.96	\$121.67		\$115.87
Local and interurban passenger transit:															
Local and suburban transportation		\$103.07	\$102.24	\$102.41	\$102.48	102.30	103.25	103.09	103.63	102.48	100.38	99.72	100.32	\$101.70	100.11
Intercity and rural buslines		132.75	120.51	123.38	126.44	138.70	134.06	133.44	124.27	122.69	123.12	118.29	121.39	125.86	118.40
Motor freight transportation and storage		116.81	120.67	117.29	120.13	120.12	119.71	118.85	118.63	117.31	115.36	114.95	114.89	117.31	113.30
Pipeline transportation		140.35	141.51	139.47	136.49	140.15	134.94	138.65	140.66	137.16	138.45	135.94	138.63	138.38	132.76
Communication:															
Telephone communication		102.44	103.36	106.08	105.04	105.30	102.26	102.36	102.00	101.24	99.94	100.58	101.09	102.40	98.95
Telegraph communication ⁴		111.24	112.59	111.90	112.17	112.86	112.71	112.98	113.25	110.30	108.16	107.38	108.05	110.92	107.78
Radio and television broadcasting		136.37	137.86	134.85	137.07	135.93	132.10	132.10	132.10	131.66	135.04	131.99	131.93	133.96	127.20
Electric, gas, and sanitary services:															
Electric companies and systems		123.90	124.92	123.79	122.96	123.37	121.42	121.13	121.42	119.72	119.31	119.02	119.60	121.13	116.85
Gas companies and systems		124.84	125.55	123.41	123.60	124.01	123.26	124.09	123.55	121.66	120.42	120.13	119.43	122.36	118.24
Combined utility systems		116.62	117.16	117.16	115.36	116.47	111.93	111.93	112.74	112.20	111.24	112.07	113.44	113.57	108.53
Water, steam, and sanitary systems		133.90	136.18	135.34	134.37	134.92	132.07	130.19	131.14	129.15	129.05	128.43	129.68	131.65	126.59
		99.05	100.02	100.26	100.14	98.06	97.88	97.64	97.41	95.94	96.70	96.93	98.06	98.29	94.66
Average weekly hours															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ⁴						42.1	43.1	43.7	41.9	43.6	43.0	41.5	43.3		42.6
Local and interurban passenger transit:															
Local and suburban transportation		41.9	41.9	41.8	42.0	42.1	42.5	42.6	43.0	42.7	42.0	41.9	41.8	42.2	42.6
Intercity and rural buslines		45.0	41.7	42.4	43.6	46.7	45.6	45.7	43.3	42.9	42.9	41.8	43.2	43.7	42.9
Motor freight transportation and storage		40.7	41.9	41.3	42.3	42.0	42.3	41.7	42.2	41.6	41.2	41.2	41.0	41.6	41.5
Pipeline transportation		41.4	40.9	40.9	40.5	41.1	40.4	40.9	41.1	40.7	40.6	40.1	40.3	40.7	40.6
Communication:															
Telephone communication		39.4	39.6	40.8	40.4	40.5	40.1	40.3	40.0	39.7	39.5	39.6	39.8	40.0	39.9
Telegraph communication ⁴		41.2	41.7	41.6	41.7	41.8	41.9	42.0	42.1	42.1	41.6	41.2	41.4	41.7	42.1
Radio and television broadcasting		39.3	39.5	39.2	39.5	39.4	39.2	39.2	39.2	39.3	39.6	39.4	39.5	39.4	38.9
Electric, gas, and sanitary services:															
Electric companies and systems		41.3	41.5	41.4	41.4	41.4	41.3	41.2	41.3	41.2	41.0	41.0	40.9	41.1	41.0
Gas companies and systems		41.2	41.3	41.0	41.2	41.2	41.5	41.5	41.6	41.1	41.1	41.1	41.0	40.9	41.2
Combined utility systems		41.5	41.4	41.4	41.2	41.3	40.7	40.7	40.7	40.8	40.6	40.9	41.1	41.0	40.8
Water, steam, and sanitary systems		41.2	41.9	41.9	41.6	41.9	41.4	41.2	41.5	41.0	41.1	40.9	41.3	41.4	41.1
		41.1	41.5	41.6	41.9	41.2	41.3	41.2	41.1	41.0	40.8	40.9	41.2	41.3	40.8
Average hourly earnings															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads ⁴						\$2.78	\$2.75	\$2.75	\$2.78	\$2.74	\$2.75	\$2.77	\$2.81		\$2.72
Local and interurban passenger transit:															
Local and suburban transportation		\$2.46	\$2.44	\$2.45	\$2.44	2.43	2.43	2.42	2.41	2.40	2.39	2.38	2.40	\$2.41	2.35
Intercity and rural buslines		2.95	2.89	2.91	2.90	2.97	2.94	2.92	2.87	2.86	2.87	2.83	2.81	2.88	2.76
Motor freight transportation and storage		2.87	2.88	2.84	2.84	2.86	2.83	2.85	2.81	2.82	2.80	2.79	2.79	2.82	2.73
Pipeline transportation		3.39	3.46	3.41	3.37	3.41	3.34	3.39	3.42	3.37	3.41	3.39	3.44	3.40	3.27
Communication:															
Telephone communication		2.60	2.61	2.60	2.60	2.60	2.55	2.54	2.55	2.55	2.53	2.54	2.54	2.56	2.48
Telegraph communication ⁴		2.70	2.70	2.69	2.69	2.70	2.69	2.69	2.69	2.62	2.60	2.60	2.61	2.66	2.56
Radio and television broadcasting		3.47	3.49	3.44	3.47	3.45	3.37	3.37	3.37	3.35	3.41	3.35	3.34	3.40	3.27
Electric, gas, and sanitary services:															
Electric companies and systems		3.00	3.01	2.99	2.97	2.98	2.94	2.94	2.94	2.92	2.91	2.91	2.91	2.94	2.85
Gas companies and systems		3.03	3.04	3.01	3.00	3.01	2.97	2.99	2.97	2.96	2.93	2.93	2.92	2.97	2.87
Combined utility systems		2.81	2.83	2.83	2.80	2.82	2.75	2.75	2.77	2.75	2.74	2.74	2.76	2.77	2.66
Water, steam, and sanitary systems		3.25	3.25	3.23	3.23	3.22	3.19	3.16	3.16	3.15	3.14	3.14	3.14	3.18	3.08
		2.41	2.41	2.41	2.39	2.38	2.37	2.37	2.37	2.34	2.37	2.37	2.38	2.38	2.32

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
	Average weekly earnings														
Wholesale and retail trade ¹	\$78.31	\$77.60	\$77.75	\$77.95	\$78.36	\$78.79	\$78.79	\$78.19	\$77.39	\$76.62	\$76.42	\$76.03	\$77.59	\$75.08	
Wholesale trade.....	100.75	101.43	100.85	100.94	100.69	99.72	99.55	100.12	99.47	98.58	98.58	97.93	99.47	96.22	
Motor vehicles and automotive equipment.....	95.26	96.79	96.14	96.33	96.33	95.11	94.89	94.66	94.66	94.24	93.15	92.74	95.08	92.82	
Drugs, chemicals, and allied products.....	103.06	103.31	102.51	102.26	102.36	100.65	100.60	100.65	99.75	99.50	99.75	99.75	101.05	97.84	
Dry goods and apparel.....	90.40	92.48	92.63	93.99	94.49	92.37	90.86	90.86	90.64	92.38	91.48	91.96	91.99	92.43	
Groceries and related products.....	94.76	95.34	95.04	93.75	94.43	93.83	94.75	94.47	93.38	92.51	91.65	90.53	93.38	89.86	
Electrical goods.....	106.53	109.74	106.52	105.04	104.26	103.06	102.40	102.77	101.85	101.71	102.21	102.87	103.83	101.59	
Hardware, plumbing, and heating goods.....	96.22	97.34	97.03	96.39	97.10	95.82	95.65	96.05	95.65	95.00	93.96	93.50	95.41	92.97	
Machinery, equipment, and supplies.....	109.89	110.15	109.75	110.97	110.56	108.50	107.68	109.06	108.09	107.16	107.16	106.49	108.65	104.14	
Retail trade ¹	68.45	68.40	68.26	68.25	68.61	69.30	69.30	68.96	67.63	67.48	66.75	66.75	68.04	65.95	
General merchandise stores.....	55.08	56.32	53.88	54.54	54.86	55.22	55.38	54.79	53.51	53.28	53.01	52.51	54.13	52.59	
Department stores.....	59.45	59.49	57.94	59.31	59.84	60.03	60.03	59.68	58.31	57.80	57.12	56.45	58.65	57.10	
Limited price variety stores.....	39.17	40.66	40.00	40.00	40.13	41.50	41.08	40.22	39.43	39.48	39.36	39.16	39.98	38.01	
Food stores.....	66.39	66.62	66.59	66.43	66.85	67.68	67.68	66.93	65.58	65.26	65.24	64.73	66.15	64.78	
Grocery, meat, and vegetable stores.....	67.62	67.82	68.16	67.82	68.45	69.14	69.50	68.74	66.82	66.66	66.47	66.12	67.74	66.22	
Apparel and accessories stores.....	54.78	56.32	54.42	54.08	54.90	55.11	55.77	54.70	54.06	55.36	53.35	53.85	54.70	53.63	
Men's and boys' apparel stores.....	66.55	67.84	66.79	66.24	67.33	67.82	68.96	67.28	66.06	66.39	64.40	65.15	66.77	65.82	
Women's ready-to-wear stores.....	49.80	50.75	48.29	48.43	48.38	48.56	49.27	48.76	48.33	49.13	47.52	47.71	48.62	47.46	
Family clothing stores.....	52.65	54.76	54.01	52.17	53.51	54.62	55.34	54.32	53.40	54.01	52.10	53.44	53.75	52.45	
Shoe stores.....	54.75	56.24	54.21	55.01	55.53	56.11	56.45	54.15	54.78	58.35	55.26	55.44	55.58	55.61	
	Average weekly hours														
Wholesale and retail trade ¹	38.2	38.8	38.3	38.4	38.6	39.2	39.2	38.9	38.5	38.5	38.4	38.4	38.6	38.7	
Wholesale trade.....	40.3	40.9	40.5	40.7	40.6	40.7	40.8	40.7	40.6	40.4	40.4	40.3	40.6	40.6	
Motor vehicles and automotive equipment.....	41.6	41.9	41.8	41.7	41.7	41.9	41.8	41.7	41.7	41.7	41.4	41.4	41.7	42.0	
Drugs, chemicals, and allied products.....	40.1	40.2	40.2	40.1	40.3	40.1	40.4	40.1	39.9	39.8	39.9	39.9	40.1	40.1	
Dry goods and apparel.....	37.2	37.9	37.5	37.9	38.1	37.7	37.7	37.7	37.3	37.4	37.8	38.0	37.7	37.9	
Groceries and related products.....	41.2	42.0	41.5	41.3	41.6	41.7	42.3	41.8	41.5	41.3	41.1	40.8	41.5	41.6	
Electrical goods.....	40.2	41.1	40.5	40.4	40.1	40.1	40.0	40.3	40.1	40.2	40.4	40.5	40.4	40.8	
Hardware, plumbing, and heating goods.....	40.6	40.9	40.6	40.5	40.8	40.6	40.7	40.7	40.7	40.6	40.5	40.3	40.6	40.6	
Machinery, equipment, and supplies.....	40.7	41.1	40.8	41.1	41.1	41.1	41.1	41.0	41.1	40.9	40.9	40.8	41.0	41.0	
Retail trade ¹	37.2	38.0	37.3	37.5	37.7	38.5	38.5	38.1	37.6	37.7	37.5	37.5	37.8	37.9	
General merchandise stores.....	34.0	36.1	34.1	34.3	34.5	35.4	35.5	34.9	34.3	34.6	34.2	34.1	34.7	34.6	
Department stores.....	33.4	35.2	33.3	33.7	34.0	34.7	34.7	34.3	33.9	34.2	33.8	33.6	34.1	34.4	
Limited price variety stores.....	30.6	33.6	32.0	32.0	32.1	33.2	33.4	32.7	32.1	32.9	32.0	32.1	32.5	32.7	
Food stores.....	34.4	34.7	34.5	34.6	35.0	36.0	36.0	35.6	34.7	34.9	34.7	34.8	35.0	35.4	
Grocery, meat, and vegetable stores.....	34.5	34.6	34.6	34.6	35.1	36.2	36.2	35.8	34.8	34.9	34.8	34.8	35.1	35.6	
Apparel and accessories stores.....	33.4	35.2	33.8	33.8	34.1	35.1	35.3	34.4	34.0	34.6	34.2	34.3	34.4	34.6	
Men's and boys' apparel stores.....	35.4	37.9	36.7	36.8	37.2	38.1	38.1	37.8	36.7	37.3	36.8	36.6	37.3	37.4	
Women's ready-to-wear stores.....	33.2	35.0	33.3	33.4	33.6	34.2	34.7	34.1	33.8	34.6	33.7	33.6	34.0	33.9	
Family clothing stores.....	32.7	35.1	34.4	34.1	34.3	35.7	35.5	35.5	34.9	35.3	34.5	34.7	34.9	35.2	
Shoe stores.....	32.2	32.7	31.7	31.8	32.1	33.8	33.8	31.3	31.3	32.6	32.7	33.6	32.5	33.3	
	Average hourly earnings														
Wholesale and retail trade ¹	\$2.05	\$2.00	\$2.03	\$2.03	\$2.03	\$2.01	\$2.01	\$2.01	\$2.01	\$1.99	\$1.99	\$1.98	\$2.01	\$1.94	
Wholesale trade.....	2.50	2.48	2.49	2.48	2.48	2.45	2.44	2.46	2.45	2.44	2.44	2.43	2.45	2.37	
Motor vehicles and automotive equipment.....	2.29	2.31	2.30	2.31	2.31	2.27	2.27	2.27	2.27	2.26	2.25	2.24	2.28	2.21	
Drugs, chemicals, and allied products.....	2.57	2.57	2.55	2.55	2.54	2.51	2.49	2.51	2.50	2.50	2.50	2.50	2.52	2.44	
Dry goods and apparel.....	2.43	2.44	2.47	2.48	2.48	2.45	2.41	2.41	2.43	2.47	2.42	2.42	2.44	2.44	
Groceries and related products.....	2.30	2.27	2.29	2.27	2.27	2.25	2.24	2.26	2.25	2.24	2.23	2.22	2.25	2.16	
Electrical goods.....	2.65	2.67	2.63	2.60	2.60	2.57	2.56	2.55	2.54	2.53	2.53	2.54	2.57	2.49	
Hardware, plumbing, and heating goods.....	2.37	2.38	2.39	2.38	2.38	2.36	2.35	2.36	2.35	2.34	2.32	2.32	2.35	2.29	
Machinery, equipment, and supplies.....	2.70	2.68	2.69	2.70	2.69	2.64	2.62	2.66	2.63	2.62	2.62	2.61	2.65	2.54	
Retail trade ¹	1.84	1.80	1.83	1.82	1.82	1.80	1.80	1.81	1.80	1.79	1.78	1.78	1.80	1.74	
General merchandise stores.....	1.62	1.56	1.58	1.59	1.59	1.56	1.56	1.57	1.56	1.54	1.55	1.54	1.56	1.52	
Department stores.....	1.78	1.69	1.74	1.76	1.76	1.73	1.73	1.74	1.72	1.69	1.69	1.68	1.72	1.66	
Limited price variety stores.....	1.28	1.21	1.25	1.25	1.25	1.25	1.23	1.23	1.23	1.20	1.23	1.22	1.23	1.19	
Food stores.....	1.93	1.92	1.93	1.92	1.91	1.88	1.88	1.88	1.89	1.87	1.88	1.86	1.89	1.83	
Grocery, meat, and vegetable stores.....	1.96	1.96	1.97	1.96	1.95	1.91	1.92	1.92	1.92	1.91	1.91	1.90	1.93	1.86	
Apparel and accessories stores.....	1.64	1.60	1.61	1.60	1.61	1.57	1.58	1.59	1.59	1.60	1.56	1.57	1.59	1.55	
Men's and boys' apparel stores.....	1.88	1.79	1.82	1.80	1.81	1.78	1.81	1.78	1.80	1.78	1.75	1.78	1.79	1.76	
Women's ready-to-wear stores.....	1.50	1.45	1.45	1.45	1.44	1.42	1.42	1.43	1.43	1.42	1.41	1.42	1.43	1.40	
Family clothing stores.....	1.61	1.56	1.57	1.53	1.56	1.53	1.55	1.53	1.53	1.53	1.51	1.54	1.54	1.49	
Shoe stores.....	1.70	1.72	1.71	1.73	1.73	1.66	1.67	1.73	1.75	1.79	1.69	1.65	1.71	1.67	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,¹ by industry—Continued

Revised series; see box, p. 470.

Industry	1964					1963								Annual average	
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Average weekly earnings															
Wholesale and retail trade ¹ —Continued															
Retail trade ¹ —Continued															
Furniture and appliance stores.....	\$84.02	\$87.15	\$84.66	\$83.22	\$83.64	\$84.05	\$82.42	\$82.62	\$81.40	\$80.60	\$80.79	\$80.40	\$82.62	\$80.75	
Other retail trade.....	78.31	78.85	79.10	78.69	78.25	79.19	79.19	78.81	78.06	77.64	76.63	76.63	78.25	75.76	
Motor vehicle dealers.....	94.83	96.58	98.76	97.45	93.74	97.90	98.11	98.99	98.33	97.45	94.18	93.30	96.58	93.08	
Other vehicle and accessory dealers.....	82.78	84.55	82.16	82.16	82.78	83.10	84.23	82.65	82.16	81.22	80.85	81.10	82.53	80.08	
Drug stores.....	59.59	60.02	59.53	58.32	59.29	60.54	60.59	60.10	58.08	58.44	58.08	57.88	58.93	57.41	
Finance, insurance, and real estate:															
Banking.....	76.91	76.13	75.35	74.97	75.14	74.40	74.77	74.40	74.40	74.23	74.23	74.40	74.97	71.80	
Security dealers and exchanges.....	127.42	128.13	126.92	126.92	121.55	115.80	118.84	123.77	124.19	119.06	116.34	119.10	121.53	116.95	
Insurance carriers.....	97.67	96.86	96.79	96.72	96.66	96.65	96.13	95.67	95.44	95.71	95.69	96.28	93.46	93.46	
Life insurance.....	103.38	102.14	102.14	102.15	102.57	102.45	101.21	100.25	100.23	100.83	100.64	101.59	99.08	99.08	
Accident and health insurance.....	83.37	82.69	82.92	82.56	81.84	81.86	82.06	81.97	81.36	81.18	81.58	82.10	78.33	78.33	
Fire, marine, and casualty insurance.....		92.89	92.66	92.40	92.18	91.55	91.64	92.20	92.07	91.80	91.70	91.79	91.95	88.61	
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels ³	47.72	47.86	47.72	48.09	48.22	48.31	47.96	47.36	47.86	46.08	46.85	47.23	47.58	46.14	
Personal services:															
Laundries, cleaning and dyeing plants.....		52.13	51.99	51.87	52.00	51.48	52.00	52.67	52.54	52.40	50.95	50.04	51.87	50.57	
Motion pictures:															
Motion picture filming and distributing.....	134.43	133.25	139.96	132.89	132.65	130.01	128.89	121.25	124.33	123.08	125.52	129.68	122.27	122.27	
Average weekly hours															
Wholesale and retail trade ¹ —Continued															
Retail trade ¹ —Continued															
Furniture and appliance stores.....	40.2	41.5	40.7	40.4	40.6	41.0	40.8	40.9	40.7	40.5	40.6	40.4	40.7	41.2	
Other retail trade.....	41.0	41.5	41.2	41.2	41.4	41.9	41.9	41.7	41.3	41.3	41.2	41.2	41.4	41.4	
Motor vehicle dealers.....	43.7	43.7	43.7	43.7	43.4	43.9	43.8	43.8	43.7	43.7	43.6	43.6	43.7	43.7	
Other vehicle and accessory dealers.....	43.8	44.5	43.7	43.7	43.8	44.2	44.1	44.2	43.7	43.9	43.7	43.6	43.9	44.0	
Drug stores.....	35.9	36.6	36.3	36.0	36.6	37.6	37.4	37.1	36.3	36.3	36.3	36.4	36.6	36.8	
Finance, insurance, and real estate:															
Banking.....	37.7	37.5	37.3	37.3	37.2	37.2	37.2	37.2	37.2	37.3	37.3	37.2	37.3	37.2	
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 ³	38.8	38.6	38.8	39.1	39.2	40.6	40.3	38.5	38.6	38.4	38.4	38.4	39.0	39.1	
Personal services:															
Laundries, cleaning and dyeing plants.....		38.9	38.8	39.0	39.1	39.0	39.1	39.6	39.5	39.4	38.6	38.2	39.0	38.9	
Motion pictures:															
Motion picture filming and distributing.....															
Average hourly earnings															
Wholesale and retail trade ¹ —Continued															
Retail trade ¹ —Continued															
Furniture and appliance stores.....	\$2.09	\$2.10	\$2.08	\$2.06	\$2.06	\$2.05	\$2.02	\$2.02	\$2.00	\$1.99	\$1.99	\$1.99	\$2.03	\$1.96	
Other retail trade.....	1.91	1.90	1.92	1.91	1.89	1.89	1.89	1.89	1.89	1.88	1.86	1.86	1.89	1.83	
Motor vehicle dealers.....	2.17	2.21	2.26	2.23	2.16	2.23	2.24	2.26	2.25	2.23	2.16	2.14	2.21	2.13	
Other vehicle and accessory dealers.....	1.89	1.90	1.88	1.88	1.89	1.88	1.91	1.87	1.88	1.85	1.85	1.86	1.88	1.82	
Drug stores.....	1.66	1.64	1.64	1.62	1.62	1.61	1.62	1.62	1.60	1.61	1.60	1.59	1.61	1.56	
Finance, insurance, and real estate:															
Banking.....	2.04	2.03	2.02	2.01	2.02	2.00	2.01	2.00	2.00	1.99	1.99	2.00	2.01	1.93	
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 ³	1.23	1.24	1.23	1.23	1.23	1.19	1.19	1.23	1.24	1.20	1.22	1.23	1.22	1.18	
Personal services:															
Laundries, cleaning and dyeing plants.....		1.34	1.34	1.33	1.33	1.32	1.33	1.33	1.33	1.33	1.32	1.31	1.33	1.30	
Motion pictures:															
Motion picture filming and distributing.....															

¹ For comparability of data with those published in issues prior to October 1963, 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 (ICO Group I).

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 1 railroads. (See footnote 3.)

TABLE C-2. Average weekly hours, seasonally adjusted, of production workers in selected industries¹
Revised series; see box, p. 470.

Industry division and group	1964		1963										
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.
Mining.....	41.7	41.6	41.5	41.4	41.8	41.8	41.5	40.9	42.2	41.9	41.6	41.0	41.5
Contract construction.....	37.7	35.5	36.6	36.9	37.6	37.3	37.2	37.3	37.6	37.5	37.5	37.3	36.1
Manufacturing.....	40.6	40.1	40.5	40.5	40.6	40.7	40.3	40.4	40.5	40.5	40.1	40.5	40.3
Durable goods.....	41.3	40.8	41.5	41.1	41.2	41.3	41.6	41.2	41.3	41.1	40.7	41.0	41.0
Ordnance and accessories.....	40.3	40.2	41.0	40.6	41.2	41.4	41.3	41.0	41.4	40.9	40.4	40.7	41.4
Lumber and wood products, except furniture.....	40.3	39.1	40.7	40.1	40.3	40.2	40.0	40.4	40.1	39.5	39.9	39.9	40.1
Furniture and fixtures.....	41.5	40.1	41.0	41.0	40.7	40.7	40.9	41.2	40.9	40.9	40.5	40.7	40.9
Stone, clay, and glass products.....	41.6	40.7	41.0	41.3	41.6	41.3	41.2	41.4	41.5	41.6	41.3	41.4	40.9
Primary metal industries.....	41.2	41.0	41.1	40.9	40.6	40.7	40.9	41.1	41.7	41.6	41.3	40.5	40.6
Fabricated metal products.....	41.7	41.3	41.8	41.5	41.6	41.4	41.1	41.2	41.2	41.4	40.9	41.2	41.3
Machinery.....	42.3	41.8	42.4	42.1	41.9	42.1	41.7	41.7	41.7	41.5	41.2	41.6	41.7
Electrical equipment and supplies.....	40.4	39.9	40.3	40.2	40.3	40.3	40.3	40.6	40.4	40.4	40.1	40.3	40.4
Transportation equipment.....	41.8	42.1	42.3	42.3	42.3	42.0	41.5	42.1	42.2	41.9	41.4	41.8	41.9
Instruments and related products.....	41.0	40.0	40.7	40.7	41.0	41.1	40.7	40.8	40.7	40.8	40.5	41.0	41.1
Miscellaneous manufacturing industries.....	40.1	38.8	39.5	39.4	39.7	39.8	39.8	39.7	39.5	39.6	39.2	39.6	39.8
Nondurable goods.....	39.9	39.1	39.6	39.5	39.8	39.7	39.6	39.5	39.6	39.7	39.3	39.8	39.7
Food and kindred products.....	40.9	40.6	41.0	40.9	41.0	40.9	41.0	40.8	41.0	40.8	40.7	41.1	40.9
Tobacco manufactures.....	35.7	38.0	38.2	39.2	38.1	37.2	39.9	39.4	39.7	39.0	35.6	39.2	37.6
Textile mill products.....	41.2	40.4	41.1	40.8	41.0	40.7	40.5	40.4	40.5	40.6	40.2	40.7	40.3
Apparel and related products.....	36.7	34.6	36.0	35.7	36.4	36.6	35.9	36.0	36.0	36.4	35.9	36.5	36.3
Paper and allied products.....	42.9	42.6	43.0	42.8	43.0	42.8	42.7	42.7	42.7	42.6	42.2	42.8	42.7
Printing, publishing, and allied industries.....	38.4	38.2	38.4	38.1	38.4	38.4	38.4	38.3	38.3	38.4	38.3	38.4	38.4
Chemicals and allied products.....	41.5	41.3	41.7	41.4	41.5	41.5	41.5	41.6	41.4	41.6	41.8	41.6	41.4
Petroleum refining and related industries.....	42.0	41.0	41.9	41.5	41.6	41.5	41.6	41.7	41.9	41.9	42.2	41.3	41.3
Rubber and miscellaneous plastic products.....	40.8	40.7	41.5	40.9	41.0	41.2	40.8	40.2	40.1	40.4	40.7	41.1	41.1
Leather and leather products.....	38.2	36.6	38.2	37.4	38.9	38.3	37.8	37.0	37.3	37.3	36.8	36.9	37.1
Wholesale and retail trade ³	38.4	38.4	38.6	38.6	38.5	38.6	38.7	38.7	38.7	38.7	38.7	38.6	38.7
Wholesale trade.....	40.4	40.4	40.7	40.5	40.6	40.5	40.6	40.6	40.6	40.6	40.5	40.6	40.6
Retail trade ⁴	37.4	37.4	37.8	37.7	37.8	37.7	37.8	37.9	37.9	37.8	37.9	37.8	37.8

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 Labor 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
Revised series; see box, p. 470.

Major industry group	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing.....	\$2.42	\$2.43	\$2.42	\$2.40	\$2.38	\$2.38	\$2.35	\$2.37	\$2.37	\$2.37	\$2.37	\$2.36	\$2.35	\$2.37	\$2.31
Durable goods.....	2.60	2.60	2.58	2.57	2.55	2.55	2.52	2.54	2.54	2.54	2.54	2.53	2.52	2.54	2.48
Ordnance and accessories.....	2.90	2.90	2.88	2.88	2.85	2.84	2.82	2.82	2.79	2.80	2.80	2.82	2.81	2.82	2.75
Lumber and wood products, except furniture.....	1.99	2.00	2.00	2.01	2.03	1.99	1.95	1.93	1.94	1.91	1.90	1.89	1.96	1.96	1.91
Furniture and fixtures.....	1.95	1.94	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.88
Stone, clay, and glass products.....	2.41	2.40	2.39	2.39	2.39	2.37	2.37	2.37	2.35	2.36	2.36	2.35	2.37	2.31	
Primary metal industries.....	2.96	2.96	2.95	2.94	2.94	2.94	2.96	2.96	2.95	2.98	2.93	2.92	2.95	2.90	
Fabricated metal products.....	2.56	2.55	2.54	2.52	2.52	2.51	2.51	2.51	2.52	2.51	2.50	2.50	2.52	2.47	
Machinery.....	2.73	2.72	2.71	2.70	2.69	2.67	2.67	2.67	2.67	2.67	2.66	2.66	2.68	2.61	
Electrical equipment and supplies.....	2.44	2.44	2.42	2.41	2.40	2.39	2.40	2.40	2.40	2.40	2.39	2.39	2.40	2.34	
Transportation equipment.....	2.95	2.95	2.95	2.93	2.92	2.87	2.88	2.87	2.86	2.86	2.86	2.86	2.89	2.80	
Instruments and related products.....	2.44	2.44	2.43	2.42	2.42	2.42	2.41	2.42	2.41	2.41	2.41	2.41	2.42	2.37	
Miscellaneous manufacturing industries.....	2.03	2.01	1.98	1.97	1.96	1.95	1.97	1.97	1.96	1.98	1.97	1.98	1.97	1.92	
Nondurable goods.....	2.19	2.20	2.19	2.17	2.16	2.16	2.13	2.15	2.14	2.14	2.13	2.13	2.15	2.09	
Food and kindred products.....	2.28	2.26	2.24	2.20	2.20	2.18	2.21	2.22	2.22	2.23	2.22	2.22	2.22	2.15	
Tobacco manufactures.....	1.95	1.87	1.85	1.78	1.77	1.80	1.99	1.99	2.00	1.97	1.94	1.90	1.88	1.83	
Textile mill products.....	1.69	1.69	1.68	1.65	1.65	1.64	1.64	1.64	1.63	1.64	1.64	1.64	1.65	1.62	
Apparel and related products.....	1.75	1.74	1.73	1.74	1.73	1.69	1.67	1.66	1.66	1.66	1.68	1.67	1.69	1.65	
Paper and allied products.....	2.40	2.39	2.38	2.37	2.37	2.36	2.36	2.35	2.34	2.34	2.33	2.32	2.35	2.29	
Printing, publishing, and allied industries.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	
Chemicals and allied products.....	2.69	2.69	2.67	2.67	2.66	2.65	2.66	2.64	2.62	2.60	2.61	2.62	2.64	2.57	
Petroleum refining and related industries.....	3.13	3.13	3.11	3.07	3.08	3.04	3.05	3.05	3.04	3.08	3.09	3.06	3.07	2.97	
Rubber and miscellaneous plastic products.....	2.42	2.42	2.41	2.38	2.38	2.37	2.38	2.39	2.38	2.38	2.38	2.38	2.39	2.30	
Leather and leather products.....	1.75	1.75	1.76	1.75	1.75	1.72	1.71	1.73	1.73	1.73	1.72	1.70	1.73	1.69	

¹ For comparability of data with those published in issues prior to October 1963, 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 goods total has little effect.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry¹

Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing.....	2.7	2.7	3.1	3.0	3.0	3.1	2.9	2.9	3.0	2.8	2.4	2.6	2.5	2.8	2.8
Durable goods.....	2.8	2.8	3.3	3.2	3.2	3.2	3.0	2.9	3.2	2.9	2.5	2.7	2.6	2.9	2.8
Nondurable goods.....	2.5	2.5	2.8	2.8	2.9	3.0	2.8	3.8	2.8	2.6	2.4	2.6	2.5	2.7	2.7
<i>Durable goods</i>															
Ordnance and accessories.....		1.8	2.5	2.2	2.5	2.6	2.7	2.4	2.4	2.2	1.6	2.1	2.5	2.3	2.2
Ammunition, except for small arms.....		2.1	2.8	2.6	2.9	2.7	2.8	2.8	2.7	2.1	1.6	1.9	2.4	2.5	1.9
Sighting and fire control equipment.....		.8	1.7	1.2	1.1	2.3	2.0	.5	.7	.9	1.2	2.1	2.2	1.6	3.0
Other ordnance and accessories.....		1.5	2.3	1.8	2.2	2.5	2.6	2.1	2.4	2.6	1.6	2.4	2.6	2.3	2.5
Lumber and wood products, except furniture.....		2.8	3.2	3.3	3.6	3.8	4.0	3.7	3.9	3.2	2.9	3.0	2.9	3.4	3.2
Sawmills and planing mills.....		2.7	3.2	3.3	3.5	3.6	3.9	3.8	3.9	3.2	3.0	3.0	2.9	3.3	3.1
Millwork, plywood, and related products.....		3.1	3.6	3.6	3.5	3.9	4.2	4.0	3.9	3.5	3.1	3.2	3.0	3.5	3.3
Wooden containers.....		1.8	2.6	2.6	3.0	3.2	3.7	4.2	3.5	3.5	2.8	2.6	2.2	3.0	2.9
Miscellaneous wood products.....		2.3	2.8	3.0	3.1	3.3	3.2	2.7	3.1	3.1	2.6	2.9	2.7	2.9	2.9
Furniture and fixtures.....		2.6	3.6	3.4	3.5	3.7	3.5	2.9	2.9	2.5	2.2	2.6	2.5	3.0	2.9
Household furniture.....		2.8	4.0	3.6	3.7	3.8	3.4	2.9	2.9	2.6	2.4	2.9	2.7	3.2	3.0
Office furniture.....		1.6	2.5	1.9	2.6	2.8	2.7	2.3	2.9	1.8	1.3	1.8	1.9	2.2	2.1
Partitions; office and store fixtures.....		1.4	1.8	2.2	2.7	3.2	3.4	3.1	2.3	1.8	1.2	1.3	1.7	2.2	3.0
Other furniture and fixtures.....		2.1	3.0	3.2	3.0	3.9	4.1	3.0	2.8	2.5	1.9	2.1	2.0	2.8	2.6
Stone, clay, and glass products.....		2.9	3.3	3.8	4.1	4.0	4.0	4.0	3.9	3.4	3.1	3.1	2.8	3.6	3.4
Flat glass.....		3.5	3.4	4.5	3.2	2.6	1.9	2.2	2.7	1.9	1.6	1.3	1.5	2.4	1.7
Glass and glassware, pressed or blown.....		3.4	3.1	3.2	3.5	3.4	3.5	3.4	3.5	3.6	3.3	3.3	3.4	3.5	
Cement, hydraulic.....		1.9	1.8	1.8	2.0	2.2	2.2	2.4	2.3	2.1	2.3	2.0	1.7	2.1	1.8
Structural clay products.....		2.4	2.8	3.4	3.5	3.3	3.4	3.6	3.5	3.4	2.8	2.6	2.5	3.1	2.8
Pottery and related products.....		1.6	2.3	2.2	2.2	2.4	2.0	2.0	1.9	2.0	1.6	1.8	1.6	2.0	1.8
Concrete, gypsum, and plaster products.....		3.3	4.3	5.6	6.6	6.2	6.5	6.4	6.5	6.2	5.6	4.5	3.7	5.6	5.4
Other stone and mineral products.....		2.7	3.0	3.0	3.4	3.4	3.2	3.0	3.1	3.0	2.5	2.8	2.6	3.0	2.7
Primary metal industries.....		2.9	2.8	2.5	2.4	2.7	2.4	2.7	3.3	3.1	2.8	2.5	2.4	2.7	2.3
Blast furnace and basic steel products.....		1.7	1.4	1.2	1.2	1.8	1.5	2.1	2.7	2.8	2.8	1.8	1.5	1.9	1.4
Iron and steel foundries.....		4.7	4.7	4.2	3.8	3.8	3.5	3.3	4.3	3.9	3.1	3.5	3.6	3.7	2.9
Nonferrous smelting and refining.....		3.1	2.9	2.7	3.1	3.4	3.2	2.9	2.9	2.9	2.9	2.9	2.8	3.0	2.7
Nonferrous rolling, drawing and extruding.....		3.9	4.2	3.9	3.7	3.8	3.8	3.7	4.3	3.7	2.5	3.4	3.3	3.7	3.6
Nonferrous foundries.....		3.2	3.4	3.1	3.1	2.9	2.8	2.8	3.0	2.8	2.7	3.1	3.0	3.0	2.9
Miscellaneous primary metal industries.....		3.6	3.8	3.5	3.5	3.8	2.9	3.3	3.3	3.3	2.7	3.0	3.0	3.3	3.2
Fabricated metal products.....		3.0	3.3	3.2	3.4	3.5	3.3	3.1	3.3	3.0	2.4	2.7	2.6	3.0	2.9
Metal cans.....		3.5	3.0	3.4	2.9	4.1	5.1	4.1	4.2	3.3	3.1	2.3	2.5	3.4	3.5
Cutlery, hand tools, and general hardware.....		2.7	3.4	3.5	2.9	2.8	2.4	2.1	2.8	3.0	2.0	2.6	2.5	2.7	2.5
Heating equipment and plumbing fixtures.....		1.8	2.1	2.2	2.6	2.4	2.4	2.3	2.5	2.0	1.3	1.7	1.8	2.1	1.9
Fabricated structural metal products.....		2.5	3.0	2.8	3.1	3.5	3.4	3.3	3.1	2.7	2.0	2.2	2.1	2.8	2.5
Screw machine products, bolts, etc.....		4.0	3.6	3.4	3.5	4.0	3.6	3.4	3.9	3.8	3.1	3.5	3.0	3.6	4.0
Metal stampings.....		3.8	4.4	4.1	4.5	4.0	3.5	3.6	3.9	3.7	3.0	3.3	3.2	3.7	3.5
Coating, engraving, and allied services.....		3.7	3.6	3.8	4.1	4.2	3.6	3.3	3.6	3.3	2.6	3.1	2.8	3.4	3.3
Miscellaneous fabricated wire products.....		2.7	3.1	3.3	3.3	3.3	3.2	2.8	2.9	2.8	2.2	2.8	2.8	2.9	3.0
Miscellaneous fabricated metal products.....		2.2	2.7	2.5	2.8	3.0	2.6	2.4	2.5	2.7	2.2	2.6	2.3	2.6	2.6
Machinery.....		3.4	3.8	3.4	3.2	3.3	3.2	3.2	3.4	3.1	2.8	3.2	3.0	3.2	3.1
Engines and turbines.....		2.3	3.2	2.7	2.0	3.0	2.1	2.4	2.6	2.2	1.8	2.7	2.6	2.5	2.2
Farm machinery and equipment.....		2.9	2.5	1.8	2.1	2.2	1.9	2.1	2.1	2.2	2.6	2.5	2.2	2.1	2.1
Construction and related machinery.....		2.8	3.1	3.0	2.8	3.0	3.0	2.8	3.1	2.7	2.2	2.4	2.3	2.7	2.6
Metalworking machinery and equipment.....		5.6	5.6	5.0	4.6	4.4	4.6	4.9	5.2	4.9	4.6	5.1	4.7	4.8	4.7
Special industry machinery.....		3.5	4.2	3.6	3.4	3.6	3.3	3.5	3.7	3.4	3.1	3.5	3.5	3.5	3.5
General industrial machinery.....		3.0	3.5	3.1	3.1	3.3	3.0	2.9	2.9	2.4	2.0	2.4	2.3	2.8	2.8
Office, computing, and accounting machines.....		1.2	1.9	2.2	2.1	2.2	1.8	1.5	1.7	1.6	1.8	1.7	1.5	1.7	1.5
Service industry machinery.....		1.8	2.1	1.8	1.8	2.2	2.5	2.2	2.5	2.3	1.7	2.3	1.8	2.1	2.0
Miscellaneous machinery.....		4.2	4.7	4.3	4.3	4.0	4.0	4.0	4.4	4.2	3.5	4.1	3.9	4.1	4.1
Electrical equipment and supplies.....		1.9	2.3	2.1	2.2	2.3	2.1	2.0	2.2	1.9	1.5	1.9	2.0	2.0	2.2
Electric distribution equipment.....		1.9	2.9	2.4	2.4	2.7	2.5	2.1	2.4	1.9	1.5	1.8	1.8	2.2	2.0
Electrical industrial apparatus.....		2.6	2.7	2.4	2.4	2.7	2.3	2.5	2.4	2.3	1.9	2.2	2.4	2.4	2.2
Household appliances.....		1.3	2.3	2.1	2.2	2.6	2.4	2.7	2.7	2.0	1.5	2.2	1.6	2.1	1.9
Electric lighting and wiring equipment.....		1.9	2.4	2.2	2.1	2.5	2.1	2.0	2.1	1.9	1.5	1.7	1.6	2.0	1.9
Radio and TV receiving sets.....		1.4	1.7	1.6	2.1	2.1	2.0	2.0	2.0	1.7	.8	1.4	1.4	1.7	1.9
Communication equipment.....		1.9	2.0	1.8	1.8	2.0	1.8	1.5	1.8	1.6	1.3	1.9	2.1	1.8	2.5
Electronic components and accessories.....		1.6	1.7	2.1	2.0	1.9	1.7	1.7	1.8	1.8	1.6	1.9	1.9	1.8	2.0
Miscellaneous electrical equipment and supplies.....		3.3	3.6	2.8	3.0	2.5	1.9	2.2	3.0	2.4	1.6	1.8	2.7	2.6	3.2
Transportation equipment.....		3.5	4.6	4.5	4.2	3.7	3.1	3.3	3.7	3.5	2.7	3.1	3.1	3.6	3.5
Motor vehicles and equipment.....		4.6	6.3	6.1	5.4	4.2	3.5	4.0	4.5	4.3	3.3	3.7	3.3	4.4	4.1
Aircraft and parts.....		2.3	2.7	2.6	2.8	2.9	2.6	2.5	2.5	2.2	1.9	2.3	2.7	2.6	2.9
Ship and boat building and repairing.....		2.7	3.0	3.5	3.2	3.6	2.9	2.5	2.4	3.3	3.5	2.8	2.9	3.4	3.2
Railroad equipment.....		2.0	2.1	2.0	1.8	2.4	2.0	2.5	2.3	1.9	2.0	2.3	1.6	2.1	2.0
Other transportation equipment.....		2.5	3.0	2.5	3.2	4.0	3.2	3.8	3.7	3.5	2.7	2.8	2.6	3.1	2.5
Instruments and related products.....		2.1	2.5	2.5	2.7	2.7	2.3	2.2	2.4	2.3	1.9	2.3	2.2	2.3	2.4
Engineering and scientific instruments.....		2.6	3.0	2.9	2.6	2.8	2.3	2.1	2.5	2.2	1.8	2.5	2.4	2.5	2.6
Mechanical measuring and control devices.....		2.1	2.3	2.7	2.7	2.6	2.5	2.5	2.5	2.3	1.9	2.1	1.9	2.3	2.2
Optical and ophthalmic goods.....		2.2	2.7	2.5	2.8	2.7	2.1	2.3	2.5	2.4	2.1	2.5	2.3	2.4	2.2
Surgical, medical, and dental equipment.....		1.7	2.0	2.1	2.1	2.3	2.1	1.9	2.4	2.0	1.6	2.1	1.9	2.0	2.3
Photographic equipment and supplies.....		2.2	2.8	2.9	3.2	3.1	2.0	2.4	2.8	2.3	2.1	2.9	3.2	2.7	2.9
Watches and clocks.....		2.0	2.2	1.7	2.2	2.3	2.2	1.9	1.9	1.9	1.4	1.7	1.7	1.9	1.9

See footnotes at end of table.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry¹—Continued
 Revised series; see box, p. 470.

Industry	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Manufacturing—Continued															
<i>Durable goods—Continued</i>															
Miscellaneous manufacturing industries.....	1.9	2.4	2.5	2.7	2.6	2.2	2.2	1.9	2.1	2.0	1.9	2.2	2.1	2.2	2.3
Jewelry, silverware, and plated ware.....	2.1	4.4	4.1	4.0	3.4	2.7	2.4	2.7	2.4	2.7	2.8	2.4	2.7	2.6	3.0
Toys, amusement and sporting goods.....	1.2	1.3	2.0	2.4	2.3	2.1	1.6	1.6	1.6	1.5	1.7	1.7	1.7	1.8	1.9
Pens, pencils, office and art materials.....	1.5	2.6	2.0	2.5	2.6	2.2	1.8	2.1	1.7	1.4	1.8	2.0	2.1	2.1	2.0
Costume jewelry, buttons, and notions.....	2.0	2.6	2.5	2.8	2.6	2.2	2.0	2.4	2.1	2.0	2.3	2.3	2.3	2.3	2.2
Other manufacturing industries.....	2.2	2.4	2.6	2.7	2.6	2.1	2.0	2.3	2.2	2.0	2.5	2.3	2.3	2.3	2.5
<i>Nondurable goods</i>															
Food and kindred products.....	3.3	3.4	3.5	3.5	3.8	3.5	3.8	3.7	3.4	2.9	3.1	3.0	3.4	3.4	3.4
Meat products.....	4.1	4.9	4.9	4.0	4.5	3.5	3.8	3.9	3.6	2.9	3.2	2.9	3.8	3.8	3.6
Dairy products.....	2.9	2.7	2.5	2.7	3.2	3.2	3.6	3.5	3.5	3.2	3.2	3.0	3.1	3.1	3.4
Canned and preserved food, except meats.....	1.8	2.0	1.7	2.4	3.2	2.8	2.5	2.3	2.3	1.9	2.3	2.2	2.4	2.4	2.6
Grain mill products.....	6.0	5.5	6.2	7.5	7.2	6.6	7.5	6.9	6.3	4.7	5.4	5.6	6.3	6.3	6.3
Bakery products.....	2.8	2.9	2.9	3.0	3.3	3.2	3.5	3.4	3.2	2.9	2.8	2.7	3.0	3.1	3.1
Sugar.....	4.0	3.0	3.3	4.4	3.9	3.5	3.8	3.5	4.4	3.9	3.3	3.1	3.6	3.7	3.7
Confectionery and related products.....	2.3	2.6	2.7	2.9	3.4	2.5	2.1	2.6	1.8	1.7	2.3	2.3	2.5	2.5	2.5
Beverages.....	2.1	2.6	2.9	3.1	3.3	3.6	4.4	4.1	3.2	2.9	2.8	2.3	3.1	2.8	2.8
Miscellaneous food and kindred products.....	4.2	3.9	4.2	4.1	4.0	4.1	4.0	3.8	3.8	3.4	3.6	4.0	3.9	3.9	3.9
Tobacco manufactures.....	.6	1.3	1.4	1.1	1.4	1.4	1.4	1.5	1.0	.3	.8	.7	1.1	1.0	1.0
Cigarettes.....	.5	1.2	1.6	.8	1.6	1.9	1.8	2.0	1.3	.4	1.0	.5	1.2	.9	.9
Cigars.....	.4	1.5	1.7	1.8	1.4	1.3	1.1	1.2	.9	.1	.8	1.1	1.1	.9	.9
Textile mill products.....	3.1	3.5	3.7	3.6	3.3	3.3	3.1	3.4	3.2	2.8	3.1	3.0	3.2	3.2	3.2
Cotton broad woven fabrics.....	4.0	4.0	4.3	4.0	3.4	3.4	2.9	3.1	3.2	3.0	3.0	2.9	3.4	3.4	3.2
Silk and synthetic broad woven fabrics.....	4.4	4.9	5.2	4.7	4.4	4.3	3.9	4.4	4.4	3.7	3.9	3.9	4.3	4.3	4.3
Weaving and finishing broad woolsens.....	3.1	3.1	2.4	2.9	3.4	3.3	3.8	4.0	3.7	3.0	3.6	3.7	3.4	4.2	4.2
Narrow fabrics and smallwares.....	2.6	3.2	3.4	3.3	2.7	2.7	3.2	3.1	3.4	2.9	3.0	3.0	3.1	3.3	3.2
Knitting.....	1.5	1.7	2.2	2.4	2.3	2.4	2.4	2.4	2.0	1.6	1.8	1.7	2.0	2.2	2.2
Finishing textiles, except wool and knit.....	3.5	4.6	4.7	4.3	3.9	3.7	3.3	4.5	4.1	3.8	4.6	4.2	4.1	4.2	4.2
Floor covering.....	3.8	5.0	5.0	5.1	5.4	4.5	4.1	4.2	3.5	3.6	4.8	4.9	4.4	4.1	4.2
Yarn and thread.....	3.0	3.2	3.6	3.4	3.0	3.1	3.1	3.5	3.2	2.9	3.1	2.8	3.1	3.2	3.2
Miscellaneous textile goods.....	3.2	3.9	3.9	4.0	3.3	3.7	3.5	4.2	3.3	2.8	3.3	3.4	3.5	3.5	3.5
Apparel and related products.....	1.0	1.2	1.3	1.4	1.4	1.5	1.3	1.3	1.3	1.1	1.4	1.3	1.3	1.3	1.3
Men's and boys' suits and coats.....	1.0	.9	.9	1.0	1.0	1.1	.8	1.0	1.1	.9	1.3	1.3	1.0	1.2	1.2
Men's and boys' furnishings.....	.7	1.0	.9	1.0	1.3	1.5	1.3	1.3	1.2	.9	1.1	1.0	1.1	1.2	1.2
Women's, misses', and juniors' outerwear.....	1.1	1.0	1.1	1.3	1.3	1.4	1.4	1.3	1.4	1.4	1.8	1.5	1.3	1.4	1.4
Women's and children's undergarments.....	.9	1.4	1.8	2.0	2.0	1.6	1.4	1.2	1.3	1.0	1.4	1.1	1.4	1.3	1.3
Hats, caps, and millinery.....	.9	1.2	1.0	1.4	1.6	1.6	1.4	1.0	1.2	1.0	2.0	1.7	1.4	1.5	1.5
Girls' and children's outerwear.....	1.0	.9	1.1	1.2	1.2	1.5	1.5	1.5	1.3	.7	1.2	1.2	1.2	1.2	1.2
Fur goods and miscellaneous apparel.....	.7	1.2	1.6	1.6	1.2	1.2	1.0	.9	1.0	.7	.9	.8	1.1	1.2	1.2
Miscellaneous fabricated textile products.....	1.7	2.2	2.1	2.1	2.2	1.9	1.5	1.8	1.8	1.5	1.5	1.4	1.8	1.7	1.7
Paper and allied products.....	4.2	4.5	4.6	4.8	5.0	4.8	4.8	4.6	4.3	3.8	4.3	4.1	4.5	4.4	4.4
Paper and pulp.....	5.4	5.3	5.5	5.5	5.8	5.6	5.9	5.4	5.3	4.8	5.4	5.2	5.4	5.2	5.2
Paperboard.....	5.6	5.9	5.9	6.2	6.3	6.4	6.8	6.3	5.5	5.0	5.9	5.6	5.9	5.9	5.9
Converted paper and paperboard products.....	3.0	3.6	3.3	3.4	3.8	3.6	3.2	3.2	2.9	2.6	2.9	2.9	3.2	3.0	3.0
Paperboard containers and boxes.....	3.2	3.7	3.9	4.4	4.5	4.1	3.8	4.1	3.6	3.1	3.3	3.2	3.7	3.9	3.9
Printing, publishing, and allied industries.....	2.5	3.2	2.7	2.9	3.1	2.8	2.6	2.7	2.8	2.4	2.8	2.5	2.7	2.8	2.8
Newspaper publishing and printing.....	1.8	3.2	2.4	2.6	2.4	2.2	2.8	2.6	2.7	2.0	2.0	1.8	2.3	2.5	2.5
Periodical publishing and printing.....	3.3	3.3	3.7	4.1	3.9	3.3	3.3	3.8	2.7	3.0	4.0	3.2	3.3	3.1	3.1
Books.....	3.2	3.6	2.7	3.3	4.4	4.5	3.9	3.5	3.9	3.1	3.6	2.8	3.5	3.4	3.4
Commercial printing.....	2.9	3.3	2.9	3.1	3.5	2.9	2.7	2.8	2.9	2.7	3.2	2.8	3.0	3.0	3.0
Bookbinding and related industries.....	2.2	2.5	2.4	2.3	2.4	2.1	2.1	2.4	2.2	2.1	2.2	1.8	2.2	2.4	2.4
Other publishing and printing industries.....	2.3	3.0	2.4	2.5	2.9	2.9	2.4	2.4	2.1	1.9	2.5	2.7	2.5	2.6	2.6
Chemicals and allied products.....	2.4	2.4	2.4	2.5	2.6	2.5	2.6	2.6	2.6	3.1	2.5	2.4	2.5	2.5	2.5
Industrial chemicals.....	2.5	2.4	2.4	2.5	2.4	2.6	2.6	2.5	2.7	2.8	2.3	2.4	2.4	2.4	2.5
Plastics and synthetics, except glass.....	2.1	2.2	2.1	2.2	2.3	2.3	2.5	2.7	2.1	2.6	2.0	2.0	2.3	2.3	2.3
Drugs.....	2.2	1.9	2.0	2.2	1.9	1.8	2.2	2.2	2.0	2.0	2.6	2.5	2.2	2.4	2.4
Soap, cleaners, and toilet goods.....	2.1	2.6	2.5	2.7	3.0	2.7	2.3	2.4	2.1	2.2	2.4	2.5	2.5	2.7	2.7
Paints, varnishes, and allied products.....	1.8	1.9	1.9	2.4	2.4	2.6	2.9	2.8	3.1	2.0	2.0	1.7	2.3	2.1	2.1
Agricultural chemicals.....	3.9	3.7	3.5	3.8	3.8	2.9	3.0	3.6	6.8	9.6	5.6	3.7	4.7	4.1	4.1
Other chemical products.....	2.8	2.8	2.8	3.0	3.1	2.9	2.8	2.6	2.2	2.4	2.5	2.7	2.6	2.6	2.6
Petroleum refining and related industries.....	1.8	2.1	2.3	2.5	2.7	2.4	2.9	2.7	2.6	2.5	1.7	1.6	2.3	2.3	2.3
Petroleum refining.....	1.6	1.8	1.9	1.7	2.0	1.4	2.0	1.9	1.9	2.1	1.5	1.4	1.8	1.6	1.6
Other petroleum and coal products.....	2.8	3.3	3.6	5.4	5.2	6.1	6.2	5.6	5.1	4.0	2.5	2.6	4.5	4.8	4.8
Rubber and miscellaneous plastic products.....	2.7	3.2	3.2	3.3	3.5	3.2	2.9	2.9	2.5	2.4	2.9	2.9	3.0	3.1	3.1
Tires and inner tubes.....	2.2	3.6	3.7	3.5	3.7	3.3	3.2	2.8	2.1	2.3	2.8	2.9	3.0	3.3	3.3
Other rubber products.....	2.7	2.8	2.8	2.9	3.0	2.5	2.3	2.6	2.3	2.2	2.5	2.6	2.6	2.9	2.9
Miscellaneous plastic products.....	3.1	3.4	3.3	3.5	3.8	3.8	3.5	3.3	3.1	2.5	3.4	3.2	3.3	3.2	3.2
Leather and leather products.....	1.6	1.8	1.4	1.7	1.6	1.7	1.3	1.4	1.1	.9	1.3	1.5	1.4	1.4	1.4
Leather tanning and finishing.....	2.5	3.2	2.9	3.2	3.0	2.7	2.6	3.2	2.8	2.4	2.4	2.5	2.8	2.6	2.6
Footwear, except rubber.....	1.6	1.6	1.1	1.2	1.3	1.5	1.2	1.2	.9	.7	1.2	1.3	1.2	1.1	1.1
Other leather products.....	1.3	1.9	1.8	2.4	1.9	2.0	1.3	1.4	1.0	.9	1.4	1.7	1.6	1.8	1.8

¹For comparability of data with those published in issues prior to October 1963, 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.

²Preliminary.

TABLE C-5. Indexes of aggregate weekly man-hours and payrolls in industrial and construction activities¹

Revised series; see box p. 470.

[1957-59=100]

Activity	1964		1963										Annual average		
	Feb. ²	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
Man-hours															
Total.....	97.8	95.4	101.2	103.0	106.5	106.7	105.4	103.9	104.4	101.6	98.0	95.8	94.1	101.3	99.8
Mining.....	77.6	78.7	81.5	81.7	83.8	84.3	84.7	82.6	86.7	84.2	81.3	77.4	78.2	82.1	83.6
Contract construction.....	87.2	80.1	95.0	107.8	121.8	121.7	125.6	121.9	116.1	107.6	97.4	83.3	76.5	104.8	99.3
Manufacturing.....	100.8	99.1	103.3	103.2	104.9	105.0	102.8	101.7	103.1	101.3	99.0	99.0	98.1	101.6	100.6
Durable goods.....															
Ordnance and accessories.....	102.4	101.2	105.0	104.5	105.3	104.9	101.1	102.4	104.7	103.1	100.5	99.6	98.9	102.4	100.3
Lumber and wood products, except furniture.....	143.8	145.9	150.5	148.5	150.8	150.2	147.6	146.5	148.8	147.8	144.8	149.6	151.8	149.2	150.3
Furniture and fixtures.....	88.0	85.9	93.0	94.6	98.9	100.4	99.2	95.6	95.3	94.9	90.2	87.8	87.1	93.7	93.3
Stone, clay, and glass products.....	107.2	102.6	111.1	110.2	111.6	111.6	110.8	105.3	106.0	102.6	101.8	102.7	102.4	106.6	104.8
Primary metal industries.....	96.7	94.6	100.8	106.4	108.5	109.1	110.6	109.8	109.3	106.4	101.4	94.9	91.2	103.4	100.3
Fabricated metal products.....	100.1	98.7	98.4	95.6	95.2	97.2	97.3	101.0	105.2	102.3	100.2	95.8	94.0	97.9	95.3
Machinery.....	103.8	103.2	107.2	106.7	108.1	107.9	104.7	102.7	102.7	103.4	99.8	98.9	98.5	103.6	100.6
Electrical equipment and supplies.....	107.4	106.6	107.8	104.4	104.3	104.4	102.4	102.3	104.9	103.8	103.0	103.5	102.7	103.8	101.9
Transportation equipment.....	113.4	113.0	116.7	115.6	117.1	116.8	113.5	112.6	113.7	111.8	111.8	113.4	114.5	114.7	115.8
Instruments and related products.....	95.6	96.2	100.2	99.2	98.2	94.3	80.3	92.4	95.0	94.7	92.2	92.2	92.0	93.7	88.7
Miscellaneous manufacturing industries.....	105.5	103.7	107.8	108.0	108.1	108.2	106.9	105.4	106.9	104.7	103.5	104.2	103.8	105.9	103.2
Leather and leather products.....	98.9	92.8	101.8	109.4	112.1	111.2	107.8	99.9	102.6	100.7	97.2	97.2	95.0	102.3	102.1
Nondurable goods.....															
Food and kindred products.....	98.7	96.3	101.1	101.6	104.4	105.1	104.9	100.8	101.0	99.0	97.0	98.3	97.0	100.6	101.1
Tobacco manufactures.....	84.0	86.3	91.7	94.8	101.8	105.8	104.2	97.5	93.4	88.7	85.5	86.4	85.1	93.5	95.3
Textile mill products.....	78.4	87.3	100.1	103.4	113.5	114.7	107.7	74.6	78.4	76.5	70.9	78.3	82.0	90.9	93.2
Apparel and related products.....	96.2	93.1	96.9	97.9	98.1	96.3	96.6	94.4	97.1	95.5	93.5	94.4	93.4	95.6	97.4
Paper and allied products.....	112.5	100.8	108.1	109.0	112.4	112.2	114.1	107.7	108.5	108.9	105.9	110.9	108.2	109.1	106.9
Printing, publishing, and allied industries.....	104.7	104.3	107.8	107.4	108.6	109.1	108.9	106.7	107.8	105.1	103.3	104.5	103.3	106.4	105.5
Chemicals and allied products.....	104.3	103.7	107.6	105.1	105.8	105.9	104.8	103.5	104.4	104.1	102.9	102.3	100.8	104.0	104.7
Petroleum refining and related industries.....	105.0	103.1	104.7	104.3	105.0	105.4	105.3	105.2	105.9	106.4	107.7	103.9	102.8	104.9	103.5
Rubber and miscellaneous plastic products.....	78.0	77.3	79.1	80.8	82.6	84.5	84.6	85.5	84.9	83.4	83.0	78.9	78.4	82.2	86.1
Leather and leather products.....	111.4	111.6	115.7	114.9	114.5	114.6	111.9	109.2	114.3	112.9	111.3	112.4	111.8	113.1	113.4
Miscellaneous manufacturing industries.....	96.7	93.1	98.1	94.1	95.6	95.4	99.1	96.3	96.2	90.2	87.3	93.6	95.6	94.8	98.1
Payrolls															
Mining.....	-----	88.4	91.4	90.5	92.8	94.0	93.1	90.2	95.9	92.1	89.2	85.0	86.2	90.6	90.5
Contract construction.....	-----	101.8	119.2	131.5	149.7	149.5	152.2	146.8	138.9	128.3	115.5	100.2	92.4	127.0	116.4
Manufacturing.....	-----	119.4	117.7	122.4	121.5	122.6	122.6	118.2	118.1	119.9	117.4	114.4	114.1	112.6	113.7

¹ For comparability of data with those published in issues prior to October 1963, 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

Revised series; see box p. 470.

[In current and 1957-59 dollars]¹

Item	1964		1963										Annual average		
	Jan. ²	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1963	1962
<i>Manufacturing</i>															
Gross average weekly earnings:															
Current dollars.....	\$99.90	\$102.41	\$100.85	\$100.53	\$100.53	\$98.42	\$99.23	\$100.37	\$99.23	\$97.36	\$98.09	\$97.20	\$97.44	\$99.38	\$96.56
1957-59 dollars.....	92.76	95.18	93.90	93.78	93.87	91.90	92.65	94.16	93.44	91.68	92.36	91.61	91.92	93.14	91.61
Spendable average weekly earnings:															
Worker with no dependents:															
Current dollars.....	81.98	81.95	80.75	80.51	80.51	78.89	79.51	80.38	79.51	78.04	78.63	77.92	78.11	79.63	77.86
1957-59 dollars.....	76.12	76.16	75.19	75.10	75.17	73.66	74.24	75.40	74.87	73.48	74.04	73.44	73.69	74.63	73.87
Worker with 3 dependents:															
Current dollars.....	89.65	89.86	88.58	88.31	88.31	86.58	87.25	88.18	87.25	85.72	86.31	85.58	85.78	87.37	85.53
1957-59 dollars.....	83.24	83.51	82.48	82.38	82.46	80.84	81.47	82.72	82.16	80.72	81.27	80.66	80.92	81.88	81.15

¹ For comparability of data with those published in issues prior to October 1963, 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 com-

puted 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 Index¹—U.S. city average for urban wage earners and clerical workers (including single workers) all items, groups, subgroups, and special groups of items
[1957-59=100 unless otherwise specified]

Group	1964		1964	1963												Annual average	
	February		Jan.	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962	
	Old Series	New Series	New series ²														
All items.....	107.6	107.6	107.7	107.6	107.4	107.2	107.1	107.1	107.1	106.6	106.2	106.2	106.2	106.1	106.7	105.4	
All items (1947-49=100).....	132.0	132.0	132.1	132.0	131.8	131.5	131.4	131.4	131.4	130.8	130.3	130.3	130.3	130.2	131.0	129.3	
Food.....	105.8	106.0	105.8	105.4	105.1	104.9	105.4	106.0	106.2	105.0	104.2	104.3	104.6	105.0	105.1	103.6	
Food at home.....	104.0	104.4	104.2	103.7	103.4	103.2	103.8	104.5	104.8	103.4	102.5	102.6	103.0	103.5	103.5	102.2	
Cereals and bakery products.....	109.1	109.0	109.1	109.0	109.1	109.1	109.1	109.1	109.2	109.2	109.3	109.2	109.1	109.2	109.1	107.6	
Meats, poultry, and fish.....	98.2	98.5	98.5	99.2	99.7	100.4	101.5	101.4	100.2	98.4	98.0	98.3	100.7	102.1	100.2	101.7	
Dairy products.....	104.7	104.8	105.0	105.0	104.8	104.6	104.3	104.2	103.3	102.8	102.8	102.9	103.5	103.6	103.8	104.1	
Fruits and vegetables.....	111.2	113.9	112.4	109.8	105.2	106.3	108.1	114.2	118.7	115.6	113.9	112.0	109.6	109.4	111.0	105.0	
Other foods at home ³	102.3	101.7	101.8	100.2	99.5	99.6	99.5	98.0	97.8	96.9	94.5	96.2	96.7	97.1	97.8	96.1	
Food away from home.....	114.6	114.4	114.5	114.3	114.0	114.0	113.6	113.3	113.1	113.0	112.9	112.8	112.6	112.5	113.2	110.7	
Housing.....	106.9	106.9	106.9	106.9	106.6	106.3	106.2	106.0	106.0	105.9	105.7	105.8	105.7	105.4	106.0	104.8	
Shelter ⁴	103.3	103.3	103.1	103.0	102.7	102.3	102.1	102.0	102.0	101.8	101.7	101.7	101.6	101.5	101.6	101.5	
Rent.....	107.4	107.5	107.3	107.3	107.2	107.1	107.0	106.8	106.7	106.6	106.6	106.5	106.4	106.4	106.8	105.7	
Homeownership ⁵	108.8	108.5	108.4	108.0	107.4	107.2	107.1	107.1	106.8	106.7	106.6	106.5	106.4	106.1	107.0	105.6	
Fuel and utilities ⁶	106.6	106.6	106.6	105.8	105.4	104.5	103.7	102.6	102.3	102.1	102.4	102.4	104.8	104.8	104.0	102.1	
Fuel oil and coal ⁷	104.8	106.2	108.1	108.1	108.0	108.1	108.0	107.2	108.1	108.1	107.4	107.5	108.0	108.0	107.9	107.9	
Gas and electricity.....	106.6	106.6	106.6	105.8	105.4	104.5	103.7	102.6	102.3	102.1	102.4	102.4	104.8	104.8	104.0	102.1	
Household furnishings and operation ⁸	111.3	102.7	102.7	102.9	102.7	102.6	102.7	102.5	102.4	102.4	102.3	102.3	102.3	102.1	102.4	101.5	
Housefurnishings.....	98.6	98.6	98.6	98.8	98.8	98.6	98.6	98.3	98.5	98.5	98.4	98.5	98.6	98.3	98.5	98.9	
Household operation.....	111.3	110.9	110.5	110.7	110.5	110.7	110.6	110.3	110.2	110.0	109.9	109.7	109.3	110.2	107.4		
Apparel and upkeep⁹.....	104.2	105.1	105.0	106.1	106.1	105.9	105.4	104.7	104.5	104.3	104.4	104.4	104.2	104.0	104.8	103.6	
Apparel.....	105.5	105.0	105.2	106.2	106.1	105.7	105.2	104.7	104.5	104.4	104.2	104.1	103.9	103.7	104.7	103.3	
Men's and boys'.....	100.9	101.8	101.4	103.3	103.5	103.5	102.5	101.2	101.2	101.2	101.1	101.1	101.1	100.7	101.7	100.9	
Women's and girls'.....	111.2	110.7	110.9	111.2	111.1	110.9	110.7	110.6	110.5	110.6	110.3	110.2	110.0	109.9	110.5	109.3	
Footwear.....	101.4	101.4	101.4	102.1	102.0	101.8	101.4	101.1	101.1	101.0	100.9	100.9	101.1	100.9	101.2	100.6	
Other apparel ¹⁰	108.3	108.6	109.4	108.9	109.1	109.0	107.9	108.3	107.8	107.4	107.4	107.0	107.0	106.8	107.8	107.2	
Private.....	106.6	107.2	108.0	107.5	107.7	106.5	106.9	106.4	106.1	106.0	105.5	105.6	105.3	105.4	106.8	105.9	
Public.....	119.4	118.4	118.8	118.3	117.6	117.6	117.1	117.1	116.6	116.6	116.5	116.5	116.4	116.3	116.9	115.4	
Health and recreation.....	118.5	118.5	118.2	112.7	112.4	112.3	112.1	111.9	111.7	111.4	110.7	110.2	110.1	111.4	111.4	109.4	
Medical care ¹¹	108.8	108.4	108.5	108.8	108.4	108.4	108.2	108.0	108.0	107.8	107.8	107.6	107.3	107.3	107.9	106.5	
Personal care.....	113.8	113.3	113.1	113.1	112.8	112.7	112.3	112.1	111.5	110.9	110.7	111.0	111.0	111.0	111.5	109.6	
Reading and recreation.....	108.3	108.4	108.3	108.3	108.3	108.2	108.0	108.0	108.0	107.6	106.0	105.8	105.7	105.7	107.1	105.3	
Other goods and services ¹²	107.5	107.5	107.6	107.5	107.4	107.2	107.1	107.2	107.1	106.6	106.1	106.1	106.1	106.1	106.7	105.4	
All items less shelter.....	108.3	108.4	108.4	108.5	108.4	108.1	107.8	107.6	107.5	107.3	107.0	107.0	106.8	106.6	107.4	106.1	
All items less food.....	104.8	104.9	104.9	104.9	104.7	104.5	104.4	104.6	104.6	104.0	103.5	103.6	103.6	103.6	104.1	103.2	
Commodities¹³.....	105.4	105.6	105.7	105.6	105.4	105.2	105.3	105.5	105.5	104.8	104.2	104.2	104.4	104.5	104.9	103.6	
Nondurables ¹⁴	105.1	105.5	105.6	105.9	105.8	105.6	105.2	105.0	104.8	104.5	104.2	104.3	104.2	104.1	104.8	103.8	
Nondurables less food.....	104.0	104.2	104.2	104.4	104.5	104.3	104.6	103.8	103.7	103.5	103.6	103.4	103.2	104.0	103.0		
Apparel commodities.....	102.7	102.9	102.8	104.2	104.3	104.2	103.4	102.5	102.4	102.7	102.2	102.3	102.1	101.8	102.8	101.8	
Nondurables less food and apparel.....	105.8	106.0	106.5	106.2	106.0	105.8	105.5	105.7	105.5	105.0	104.7	104.7	104.7	104.6	105.3	104.2	
Durables ¹⁵	102.1	102.2	102.3	103.0	103.1	102.7	102.2	102.1	102.1	102.0	101.8	101.8	101.5	101.2	102.1	101.8	
New cars.....	117.1	119.0	119.6	120.3	121.0	120.0	120.1	119.0	118.1	117.7	115.7	115.4	113.3	110.7	116.6	115.2	
Used cars.....	98.7	98.6	98.7	98.9	98.8	98.7	98.6	98.5	98.5	98.4	98.3	98.3	98.4	98.5	98.5	98.8	
Household durables ¹⁶	104.1	104.8	104.5	104.5	104.2	103.7	103.6	103.5	103.3	103.0	103.1	102.9	102.7	103.5	102.8		
Commodities less food¹³.....	114.3	114.2	114.1	113.9	113.7	113.5	113.3	113.1	112.9	112.6	112.5	112.5	112.3	112.1	113.0	110.9	
Services less rent ¹⁷	116.0	116.0	115.8	115.8	115.5	115.3	115.1	114.8	114.6	114.4	114.0	114.0	113.7	113.4	114.5	112.1	
Household services (Dec. 1963=100).....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Transportation services.....	114.8	114.2	114.1	113.7	113.3	113.1	112.9	112.7	112.4	112.3	112.2	112.0	111.8	111.4	112.4	111.2	
Medical care services ¹¹	121.9	121.7	121.7	121.3	121.3	121.1	120.9	120.8	120.6	120.5	119.9	119.6	119.3	119.1	120.3	116.8	
Other services ¹⁹ (Dec. 1963=100).....	100.3	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	100.0	

¹ The CPI measures the average change in prices of goods and services purchased by urban wage-earner and clerical-worker families.

² Beginning January 1964, the Consumer Price Index structure has been revised to reflect buying patterns of wage earners and clerical workers in the 1960's. The "new series" indexes shown here are based on expenditures of all urban wage-earner and clerical-worker consumers, including single workers living alone, as well as families of two or more persons. Separate indexes for families only (excluding single persons) for the U.S. city average are available on request. The "old series" indexes will be discontinued after June 1964.

³ Includes eggs, fats and oils, sugar and sweets, nonalcoholic beverages, and prepared and partially prepared foods.

⁴ Also includes hotel and motel room rates not shown separately.

⁵ Includes home purchase, mortgage interest, taxes, insurance, and maintenance and repairs.

⁶ Also includes telephone, water, and sewerage service not shown separately.

⁷ Called "Solid and petroleum fuels" prior to 1964.

⁸ Includes housefurnishings and housekeeping supplies and services, but excludes telephone, water, and laundry and dry cleaning of apparel, included under household operation in the old series.

⁹ Includes dry cleaning and laundry of apparel, formerly included in household operation.

¹⁰ Includes infants' wear, sewing materials, jewelry, and miscellaneous apparel. Not shown separately in the new series.

¹¹ Corrected indexes for January through December 1963.

¹² Includes tobacco, alcoholic beverages, and funeral, legal, and bank service charges.

¹³ Recalculated group—indexes prior to January 1964 have been recomputed.

¹⁴ Includes foods, paint, furnace filters, shrubbery, fuel oil, coal, household textiles, housekeeping supplies, apparel, gasoline and motor oil, drugs and pharmaceuticals, toilet goods, nondurable recreational goods, newspapers, magazines, books, tobacco, and alcoholic beverages.

¹⁵ Includes home purchase, which was classified under services prior to 1964, building materials, furniture and bedding, floor coverings, household appliances, dinnerware, tableware, cleaning equipment, power tools, lamps, venetian blinds, hardware, automobiles, tires, radios, television sets, tape recorders, durable toys, and sports equipment.

¹⁶ Called "Durable less cars" prior to 1964. Does not include auto parts, durable toys, and sports equipment.

¹⁷ Excludes home purchase costs which were classified under this heading prior to 1964.

¹⁸ Includes rent, mortgage interest, taxes and insurance on real property, home maintenance and repair services, gas, electricity, telephone, water, sewerage service, household help, postage, laundry and dry cleaning, furniture and apparel repair and upkeep, moving, auto repairs, auto insurance, registration and license fees, parking and garage rent, local transit, taxicabs, airplane, train, and bus fares, professional medical services, hospital services, health insurance, barber and beauty shop services, movies, fees for sports, television repairs, and funeral, bank, and legal services.

¹⁹ Includes the services components of apparel, personal care, reading and recreation, and other goods and services. Not comparable with series published prior to 1964.

TABLE D-2. Consumer Price Index—U.S. city average and selected cities for urban wage earners and clerical workers (including single workers)¹

[1957-59=100 unless otherwise specified]

City ²	1964 February		1964 January	1963												Annual Average		February '64 (1947-49=100)	
	Old series	New series	New series	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	April	Mar.	Feb.	1963	1962	Old series	New series	
All Items																			
U.S. city average ³	107.6	107.6	107.7	107.6	107.4	107.2	107.1	107.1	107.1	106.6	106.2	106.2	106.2	106.1	106.7	105.4	132.0	132.0	
Atlanta, Ga.....	(4)	(4)	(4)	105.8	(4)	(4)	105.2	(4)	(4)	104.9	(4)	(4)	104.9	(4)	105.1	104.1	(4)	(4)	
Baltimore, Md.....	(4)	(4)	(4)	107.5	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.2	(4)	106.8	105.2	(4)	(4)	
Boston, Mass.....	(4)	(4)	110.1	(4)	(4)	110.0	(4)	(4)	109.8	(4)	(4)	109.2	(4)	(4)	109.5	107.4	(4)	(4)	
Buffalo, N.Y. (Nov. 1963=100).....	100.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Chicago, Ill.—Northwestern Ind. ⁴	105.9	105.7	105.8	106.1	105.8	106.0	106.0	106.0	106.3	105.5	105.3	105.4	105.5	105.1	105.3	104.6	133.5	133.5	
Cincinnati, Ohio—Kentucky.....	(4)	(4)	(4)	105.1	(4)	(4)	105.1	(4)	(4)	104.6	(4)	(4)	104.5	(4)	104.7	103.6	(4)	(4)	
Cleveland, Ohio.....	105.2	105.2	(4)	(4)	105.0	(4)	(4)	105.1	(4)	(4)	104.3	(4)	(4)	104.3	104.7	103.5	130.7	130.7	
Dallas, Tex. (Nov. 1963=100).....	(4)	97.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Detroit, Mich.....	103.6	103.1	103.7	103.6	103.7	103.5	103.3	104.4	103.9	103.5	102.4	102.1	102.6	102.6	103.2	102.2	127.7	127.1	
Honolulu, Hawaii (Dec. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Houston, Tex.....	107.2	(4)	(4)	(4)	106.7	(4)	(4)	106.2	(4)	(4)	104.4	(4)	(4)	105.0	105.7	104.6	132.1	(4)	
Kansas City, Mo.—Kansas.....	(4)	(4)	(4)	(4)	108.7	(4)	(4)	107.1	(4)	(4)	(4)	(4)	106.4	(4)	107.2	106.1	(4)	(4)	
Los Angeles—Long Beach, Calif.....	108.9	109.0	109.6	108.7	109.3	109.1	108.6	108.4	108.0	107.4	107.6	108.0	107.7	107.8	108.2	106.9	135.8	135.9	
Minneapolis—St. Paul, Minn.....	(4)	(4)	(4)	(4)	(4)	107.4	(4)	(4)	107.2	(4)	(4)	106.5	(4)	(4)	107.0	105.5	(4)	(4)	
New York, N.Y.—Northeastern N.J.....	109.9	110.1	109.7	109.9	109.7	109.4	109.3	109.3	108.7	107.8	107.8	107.9	107.6	107.6	108.7	106.4	132.4	132.7	
Philadelphia, Pa.—N.J.....	108.4	108.7	108.6	108.5	108.3	108.2	107.6	107.5	107.4	107.2	106.2	106.4	106.4	106.2	107.2	105.2	133.1	133.6	
Pittsburgh, Pa.....	(4)	(4)	107.7	(4)	(4)	107.4	(4)	(4)	107.9	(4)	(4)	106.3	(4)	(4)	107.1	105.9	(4)	(4)	
Portland, Oreg.—Wash.....	(4)	(4)	(4)	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.2	(4)	(4)	106.6	104.6	(4)	(4)	
St. Louis, Mo.—Ill.....	(4)	(4)	(4)	107.3	(4)	(4)	106.5	(4)	(4)	105.6	(4)	(4)	105.8	(4)	106.2	105.1	(4)	(4)	
San Francisco—Oakland, Calif.....	(4)	(4)	(4)	109.9	(4)	(4)	109.2	(4)	(4)	108.9	(4)	(4)	108.4	(4)	108.9	107.4	(4)	(4)	
Scranton, Pa.....	108.8	(4)	(4)	(4)	107.9	(4)	(4)	107.6	(4)	(4)	106.7	(4)	(4)	106.9	107.3	105.9	129.8	(4)	
Seattle, Wash.....	109.4	109.4	(4)	(4)	109.3	(4)	(4)	109.1	(4)	(4)	107.4	(4)	(4)	107.2	108.2	106.5	137.5	137.5	
Washington, D.C.—Md.—Va.....	107.4	107.3	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.1	(4)	(4)	105.6	106.4	104.6	129.3	129.3	
Food																			
U.S. city average ³	105.8	106.0	105.8	105.4	105.1	104.9	105.4	106.0	106.2	105.0	104.2	104.3	104.6	105.0	105.1	103.6	-----	-----	
Atlanta, Ga.....	104.7	104.0	104.4	103.8	103.7	104.0	104.1	104.8	105.0	103.7	102.3	102.7	103.8	104.2	103.8	103.0	-----	-----	
Baltimore, Md.....	106.3	106.3	105.9	105.7	104.4	104.7	105.4	105.7	106.0	104.8	103.5	103.7	103.8	103.9	103.9	104.7	-----	-----	
Boston, Mass.....	108.5	108.5	108.5	108.4	108.0	108.1	108.1	109.0	108.6	106.6	106.2	106.6	106.5	106.3	107.4	104.6	-----	-----	
Buffalo, N.Y. (Nov. 1963=100).....	100.8	100.8	100.4	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Chicago, Ill.—Northwestern Ind. ⁴	105.6	105.7	105.8	105.2	105.4	105.8	106.1	107.6	107.5	105.9	104.7	105.0	105.7	105.4	105.8	105.3	-----	-----	
Cincinnati, Ohio—Kentucky.....	103.2	(4)	(4)	102.7	102.5	102.6	103.2	103.7	103.5	102.9	102.3	102.2	105.7	105.4	103.7	102.9	-----	-----	
Cleveland, Ohio.....	102.0	102.1	102.3	101.9	101.6	101.7	102.2	103.6	102.6	101.6	100.7	100.8	101.7	102.2	101.8	101.0	-----	-----	
Dallas, Tex. (Nov. 1963=100).....	(4)	100.1	100.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Detroit, Mich.....	101.1	101.4	101.4	100.8	100.9	100.7	101.3	103.0	103.4	102.0	100.7	100.8	101.1	101.7	101.5	101.1	-----	-----	
Honolulu, Hawaii (Dec. 1963=100).....	(4)	100.3	99.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	
Houston, Tex.....	105.5	(4)	(4)	105.5	105.0	104.8	105.3	104.7	104.6	103.1	102.0	101.8	102.3	103.0	103.8	102.9	-----	-----	
Kansas City, Mo.—Kansas.....	106.0	(4)	(4)	105.3	105.2	105.1	105.0	105.2	105.1	103.9	102.1	103.3	103.6	104.3	104.3	103.3	-----	-----	
Los Angeles—Long Beach, Calif.....	107.9	108.0	108.1	107.8	107.6	107.5	107.0	107.1	107.7	106.3	105.9	106.6	106.8	107.8	107.1	105.5	-----	-----	
Minneapolis—St. Paul, Minn.....	103.8	(4)	(4)	103.4	103.0	103.2	102.9	102.4	103.7	102.1	101.7	102.0	101.8	101.7	102.5	101.8	-----	-----	
New York, N.Y.—Northeastern N.J.....	107.4	108.1	108.1	107.8	107.4	106.9	107.4	108.1	108.2	106.9	106.3	105.3	106.6	106.8	107.1	104.9	-----	-----	
Philadelphia, Pa.—N.J.....	105.2	105.5	105.2	104.3	103.9	104.3	104.3	105.2	105.1	104.5	103.2	103.1	104.1	104.4	104.2	103.1	-----	-----	
Pittsburgh, Pa.....	103.8	104.5	103.8	103.3	102.9	102.9	103.6	104.4	104.6	103.7	103.2	103.1	104.1	104.3	103.6	102.4	-----	-----	
Portland, Oreg.—Wash.....	106.5	(4)	(4)	105.6	105.4	105.2	105.5	106.2	105.8	104.8	104.1	104.5	104.6	105.2	105.2	103.6	-----	-----	
St. Louis, Mo.—Ill.....	106.2	106.1	106.1	105.9	105.1	105.1	105.3	105.5	105.7	104.9	103.1	104.0	104.5	105.0	104.9	103.0	-----	-----	
San Francisco—Oakland, Calif.....	107.6	108.0	107.5	106.5	107.0	106.6	107.2	107.1	107.6	107.0	105.9	106.5	106.9	107.0	106.8	105.4	-----	-----	
Scranton, Pa.....	105.0	(4)	(4)	104.7	103.8	104.4	104.8	104.4	105.0	104.6	103.1	103.1	103.3	104.4	104.1	103.1	-----	-----	
Seattle, Wash.....	107.5	108.7	108.2	107.9	107.4	107.4	107.6	107.8	107.8	107.1	106.7	107.3	107.3	106.9	107.3	105.7	-----	-----	
Washington, D.C.—Md.—Va.....	104.7	104.9	104.6	103.9	104.0	104.6	105.0	105.5	105.5	104.6	103.3	102.9	103.6	103.2	104.2	102.0	-----	-----	

¹ See footnote 1, table D-1. Indexes measure time-to-time changes in prices. They do not indicate whether it costs more to live in one city than in another.

² The designation "city" refers not only to the central city but to the entire Standard Metropolitan Statistical Area, as defined for the 1960 Census of Population. The Standard Consolidated Area is used for New York and Chicago.

³ Average of 50 cities in the "new series"; 46 cities in the "old series."

⁴ All items indexes are computed monthly for 5 cities and once every 3 months on a rotating cycle for other cities.

⁵ Corrected indexes, January through December 1963.

⁶ Corrected indexes, January 1964.

The initial publication of the "new series" CPI appeared in the March 1964 issue of the *Monthly Labor Review*. The "new series" index, which results from the revision project announced earlier, is based on up-to-date samples of cities, retail stores, and service establishments. The list of goods and services priced for the index has also been modernized and the expenditure weights reflect the 1960-61 spending patterns of urban wage earners and clerical workers, including single persons. For the U.S. as a whole, an index is also available for families only. The "new series" indexes are issued as continuations of the "old series" with no change in the base period, 1957-59=100. Both the "old" and "new series" indexes will be published through June 1964, after which the "old series" will be discontinued.

TABLE D-3. Indexes of wholesale prices,¹ by group and subgroup of commodities[1957-59=100, unless otherwise specified]²

Commodity group	1964			1963									Annual Average		
	Feb. ³	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
All commodities.....	100.5	101.0	100.3	100.7	100.5	100.3	100.4	100.6	100.3	100.0	99.7	99.9	100.2	100.3	100.6
Farm products and processed foods.....	98.0	99.7	97.2	99.7	99.1	98.5	98.9	99.8	99.1	98.4	97.6	97.4	98.7	98.7	99.6
Farm products.....	94.5	96.3	93.3	96.2	95.1	95.5	96.3	96.8	94.9	94.4	95.4	95.4	96.5	95.7	97.7
Fresh and dried fruits and vegetables...	97.9	95.9	94.8	96.1	89.1	88.0	92.5	97.0	97.1	99.8	99.6	99.0	96.5	96.1	97.7
Grains.....	102.0	103.9	101.8	100.3	101.8	102.9	98.5	99.5	101.4	102.9	105.1	103.7	103.0	101.9	98.8
Livestock and live poultry.....	82.8	84.7	79.9	87.9	88.0	88.6	93.5	94.4	89.3	86.8	88.2	85.6	89.5	88.8	96.2
Plant and animal fibers.....	101.7	101.5	101.4	99.8	99.4	99.4	99.6	100.2	101.4	101.7	102.0	101.8	100.8	100.6	98.4
Fluid milk.....	102.3	102.8	103.4	103.2	102.6	101.8	100.6	99.8	97.9	97.3	98.3	99.6	101.1	100.6	101.2
Eggs.....	89.7	106.3	99.8	102.4	97.9	107.8	96.0	87.5	79.2	77.1	81.3	99.8	99.1	94.0	95.2
Hay, hayseeds, and oilseeds.....	113.9	115.5	114.6	117.5	114.1	110.5	111.3	111.1	113.8	112.5	110.7	113.8	113.5	113.0	105.4
Other farm products.....	96.4	99.0	90.6	90.7	90.4	89.0	88.4	89.1	89.3	89.5	89.4	89.0	89.1	89.3	91.8
Processed foods.....	100.9	102.5	100.4	102.5	102.2	100.9	100.9	102.2	102.4	101.7	99.3	99.0	100.5	101.1	101.2
Cereal and bakery products.....	107.2	107.0	106.9	107.3	107.7	107.0	106.0	106.4	107.0	107.6	108.1	108.0	108.6	107.3	107.6
Meats, poultry and fish.....	88.8	91.8	87.7	91.7	93.2	94.2	95.2	96.3	94.1	91.9	90.3	91.8	95.6	93.3	99.1
Dairy products and ice cream.....	107.5	108.0	108.1	107.9	107.4	108.0	107.9	107.3	106.6	106.8	106.9	107.1	108.0	107.5	106.9
Canned and frozen fruits and vegetables.....	107.3	107.2	106.8	106.4	105.8	105.3	104.8	105.7	104.6	103.4	102.9	101.3	99.8	103.9	98.0
Sugar and confectionery.....	122.9	130.3	124.9	131.2	125.4	112.5	111.2	120.3	132.1	133.6	113.9	106.1	105.1	118.4	102.2
Packaged beverage materials.....	94.9	90.6	85.7	84.1	81.8	80.9	80.9	81.1	81.1	80.9	80.9	79.1	79.1	81.2	81.7
Animal fats and oils.....	91.2	88.2	88.4	93.5	90.2	84.1	84.3	82.7	79.2	77.2	79.1	80.0	86.0	83.9	88.4
Crude vegetable oils.....	73.6	74.4	76.7	84.0	84.8	78.6	77.4	83.6	83.3	84.2	83.3	83.8	82.5	82.0	84.5
Refined vegetable oils.....	74.8	74.8	77.4	84.1	82.3	80.8	79.6	84.3	84.4	85.8	84.1	90.0	89.2	84.2	93.1
Vegetable oil end products.....	88.1	87.9	87.9	87.4	86.0	86.2	86.1	87.0	87.0	87.0	87.2	90.5	91.9	88.0	97.3
Miscellaneous processed foods.....	106.6	107.4	107.4	107.8	108.7	106.5	106.5	104.5	103.9	101.8	101.4	101.5	101.5	104.3	101.8
All commodities except farm products.....	101.2	101.5	101.1	101.2	101.2	100.8	100.8	101.1	101.0	100.7	100.2	100.4	100.6	100.8	100.9
All commodities except farm and foods.....	101.3	101.3	101.2	100.9	100.9	100.7	100.8	100.8	100.7	100.5	100.4	100.6	100.6	100.7	100.8
Textile products and apparel.....	101.2	101.2	101.2	101.1	101.7	100.5	100.4	100.4	100.3	100.2	100.1	100.2	100.3	100.5	100.6
Cotton products.....	101.2	101.3	101.5	101.3	100.2	99.9	99.7	99.8	99.7	99.7	100.1	100.2	100.5	100.3	101.7
Wool products.....	103.3	103.2	102.8	101.6	100.6	100.6	100.6	100.5	100.8	100.6	100.8	100.8	100.7	100.9	99.1
Manmade fiber textile products.....	95.1	94.7	94.6	94.4	94.2	94.0	93.9	93.7	93.8	93.8	93.8	93.8	93.7	93.9	93.9
Silk products.....	116.8	121.6	126.3	130.5	126.1	130.1	136.6	134.5	148.0	144.4	150.9	150.9	151.1	139.9	125.9
Apparel.....	102.3	102.3	102.3	102.3	102.5	102.3	102.2	102.2	102.0	101.6	101.3	101.4	101.4	101.9	101.5
Miscellaneous textile products.....	117.3	118.3	116.0	119.0	116.9	116.9	116.5	115.1	117.4	118.2	116.3	114.9	118.2	117.4	122.4
Hides, skins, leather, and leather products.....	102.5	102.7	103.0	103.5	103.4	103.1	103.6	104.3	104.5	104.8	104.5	105.1	105.1	104.2	107.4
Hides and skins.....	74.1	76.1	76.3	82.7	80.5	77.3	80.5	83.5	85.8	87.4	85.0	88.4	85.9	84.0	106.2
Leather.....	99.7	99.5	99.5	99.7	99.5	99.5	100.1	102.2	102.5	103.2	102.8	103.7	104.7	101.9	108.5
Footwear.....	108.3	108.3	108.2	108.2	108.4	108.4	108.4	108.4	108.2	108.2	108.2	108.3	108.3	108.3	108.6
Other leather products.....	101.8	101.9	103.3	103.2	103.4	103.4	103.5	104.0	104.3	104.4	104.5	104.7	104.8	104.0	104.3
Fuel and related products, and power.....	99.0	99.5	99.3	97.9	98.8	99.0	98.9	100.4	100.9	100.4	100.3	100.8	100.3	99.8	100.2
Coal.....	98.1	98.3	98.3	98.3	97.7	97.2	96.2	95.8	94.9	94.2	95.0	98.1	98.4	96.9	96.8
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.....	126.7	124.8	124.8	122.3	122.0	121.7	120.9	121.2	120.3	120.1	124.1	127.8	127.8	122.8	119.2
Electric power.....	101.3	101.3	101.3	101.3	101.4	101.8	101.9	102.0	102.2	102.2	102.4	102.4	102.5	102.0	102.8
Petroleum products, refined.....	95.3	96.6	96.1	93.8	95.6	95.9	96.1	98.7	99.9	99.1	98.2	98.2	97.1	97.2	98.2
Chemicals and allied products.....	96.4	96.3	96.2	96.3	96.2	96.0	96.0	96.0	96.3	96.4	96.3	96.8	96.7	96.3	97.5
Industrial chemicals.....	94.3	94.3	94.3	94.2	94.2	94.5	94.6	94.7	95.0	95.0	95.0	95.4	95.2	94.8	96.3
Prepared paint.....	105.3	105.3	105.3	105.1	103.9	103.9	103.9	103.0	103.0	103.0	103.7	103.7	103.8	103.8	103.8
Paint materials.....	91.5	91.2	91.0	91.1	90.8	89.2	89.0	89.2	91.1	91.7	91.5	93.0	93.0	91.1	95.6
Drugs and pharmaceuticals.....	95.3	95.4	95.0	95.0	94.9	94.9	95.0	95.1	95.2	95.2	95.1	95.2	95.1	95.1	96.0
Fats and oils, inedible.....	82.7	83.1	85.0	90.2	88.5	81.3	81.7	81.4	80.6	78.6	77.7	74.5	72.7	80.3	76.3
Mixed fertilizer.....	103.7	103.6	103.5	103.7	103.8	103.8	103.6	103.6	103.6	103.6	103.7	103.6	103.6	103.6	103.8
Fertilizer materials.....	100.5	99.4	98.4	98.4	97.1	97.2	96.9	99.8	100.8	102.3	102.3	102.3	102.3	99.9	101.9
Other chemicals and allied products.....	99.2	99.2	99.1	99.0	99.0	98.9	98.9	98.7	98.6	98.6	98.6	99.5	99.5	99.0	99.4
Rubber and rubber products.....	93.6	93.7	93.8	94.2	94.2	93.4	93.7	93.0	93.1	93.2	94.1	94.1	94.2	93.8	93.3
Crude rubber.....	89.5	89.4	89.9	91.6	91.5	88.9	90.7	91.6	92.5	92.6	92.8	92.7	93.7	91.9	93.6
Tires and tubes.....	91.3	91.3	91.4	91.7	91.7	91.7	91.2	89.1	89.1	89.1	89.0	89.0	89.0	90.1	87.1
Miscellaneous rubber products.....	97.6	97.9	97.9	97.9	97.9	97.2	97.5	97.5	97.5	97.5	99.8	99.8	99.7	98.3	99.4
Lumber and wood products.....	99.8	99.0	99.1	99.2	99.2	99.9	102.6	101.6	98.3	97.5	97.0	96.5	96.1	98.6	96.5
Lumber.....	100.3	99.2	99.2	99.3	99.3	100.7	102.7	102.1	99.2	98.4	97.6	96.6	96.2	98.9	96.5
Millwork.....	106.9	106.7	106.3	106.2	106.2	105.6	104.9	104.2	103.0	102.4	102.4	102.5	102.3	104.0	101.8
Plywood.....	91.8	91.1	92.4	92.5	92.4	92.6	104.1	100.9	92.6	90.9	91.0	91.2	90.5	93.5	92.4
Pulp, paper, and allied products.....	99.9	99.8	99.4	99.4	99.5	99.1	99.1	99.0	99.4	99.1	99.0	99.0	99.1	99.2	100.0
Woodpulp.....	96.1	96.1	94.4	94.4	95.0	91.7	91.7	91.7	91.3	91.3	91.3	89.4	89.4	91.7	93.2
Wastepaper.....	91.1	91.1	90.8	91.0	90.7	90.9	91.2	91.4	90.8	89.8	92.5	96.6	96.1	92.2	97.5
Paper.....	103.1	103.1	102.9	102.9	102.8	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.4	102.6
Paperboard.....	96.5	96.5	96.5	96.6	96.6	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.7	93.1
Converted paper and paperboard products.....	100.1	100.0	99.5	99.4	99.4	99.8	99.8	99.6	100.3	99.9	99.7	99.7	99.9	99.7	101.0
Building paper and board.....	95.0	95.2	95.2	95.1	96.9	97.6	97.5	97.5	97.5	96.2	95.5	94.1	95.5	96.2	97.2

See footnotes at end of table.

TABLE D-3. Indexes of wholesale prices,¹ by group and subgroup of commodities—Continued[1957-59=100, unless otherwise specified]²

Commodity group	1964		1963										Annual Average		
	Feb. ³	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
All commodities except farm and foods—Continued															
Metals and metal products.....	101.8	4101.7	101.3	101.0	100.9	100.3	100.1	100.0	100.0	99.9	99.4	99.4	99.4	100.1	100.0
Iron and steel.....	100.2	100.2	100.0	99.9	99.9	99.1	99.0	99.0	99.0	99.3	98.5	98.4	98.6	99.1	99.3
Nonferrous metals.....	101.7	101.4	101.0	100.2	99.9	99.6	99.4	99.0	98.7	98.7	98.2	98.1	98.0	99.1	99.2
Metal containers.....	105.8	104.6	104.6	104.6	104.6	104.7	105.0	105.0	104.9	104.6	104.5	104.5	104.5	104.7	103.7
Hardware.....	104.6	4104.6	104.3	104.4	104.4	104.2	104.1	104.1	104.0	103.9	103.9	103.9	104.0	104.1	104.0
Plumbing fixtures and brass fittings.....	100.5	100.5	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.8	100.8	101.3	101.1	100.5	100.1
Heating equipment.....	92.0	492.0	92.7	92.8	93.1	93.1	93.1	93.3	93.3	93.0	92.9	92.6	92.4	92.9	93.2
Fabricated structural metal products.....	99.1	499.0	99.0	98.9	98.9	98.7	98.4	98.3	98.2	98.2	97.6	97.8	98.0	98.3	98.2
Fabricated nonstructural metal products.....	109.3	4109.3	108.2	107.1	107.0	105.0	105.0	105.0	104.9	104.0	103.8	103.7	103.7	105.1	103.9
Machinery and motive products.....	102.7	102.5	102.6	102.5	102.3	102.2	102.1	102.1	102.0	101.9	101.9	102.0	102.2	102.2	102.3
Agricultural machinery and equipment.....	112.2	4112.1	111.9	111.4	111.2	110.9	110.9	110.9	111.0	110.9	110.9	111.0	110.8	111.1	109.5
Construction machinery and equipment.....	111.8	111.8	111.2	110.9	110.4	110.1	110.0	109.7	109.6	109.2	108.8	108.8	108.5	109.6	107.8
Metalworking machinery and equipment.....	111.1	110.8	110.8	110.5	110.3	110.2	110.2	109.9	109.6	109.4	109.4	109.1	109.1	109.8	109.3
General purpose machinery and equipment.....	104.9	104.8	104.8	104.7	104.5	104.3	103.9	103.9	103.5	103.4	103.4	103.4	103.6	103.9	103.3
Miscellaneous machinery.....	104.3	104.1	103.7	103.7	103.5	103.5	103.4	103.4	103.4	103.3	103.4	103.7	103.4	103.5	4103.2
Special industry machinery and equipment ⁴	105.2	4105.2	105.0	104.7	104.8	104.6	104.2	104.1	103.9	103.9	103.9	103.1	103.1	104.0	101.9
Electrical machinery and equipment.....	97.5	496.9	97.7	97.5	497.4	97.2	97.2	97.2	97.7	97.5	97.0	96.9	97.8	97.4	98.4
Motor vehicles.....	99.8	99.8	99.9	99.9	99.9	99.3	99.5	99.8	99.3	99.8	100.2	100.7	100.8	100.0	100.8
Transportation equipment, railroad rolling stock 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	100.5	100.5	100.5
Furniture and other household durables.....	98.4	498.4	98.0	98.1	98.1	98.1	98.1	98.0	98.1	98.0	98.1	98.2	98.2	98.1	98.8
Household furniture.....	105.0	4105.0	104.7	104.8	104.8	104.8	104.6	104.5	104.5	104.4	104.4	104.6	104.5	104.6	103.8
Commercial furniture.....	103.1	103.1	103.1	103.1	103.1	103.0	102.8	102.8	102.8	102.3	102.3	102.3	102.3	102.7	102.3
Floor coverings.....	100.1	4100.1	98.0	97.9	97.4	96.8	96.6	96.6	95.9	95.7	95.9	96.0	95.9	96.6	97.0
Household appliances.....	91.4	491.3	91.1	91.2	91.2	91.4	91.7	91.7	91.9	92.0	92.1	92.3	92.3	91.8	94.0
Television, radio receivers, and phonographs.....	87.2	487.2	87.3	87.8	87.8	87.8	87.7	87.7	88.9	88.9	89.4	89.4	90.1	88.6	91.1
Other household durable goods.....	103.7	103.6	103.3	103.4	103.4	103.5	103.3	103.4	103.2	102.9	103.0	102.8	102.8	103.2	103.1
Nonmetallic mineral products.....	101.2	101.1	101.3	101.2	101.3	101.1	101.0	100.9	101.2	101.3	101.5	101.5	101.5	101.3	101.8
Flat glass.....	101.0	101.0	101.0	101.0	101.6	100.0	98.9	96.6	96.6	96.6	96.6	96.6	96.6	98.3	97.0
Concrete ingredients.....	102.7	4102.7	103.1	102.9	102.9	103.0	103.0	103.2	103.2	103.0	103.0	103.0	103.0	103.0	103.2
Concrete products.....	101.0	101.2	101.4	101.4	101.3	101.3	101.2	101.2	101.9	101.9	102.2	102.2	102.2	101.7	102.6
Structural clay products.....	103.6	103.5	103.5	103.5	103.4	103.4	103.6	103.5	104.0	104.0	103.8	103.6	103.6	103.6	103.5
Gypsum products.....	108.0	106.1	106.1	106.1	106.1	106.1	105.8	105.0	105.0	105.0	105.0	105.0	105.0	105.4	105.0
Prepared asphalt roofing.....	87.4	87.4	87.4	87.4	87.4	88.2	88.2	88.2	89.1	92.7	94.1	94.1	94.1	90.0	94.8
Other nonmetallic minerals.....	101.3	101.3	101.4	101.4	101.4	100.9	100.7	101.2	101.3	101.4	101.4	101.5	101.5	101.4	102.2
Tobacco products and bottled beverages.....	107.1	107.6	107.5	107.5	107.5	107.5	107.5	107.5	105.8	105.2	104.4	104.3	104.3	106.1	104.1
Tobacco products.....	105.9	105.9	105.9	105.9	105.9	105.7	105.7	105.7	105.7	104.5	102.3	102.2	102.2	104.5	102.1
Alcoholic beverages.....	101.0	101.0	101.0	100.9	100.9	101.0	101.0	101.0	101.0	101.0	101.1	101.1	101.1	101.0	101.0
Nonalcoholic beverages.....	125.0	127.7	127.7	127.7	127.7	127.7	127.7	127.7	118.2	117.4	117.4	117.4	117.4	122.6	116.9
Miscellaneous products.....	110.9	112.6	112.2	110.9	111.2	111.8	111.1	110.4	108.1	107.6	108.0	110.8	111.5	110.4	107.3
Toys, sporting goods, small arms, ammunition.....	100.9	4100.9	101.1	101.0	101.1	101.1	101.2	101.0	100.7	100.7	100.7	100.5	101.1	101.0	100.8
Manufactured animal feeds.....	117.4	120.4	119.7	117.2	117.9	119.0	117.7	116.3	112.1	111.2	111.9	117.1	118.2	116.4	110.6
Notions and accessories.....	99.1	99.1	99.1	99.1	99.1	99.1	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.8	98.7
Jewelry, watches and photographic equipment.....	103.3	103.6	103.6	103.6	103.5	103.4	103.5	103.9	103.8	103.9	103.8	103.9	104.0	103.7	104.2
Other miscellaneous products.....	101.7	101.7	101.4	101.4	101.1	101.1	101.1	100.9	101.3	101.4	101.4	101.7	101.7	101.4	101.3

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	1964		1963										Annual average		
	Feb. ³	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
All foods.....	100.3	102.1	99.9	101.9	101.0	100.2	100.1	101.3	101.1	100.7	98.7	99.0	100.1	100.4	100.6
All fish.....	109.0	109.8	107.5	106.1	106.8	107.1	105.5	110.0	114.4	115.9	113.6	117.3	118.4	112.0	119.2
All commodities except farm products.....	101.2	101.5	101.1	101.2	101.2	100.8	100.8	101.1	101.0	100.7	100.2	100.4	100.6	100.8	100.9
Textile products, excluding hard fiber products.....	99.4	99.4	99.4	99.1	98.3	98.1	98.0	97.9	98.0	98.0	98.2	98.3	98.4	98.3	98.8
Bituminous coal—domestic sizes.....	100.7	101.1	101.0	100.9	100.6	99.0	97.2	96.3	94.2	92.9	95.5	100.6	101.5	98.4	98.3
Refined petroleum products.....	95.3	96.6	96.1	93.8	95.6	95.9	98.1	98.7	99.9	99.1	98.2	98.2	97.1	97.2	98.2
East Coast markets.....	97.8	97.8	97.8	95.1	93.4	93.4	98.2	96.2	96.2	96.2	98.9	98.9	98.9	96.7	99.4
Midcontinent markets.....	89.7	94.5	93.0	85.4	96.8	99.7	95.4	99.7	105.4	102.6	99.7	98.6	88.6	96.6	98.2
Gulf Coast markets.....	96.5	96.7	96.1	96.1	95.4	95.4	97.1	100.1	99.7	99.7	97.7	97.7	97.9	97.6	98.6
Pacific Coast markets.....	87.7	87.7	89.2	89.2	89.2	89.7	87.2	88.2	89.7	90.7	90.7	90.7	90.7	89.7	90.9
Midwest markets ⁴	93.7	95.5	94.6	90.8	92.1	90.9	92.1	94.6	95.8	93.3	94.5	95.5	98.0	94.2	94.2
Soaps.....	105.4	105.4	105.4	105.4	105.4	105.4	105.4	103.5	103.5	103.5	103.5	103.5	103.5	104.3	102.6
Synthetic detergents.....	99.4	99.4	99.4	99.4	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.5	99.7
Pharmaceutical preparations.....	97.5	97.5	97.1	96.9	96.7	96.7	96.8	96.9	96.8	96.9	96.8	96.8	96.6	96.8	97.3
Ethical preparations ⁵	96.2	96.2	95.8	95.8	95.5	95.5	95.8	95.8	95.7	95.7	95.7	95.7	96.5	95.7	96.9
Anti-infectives ⁶	88.2	88.2	88.2	88.2	88.2	88.3	88.3	88.3	88.3	88.5	88.5	88.5	88.5	88.4	93.1
Anti-arthritis 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	100.6	100.6
Sedatives and hypnotics ⁶	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	112.5	112.5	112.5	113.0	112.5
Anesthetics ⁶	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	100.0
Anti-spasmodics and anti-cholinergics ⁶	100.2	100.2	100.2	100.2	100.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0
Cardiovasculars and anti-hypertensives ⁶	97.6	97.6	97.6	97.6	97.6	97.6	101.3	101.3	101.3	101.3	101.3	101.3	101.3	100.7	99.9
Diabetics ⁶	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	104.0
Hormones ⁶	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	99.6	99.6	99.6	100.1	99.6
Diuretics ⁶	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	100.0
Dermatologicals ⁶	108.7	108.7	108.7	108.7	104.3	104.3	104.3	104.3	100.8	100.8	100.8	100.8	100.8	103.3	100.7
Hermatincs ⁶	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8
Analgesics ⁶	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	101.8	101.8
Anti-obesity preparations ⁶	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	100.0
Cough and cold preparations ⁶	104.0	104.0	96.8	96.8	96.8	97.0	100.4	100.4	100.4	100.7	100.7	100.7	100.7	99.3	100.0
Vitamins ⁶	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	88.1	88.1	88.1	88.1	88.1	87.9	88.1
Proprietary preparations ⁵	102.7	102.6	102.1	101.6	101.6	101.5	100.7	101.5	101.5	101.6	101.6	101.6	101.6	101.5	100.5
Vitamins.....	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.1
Cough and cold preparations ⁵	100.5	99.9	99.2	99.2	99.2	98.6	98.6	100.1	100.1	100.1	100.1	100.1	100.1	99.6	100.0
Laxatives and elimination aids ⁵	104.7	104.7	104.4	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	101.7	103.5
Internal analgesics ⁵	102.1	102.1	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.8	101.2
Tonics and alteratives ⁵	100.2	100.2	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
External analgesics ⁵	102.8	102.8	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	100.8
Antiseptics ⁵	106.8	106.8	104.9	104.9	104.9	104.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9	103.5	100.2
Antacids ⁵	103.0	103.0	103.0	98.9	98.9	98.9	98.9	98.9	98.9	100.1	100.1	100.1	100.1	99.7	99.6
Lumber and wood products (excluding millwork).....	98.4	97.4	97.6	97.8	97.8	98.9	102.8	101.7	97.7	96.7	96.1	95.4	94.9	97.7	95.6
Softwood lumber.....	99.1	97.7	97.8	97.9	98.1	99.9	102.6	101.9	98.5	97.5	96.5	95.6	95.3	98.0	95.9
Pulp, paper, and allied products (excluding building paper and board).....	100.1	100.0	99.6	99.6	99.6	99.2	99.2	99.1	99.5	99.2	99.2	99.2	99.3	99.3	100.1
Special metals and metal products ⁷	101.7	101.6	101.4	101.1	101.1	100.5	100.4	100.4	100.2	100.2	100.0	100.1	100.2	100.5	100.5
Steel mill products.....	103.1	103.1	103.1	103.1	103.0	102.0	102.0	102.1	102.1	102.0	101.2	101.1	101.3	102.0	101.4
Machinery and equipment.....	103.8	103.5	103.7	103.5	103.3	103.2	103.0	103.0	103.1	103.0	102.7	102.6	102.9	103.1	102.9
Agricultural machinery (including tractors).....	113.5	113.4	113.2	112.6	112.4	112.1	112.1	112.0	112.2	112.2	112.1	112.0	111.9	112.2	110.5
Metalworking machinery.....	111.2	110.8	110.8	110.4	110.1	109.9	109.9	109.5	109.1	108.9	108.8	108.4	108.5	109.4	108.8
All tractors.....	113.9	113.9	113.1	112.6	111.9	111.3	111.2	110.9	111.3	111.1	110.7	110.6	110.5	111.3	109.4
Industrial valves.....	107.8	107.8	107.8	107.8	107.8	107.2	106.7	107.5	107.4	107.4	107.4	107.4	107.4	107.5	107.4
Industrial fittings.....	100.0	100.0	100.0	100.0	100.0	99.2	96.9	95.4	91.7	91.1	90.9	90.9	94.6	95.4	93.0
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	90.8
Abrasive grinding wheels.....	96.5	96.5	96.5	96.3	96.3	96.3	96.3	96.3	96.3	96.4	96.4	97.7	97.7	96.7	98.5
Construction materials.....	99.2	98.8	98.8	98.8	98.8	99.0	99.7	99.3	98.3	98.1	97.8	97.7	97.6	98.5	98.3

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	1964		1963										Annual average		
	Feb. ³	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1963	1962
All commodities.....	100.5	101.0	100.3	100.7	100.5	100.3	100.4	100.6	100.3	100.0	99.7	99.9	100.2	100.3	100.6
<i>Stage of processing</i>															
Crude materials for further processing.....	94.1	95.1	92.6	95.1	94.8	94.8	95.7	96.1	94.8	94.2	95.0	94.5	95.6	95.0	97.1
Crude foodstuffs and feedstuffs.....	92.2	94.0	90.1	94.2	93.8	94.0	95.4	96.1	93.7	92.8	93.9	92.8	94.7	94.0	96.8
Crude nonfood materials except fuel.....	96.6	96.6	96.3	96.1	96.1	95.6	95.6	95.9	96.4	96.6	96.5	96.7	96.4	96.2	97.4
Crude nonfood materials, except fuel, for manufacturing.....	96.1	96.1	95.7	95.5	95.5	94.9	94.9	95.3	95.8	96.0	95.9	96.2	95.8	95.6	96.9
Crude nonfood materials, except fuel, for construction.....	102.7	102.7	103.1	103.0	102.9	103.0	103.0	103.2	103.2	103.0	103.0	103.1	103.0	103.0	103.2
Crude fuel.....	105.0	104.5	104.6	103.7	103.3	102.9	102.0	101.9	101.0	100.5	102.3	105.4	105.6	103.0	101.8
Crude fuel for manufacturing.....	104.9	104.4	104.4	103.6	103.3	102.8	102.0	101.8	101.0	100.5	102.3	105.3	105.5	103.0	101.8
Crude fuel for nonmanufacturing.....	105.4	104.9	104.9	104.1	103.6	103.1	102.2	102.1	101.2	100.7	102.5	105.8	106.0	103.3	102.0
Intermediate materials, supplies, and components.....	101.2	101.3	101.1	101.0	100.9	100.5	100.5	100.6	100.6	100.5	99.9	100.0	100.1	100.5	100.2
Intermediate materials and components for manufacturing.....	100.4	100.6	100.2	100.4	100.1	99.1	99.1	99.4	99.7	99.7	98.8	98.6	98.7	99.4	99.2
Intermediate materials for food manufacturing.....	107.2	110.2	107.1	110.6	108.8	103.7	102.9	106.4	109.8	110.2	103.5	101.2	101.2	105.5	100.5
Intermediate materials for nondurable manufacturing.....	97.6	97.6	97.5	97.4	97.2	96.6	96.6	96.8	97.0	97.1	97.1	97.1	97.2	97.1	98.0
Intermediate materials for durable manufacturing.....	101.9	101.8	101.6	101.4	101.3	100.8	101.0	100.8	100.4	100.1	99.6	99.7	99.8	100.5	100.4
Components for manufacturing.....	99.9	99.5	99.6	99.4	99.2	99.0	98.7	98.6	98.7	98.6	98.2	98.2	98.5	98.8	98.8
Materials and components for construction.....	100.3	100.1	100.1	100.0	100.0	99.8	100.4	100.1	99.4	99.2	99.0	98.9	98.9	99.6	99.8
Processed fuels and lubricants.....	99.3	99.8	99.7	98.3	99.4	99.9	99.8	101.4	101.8	101.4	100.8	100.8	100.3	100.3	101.2
Processed fuels and lubricants for manufacturing.....	100.9	101.2	101.1	100.0	100.8	101.2	101.1	102.3	102.6	102.4	102.0	102.2	101.9	101.7	102.3
Processed fuels and lubricants for nonmanufacturing.....	96.7	97.3	97.3	95.5	97.1	97.6	97.6	99.7	100.3	99.7	98.6	98.4	97.6	98.1	99.4
Containers, nonreturnable.....	99.9	99.6	100.4	100.6	100.6	100.9	101.0	100.8	101.4	101.2	100.9	101.1	101.4	101.0	102.2
Supplies.....	106.6	107.4	107.0	106.3	106.5	106.6	106.2	106.8	105.0	104.7	105.1	106.4	106.7	106.1	104.5
Supplies for manufacturing.....	105.3	105.3	105.3	105.4	105.4	105.1	105.0	105.0	105.1	105.2	105.9	105.7	105.8	105.4	105.7
Supplies for nonmanufacturing.....	106.5	107.7	107.1	106.0	106.3	106.6	106.1	105.6	104.3	104.0	104.2	106.1	106.5	105.8	103.5
Manufactured animal feeds.....	110.8	113.6	112.9	110.6	111.2	112.2	110.9	109.7	105.6	104.8	105.4	110.5	111.4	109.7	104.1
Other supplies.....	102.0	102.1	101.6	101.4	101.4	101.3	101.3	101.2	101.6	101.6	101.6	101.5	101.5	101.4	101.3
Finished goods (goods to users, including raw foods and fuels).....	101.6	102.1	101.4	101.8	101.6	101.5	101.4	101.8	101.5	101.1	100.8	101.1	101.5	101.4	101.7
Consumer finished goods.....	100.7	101.5	100.6	101.1	100.9	100.8	100.8	101.2	100.8	100.4	99.9	100.3	100.9	100.7	101.2
Consumer foods.....	99.8	101.4	99.4	101.0	100.4	100.3	100.3	101.0	100.1	99.4	98.2	99.0	100.4	100.1	101.3
Consumer crude foods.....	97.5	100.9	98.8	100.2	95.4	97.1	95.7	95.4	92.5	93.2	94.2	99.5	98.9	97.0	98.6
Consumer processed foods.....	100.2	101.5	99.4	101.2	101.2	100.8	101.0	101.9	101.3	100.3	98.9	98.9	100.7	100.6	101.7
Consumer other nondurable goods.....	102.1	102.4	102.2	101.7	102.0	101.9	101.9	102.3	102.1	101.8	101.6	101.8	101.7	101.9	101.6
Consumer durable goods.....	99.6	99.5	99.5	99.6	99.6	99.4	99.3	99.4	99.3	99.4	99.5	99.7	99.8	99.5	100.0
Producer finished goods.....	103.7	103.5	103.6	103.4	103.2	103.0	103.0	103.0	103.0	102.9	102.9	102.9	103.0	103.1	102.9
Producer finished goods for manufacturing.....	105.7	105.6	105.6	105.5	105.3	105.1	105.1	105.0	104.9	104.7	104.7	104.5	104.6	105.0	104.4
Producer finished goods for nonmanufacturing.....	101.7	101.5	101.5	101.3	101.1	100.9	101.0	101.1	101.2	101.1	101.2	101.4	101.4	101.2	101.4
<i>Durability of product</i>															
Total durable goods.....	101.9	101.7	101.6	101.5	101.4	101.1	101.2	101.1	100.9	100.8	100.6	100.6	100.7	101.0	101.0
Total nondurable goods.....	99.4	100.3	99.2	100.0	99.8	99.5	99.6	100.1	99.8	99.4	99.0	99.2	99.7	99.6	100.1
Total manufactures.....	101.1	101.3	100.9	100.9	100.9	100.7	100.8	101.0	100.8	100.4	100.0	100.2	100.4	100.6	100.8
Durable manufactures.....	102.1	101.9	101.9	101.8	101.7	101.4	101.5	101.5	101.2	101.1	100.9	100.9	101.0	101.3	101.3
Nondurable manufactures.....	100.0	100.5	99.9	100.1	100.2	99.9	100.0	100.4	100.2	99.5	99.0	99.3	99.7	99.8	100.1
Total raw or slightly processed goods.....	97.8	99.4	97.1	99.2	98.4	98.0	98.2	98.9	98.2	98.4	98.3	99.1	98.5	98.5	99.5
Durable raw or slightly processed goods.....	92.1	92.1	91.2	90.5	90.7	90.5	90.0	89.3	89.3	89.9	89.4	88.7	88.6	89.6	89.2
Nondurable raw or slightly processed goods.....	98.2	99.8	97.4	99.7	98.8	98.5	98.7	99.5	98.7	98.9	98.9	98.9	99.7	99.1	100.1

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	.69
1950.....	4,843		2,410,000		38,800,000	.44
1951.....	4,757		2,220,000		22,900,000	.23
1952.....	5,117		3,540,000		59,100,000	.67
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.....	3,614		1,230,000		18,600,000	.16
1963: February ²	200	320	60,000	120,000	1,100,000	.12
March ²	225	350	45,000	90,000	1,110,000	.12
April ²	350	475	100,000	130,000	1,050,000	.10
May ²	425	600	125,000	165,000	1,750,000	.17
June ²	450	675	135,000	190,000	1,740,000	.18
July ²	400	660	115,000	220,000	2,060,000	.20
August ²	325	575	75,000	185,000	1,620,000	.15
September ²	300	550	100,000	155,000	1,100,000	.11
October ²	290	500	95,000	160,000	1,500,000	.13
November ²	180	425	70,000	145,000	1,400,000	.14
December ²	80	300	30,000	80,000	1,000,000	.10
1964: January ²	210	370	60,000	100,000	1,010,000	.10
February ²	225	375	80,000	125,000	1,130,000	.12

¹ The data include all known strikes or lockouts involving 6 workers or more and lasting a full day or shift or longer. Figures on workers involved and man-days idle cover all workers made idle for as long as 1 shift in establishments directly involved in a stoppage. They do not measure the indirect

or secondary effect on other establishments or industries whose employees are made idle as a result of material or service shortage.

² Preliminary.

F.—Work Injuries

TABLE F-1. Injury-frequency rates¹ for selected manufacturing industries

Industry	1963 ²						1962 ²				1961 ²		Annual average		
	Fourth quarter				3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	1963 ²	1962 ²
	Oct.	Nov.	Dec.	Quarter											
All manufacturing.....	11.9	10.7	10.0	10.9	12.0	10.8	10.6	10.6	11.7	11.2	11.1	10.6	11.8	11.3	11.4
Food and kindred products:															
Meat packing and custom slaughtering.....	32.5	26.9	26.1	28.5	31.8	27.7	26.9	26.8	29.1	26.1	26.9	24.3	26.2	28.9	27.1
Sausages and other prepared meat products.....	19.4	35.1	29.0	27.7	30.6	28.4	23.4	24.8	29.7	27.4	35.9	20.9	33.9	27.8	30.0
Poultry and small game dressing and packing.....	(8)	(8)	(8)	33.3	44.7	27.4	27.0	36.1	29.6	36.8	28.0	38.9	45.5	33.7	32.6
Dairy products.....	17.8	15.1	16.7	16.6	17.2	16.9	17.8	16.5	17.5	17.1	18.7	16.5	17.6	17.2	17.1
Canning and preserving.....	21.8	17.1	15.5	18.8	25.4	18.4	18.6	20.5	24.5	19.6	19.7	19.4	24.2	21.1	22.0
Grain-mill products.....	22.5	15.5	13.8	17.4	19.8	19.3	16.3	18.2	18.0	17.6	15.6	16.9	16.2	18.4	17.3
Bakery products.....	14.4	16.2	14.0	15.0	16.0	15.6	16.5	16.8	16.9	15.3	19.1	15.2	17.6	15.8	16.6
Cane sugar.....	(8)	(8)	(2)	12.6	11.9	8.0	10.3	12.8	9.7	6.2	8.3	15.4	13.8	10.8	9.4
Confectionery and related products.....	18.1	17.0	12.3	16.0	16.6	13.6	13.6	17.2	17.3	16.0	16.4	19.1	19.6	14.9	17.0
Bottled soft drinks.....	18.9	21.6	19.3	19.9	28.6	23.2	20.6	20.7	27.0	27.9	24.2	21.0	24.8	23.8	25.4
Malt and malt liquors.....	20.0	17.2	20.1	19.1	24.1	22.6	23.5	19.2	17.2	20.6	17.5	19.0	19.1	22.5	18.7
Distilled liquors.....	12.4	10.4	7.9	10.4	7.4	11.4	8.4	9.0	4.6	7.6	4.8	7.1	6.8	9.4	6.8
Miscellaneous food products.....	18.4	17.1	15.6	17.1	18.0	13.7	19.1	14.5	20.6	13.8	17.4	15.1	16.6	16.9	16.7
Textile mill products:															
Cotton yarn and textiles.....	8.6	7.1	5.2	7.1	8.6	6.8	7.4	7.4	8.6	8.1	7.2	7.2	8.1	7.5	7.9
Rayon, other synthetic, and silk textiles.....	10.4	12.3	7.8	10.1	7.1	8.1	6.8	7.1	10.0	9.3	8.1	7.0	7.0	8.1	8.6
Woolen and worsted textiles.....	14.5	14.7	14.7	14.6	17.9	15.6	14.8	14.1	17.2	20.2	15.5	17.6	17.1	15.6	16.9
Knit goods.....	5.5	3.3	4.1	4.3	7.1	6.2	6.6	6.0	7.5	6.8	5.7	4.6	6.1	6.0	6.3
Dyeing and finishing textiles.....	16.4	16.0	10.3	14.4	18.1	13.6	12.1	11.5	14.1	12.7	13.7	13.1	17.5	14.4	13.0
Miscellaneous textile goods.....	23.8	15.2	13.1	17.4	21.3	18.6	19.2	17.5	21.4	20.2	20.9	19.2	16.8	19.1	20.0
Apparel and other finished textile products:															
Clothing, men's and boys'.....	6.9	6.6	7.1	6.9	7.5	6.7	6.9	6.3	7.3	7.1	7.2	5.8	7.5	7.0	6.8
Clothing, women's and children's.....	5.8	5.2	5.0	5.3	5.4	5.4	4.2	5.5	6.0	6.8	5.6	3.8	6.3	5.3	6.2
Fur goods and miscellaneous apparel.....	(8)	(8)	(8)	5.1	14.6	6.1	7.9	7.1	10.4	8.2	5.8	4.6	7.7	8.2	7.8
Miscellaneous fabricated textile products.....	7.1	7.9	8.9	7.9	7.8	6.7	6.7	8.4	8.4	5.7	8.1	7.2	9.1	7.1	7.6
Lumber and wood products (except furniture):															
Logging.....	49.1	59.2	43.9	50.7	45.3	43.0	43.5	43.8	52.9	39.8	50.2	59.7	65.5	46.5	46.2
Sawmills and planing mills.....	35.5	37.5	30.3	34.5	38.3	35.2	33.0	37.2	39.3	36.0	35.1	35.9	39.4	35.4	37.6
Millwork and structural wood products.....	29.2	27.3	18.0	25.1	26.2	24.0	25.5	21.3	26.8	18.3	22.7	22.3	25.0	25.9	22.3
Plywood mills.....	25.4	26.9	22.3	25.0	26.7	22.3	24.5	24.8	24.4	24.5	18.3	20.8	21.1	24.8	23.2
Wooden containers.....	28.1	38.3	28.4	31.6	34.1	28.3	27.7	36.1	37.3	34.4	31.8	32.3	31.2	30.7	34.7
Miscellaneous wood products.....	43.7	28.1	34.3	35.6	27.0	36.3	27.1	24.5	26.5	30.1	28.2	27.2	32.4	31.7	27.4
Furniture and fixtures:															
Household furniture, nonmetal.....	19.4	17.2	19.7	18.7	21.0	17.6	20.1	16.2	22.8	21.3	21.9	20.7	20.6	19.4	20.8
Metal household furniture.....	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	20.2	22.2	20.6	13.3	18.5
Mattresses and bedsprings.....	25.8	15.5	27.3	22.9	20.8	21.7	19.7	28.4	25.8	21.0	17.3	16.2	19.6	21.4	23.2
Office furniture.....	12.2	12.2	10.1	14.4	21.0	14.8	9.8	12.4	13.1	15.0	20.4	11.5	14.8	14.9	15.4
Public building and professional furniture.....	(8)	(8)	(8)	(8)	21.6	8.9	11.1	13.7	18.2	12.3	16.6	13.9	13.8	14.5	15.3
Partitions and fixtures.....	17.2	23.7	19.8	20.2	19.9	18.8	17.8	15.1	20.6	20.9	22.3	18.3	17.6	18.9	20.3
Screens, shades, and blinds.....	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	10.2	12.5
Paper and allied products:															
Pulp, paper, and paperboard mills.....	10.5	8.9	10.4	9.9	10.3	9.8	9.6	9.6	9.3	9.0	10.6	10.6	10.9	9.9	9.6
Paperboard containers and boxes.....	13.5	12.2	13.9	13.1	15.2	13.6	15.3	15.6	15.6	15.6	15.9	15.2	13.3	14.2	15.7
Miscellaneous paper and allied products.....	13.1	12.4	9.8	11.8	12.2	15.1	13.6	14.9	15.1	13.1	10.3	12.2	12.7	13.4	13.4
Printing, publishing, and allied industries:															
Newspapers and periodicals.....	9.2	10.5	7.3	9.0	8.5	8.9	12.5	9.6	9.0	9.1	10.1	8.8	7.7	9.8	9.5
Bookbinding and related products.....	(8)	(8)	(8)	13.9	19.8	15.5	15.6	19.8	29.5	12.5	16.2	20.5	13.2	16.5	19.3
Miscellaneous printing and publishing.....	12.2	9.7	12.5	11.5	14.0	12.4	12.9	12.1	11.5	11.6	12.1	10.3	10.7	12.8	12.2
Chemical and allied products:															
Industrial inorganic chemicals.....	4.4	4.0	5.2	4.5	5.3	5.0	5.0	5.5	5.9	5.5	4.6	4.9	5.0	5.0	5.4
Plastics, except synthetic rubber.....	4.0	5.1	3.8	4.3	4.1	4.9	5.2	5.2	2.5	5.2	4.4	4.9	3.8	4.9	4.6
Synthetic rubber.....	(8)	(8)	(8)	4.6	3.1	5.6	2.9	3.2	3.7	4.0	4.4	4.2	2.6	4.3	3.9
Synthetic fibers.....	(8)	(8)	(8)	2.7	4.1	4.9	3.4	4.0	3.4	2.2	2.7	3.4	2.9	3.8	3.1
Explosives.....	(8)	(8)	(8)	2.8	2.4	2.1	5.5	2.5	2.9	2.1	2.2	3.9	3.2	3.2	2.4
Miscellaneous industrial organic chemicals.....	4.7	3.7	3.1	3.8	3.8	3.8	4.1	3.7	3.1	3.3	5.0	3.5	5.0	3.9	3.8
Drugs and medicines.....	7.2	6.0	6.1	6.4	7.2	6.0	6.1	4.7	6.3	6.5	5.8	6.7	6.4	6.4	5.3
Soaps and related products.....	14.6	11.4	6.9	11.1	10.6	11.9	11.1	8.0	12.4	12.1	15.2	11.0	11.3	11.3	12.2
Paints, pigments, and related products.....	9.0	9.1	11.1	9.8	11.8	10.8	12.0	10.1	11.5	13.3	11.3	7.8	11.0	11.1	12.0
Fertilizers.....	(8)	(8)	(8)	20.5	14.9	24.8	18.4	30.9	15.7	21.1	13.9	19.5	13.0	19.3	19.9
Vegetable and animal oils and fats.....	17.8	21.4	22.5	20.5	21.8	22.4	23.7	23.0	21.5	19.7	23.6	17.0	23.8	22.4	23.1
Compressed and liquified gases.....	(8)	(8)	(8)	10.5	10.9	5.1	8.8	11.8	9.4	9.6	14.3	7.1	14.8	8.9	12.6
Miscellaneous chemicals and allied products.....	18.9	15.4	12.7	15.8	12.6	13.9	14.7	12.5	13.6	14.2	12.5	14.3	14.3	14.1	13.0
Rubber products:															
Tires and inner tubes.....	6.3	5.0	3.3	4.9	6.6	4.5	5.1	4.6	4.1	4.6	3.6	5.2	3.7	5.2	4.3
Rubber footwear.....	4.0	2.2	2.2	2.8	5.2	2.8	5.0	5.3	6.2	5.5	5.5	6.8	9.3	4.0	5.6
Miscellaneous rubber products.....	13.2	11.0	9.5	11.4	12.7	10.8	9.3	9.3	9.5	11.4	11.2	9.5	10.5	11.2	10.6
Leather and leather products:															
Leather tanning and finishing.....	34.4	31.1	20.1	28.9	35.3	34.1	34.7	32.4	35.9	30.6	31.2	29.8	33.1	33.2	33.6
Boot and shoe cut stock and findings.....	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	23.1	19.0
Footwear (except rubber).....	8.9	8.0	7.7	8.2	9.9	8.7	9.4	8.6	10.2	9.8	9.0	9.3	8.7	9.1	9.4
Miscellaneous leather products.....	10.7	10.1	12.0	10.9	10.0	14.8	10.3	11.4	13.1	10.6	7.9	12.8	12.2	11.4	10.8
Stone, clay, and glass products:															
Glass and glass products.....	7.0	7.8	6.6	7.1	7.7	7.1	7.2	6.4	7.5	7.0	8.3	9.0	9.2	7.3	7.5
Structural clay products.....	24.7	25.8	20.4	23.7	36.3	27.0	24.0	27.7	29.0	27.9	33.7	31.1	30.3	27.3	29.3
Pottery and related products.....	11.5	17.0	14.9	14.5	20.2	13.9	15.6	16.7	17.7	17.0	15.5	15.5	15.4	15.9	16.9
Concrete, gypsum, and mineral wool.....	23.8	14.3	17.1	18.7	25.8	20.7	20.3	20.7	24.8	25.2	24.9	25.4	22.9	21.6	24.0
Miscellaneous nonmetallic mineral products.....	12.1	7.5	12.2	10.7	11.9	9.8									

TABLE F-1. Injury-frequency rates¹ for selected manufacturing industries—Continued

Industry	1963 ²							1962 ²				1961 ²		Annual average	
	Fourth quarter				3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	1963 ²	1962 ²
	Oct.	Nov.	Dec.	Quarter											
Primary metal industries:															
Blast furnaces and steel mills.....	3.7	3.1	3.8	3.6	3.7	3.5	3.7	3.3	3.3	3.8	3.7	3.5	3.5	3.6	3.6
Gray-iron and malleable foundries.....	29.8	23.4	21.5	25.0	23.8	25.0	23.6	24.4	27.9	25.4	25.3	23.4	28.3	26.1	25.9
Steel foundries.....	25.7	21.4	22.0	23.2	21.1	22.4	21.9	17.8	20.1	20.4	18.0	20.4	16.4	22.6	19.2
Nonferrous rolling, drawing, and alloying.....	12.4	11.4	10.4	11.4	10.9	11.7	9.6	10.9	12.1	10.9	11.3	12.1	13.2	10.9	11.3
Nonferrous foundries.....	21.7	16.8	17.0	18.6	21.3	17.4	19.5	19.3	23.6	21.2	20.2	21.4	23.5	19.4	21.2
Iron and steel forgings.....	19.3	15.9	17.2	17.6	19.7	18.7	19.3	15.4	21.1	20.6	19.8	19.2	18.9	18.9	19.8
Wire drawing.....	17.3	13.4	12.3	14.4	17.3	16.2	14.9	14.6	14.0	16.7	13.3	16.7	13.4	15.8	14.5
Welded and heavy-riveted pipe.....	12.0	18.3	17.7	15.9	13.5	12.5	11.4	13.7	14.2	15.0	11.8	8.4	10.7	13.6	13.6
Cold-finished steel.....	12.4	13.2	8.8	11.5	13.2	10.1	11.9	9.2	8.6	8.4	12.4	9.3	9.3	11.6	9.7
Fabricated metal products:															
Tin cans and other tinware.....	5.9	5.7	5.4	5.7	5.8	6.1	4.4	5.4	7.1	6.3	6.6	7.2	9.2	5.5	6.4
Cutlery and edge tools.....	(3)	(3)	(3)	11.5	18.3	11.4	12.8	13.2	13.2	15.1	14.9	18.7	12.6	13.5	14.2
Handtools, files, and saws.....	18.6	13.7	15.1	15.9	14.9	16.2	14.6	22.6	15.1	18.1	15.5	11.6	16.4	15.5	18.1
Hardware.....	11.3	7.4	10.3	9.7	10.3	9.0	8.5	9.4	10.4	10.0	9.1	10.4	11.9	9.4	10.0
Sanitary ware and plumbers' supplies.....	10.8	18.2	16.3	15.1	15.4	14.1	10.2	11.5	11.6	9.2	11.3	13.1	10.5	14.4	10.8
Oil burners, heating and cooking apparatus.....	17.6	14.1	15.4	15.8	19.5	14.7	10.9	14.4	17.7	13.7	14.5	14.0	11.8	15.4	15.4
Structural steel and ornamental metal work.....	23.0	19.7	19.0	20.6	22.8	22.7	21.0	19.7	22.5	20.6	20.5	19.3	22.1	22.1	21.5
Metal doors, sash, frame, and trim.....	(3)	(3)	(3)	20.2	25.8	21.7	18.0	23.0	26.0	22.1	21.4	17.9	22.5	21.1	23.6
Bolershop products.....	20.6	12.7	13.4	15.7	17.3	15.7	14.2	12.8	17.5	18.1	18.2	15.2	17.3	15.7	16.9
Sheet-metal work.....	22.6	25.2	21.8	23.2	23.2	27.9	20.4	20.2	24.6	25.9	21.2	22.8	27.4	24.1	23.4
Stamped and pressed metal products.....	12.5	9.7	9.1	10.5	11.7	10.2	10.7	10.2	11.7	12.7	12.2	11.5	11.6	11.0	11.8
Metal coating and engraving.....	(3)	(3)	(3)	26.9	30.9	21.9	17.9	29.3	28.2	20.6	21.1	15.9	12.7	24.5	25.6
Fabricated wire products.....	17.1	12.7	18.2	16.0	20.3	20.1	16.6	18.7	22.4	17.0	15.0	14.2	17.8	18.2	18.3
Metal barrels, drums, kegs, and pails.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Steel springs.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Bolts, nuts, washers, and rivets.....	13.1	11.3	14.4	13.0	16.5	11.3	13.3	15.9	11.6	14.3	15.4	14.5	15.1	13.9	14.2
Screw-machine products.....	11.2	12.1	12.8	12.0	17.3	9.6	13.0	13.6	13.8	13.6	13.8	14.2	14.2	13.1	13.6
Fabricated metal products, not elsewhere classified.....	9.5	11.2	8.7	9.8	10.5	10.3	9.8	8.0	12.9	10.1	11.1	10.0	10.0	10.8	10.2
Machinery (except electrical):															
Engines and turbines.....	5.4	6.9	6.7	6.4	6.2	6.7	5.2	6.1	5.6	5.2	6.8	5.8	6.0	6.1	6.0
Agricultural machinery and tractors.....	9.3	8.5	6.3	8.0	8.5	9.1	8.4	8.5	7.3	7.5	7.1	7.3	7.1	8.4	7.7
Construction and mining machinery.....	16.6	17.9	13.2	15.9	17.2	17.7	16.1	14.6	17.1	16.8	15.2	13.9	15.8	16.8	16.3
Metalworking machinery.....	10.5	10.1	11.2	10.6	10.3	9.9	10.1	9.3	10.1	9.6	9.9	8.1	9.0	10.3	9.9
Food-products machinery.....	10.7	10.3	12.6	11.2	13.7	9.1	9.8	12.1	11.0	10.6	12.7	9.5	14.1	10.9	11.5
Textile machinery.....	13.1	12.7	19.9	15.0	12.5	9.9	11.5	11.8	16.1	15.4	12.2	10.7	14.7	13.1	13.9
Miscellaneous special industry machinery.....	16.3	15.5	13.2	15.0	13.6	15.6	13.0	14.6	13.9	12.8	14.1	12.9	13.8	14.5	13.8
Pumps and compressors.....	13.7	12.6	10.0	12.1	14.5	11.9	11.3	11.0	12.8	13.0	13.8	10.0	11.2	12.4	12.9
Elevators, escalators, and conveyors.....	20.3	16.5	14.5	17.2	16.4	11.4	13.7	11.7	14.3	19.7	16.3	12.9	17.5	14.6	15.8
Mechanical power-transmission equipment (except ball and roller bearings).....	10.2	11.7	12.6	11.5	10.8	10.8	8.6	11.5	15.6	11.9	12.3	11.0	11.1	10.4	12.8
Miscellaneous general industrial machinery.....	14.0	9.6	9.0	11.0	12.3	10.3	10.1	10.3	11.0	11.9	12.1	11.2	12.0	10.9	11.6
Commercial and household machinery.....	7.2	5.4	6.5	6.4	6.4	6.0	6.0	5.5	5.5	5.8	7.1	5.7	5.9	6.0	5.8
Valves and fittings.....	16.9	13.4	10.6	13.8	14.2	12.8	13.2	11.7	12.8	14.2	15.1	11.1	13.6	13.4	13.4
Fabricated pipe and fittings.....	(3)	(3)	(3)	15.2	20.7	22.4	14.9	17.6	13.9	15.9	13.6	12.2	11.9	18.3	14.7
Ball and roller bearings.....	5.9	3.4	6.6	5.4	6.0	5.4	5.6	6.6	5.4	4.4	5.7	4.7	4.1	5.6	5.6
Machine shops, general.....	10.0	13.9	13.7	12.5	13.6	14.6	15.4	13.3	14.3	14.8	15.7	12.0	14.3	14.3	15.0
Electrical machinery:															
Electrical industrial apparatus.....	5.0	5.0	5.2	5.0	5.5	5.4	6.0	6.2	5.9	5.6	6.9	6.4	6.8	5.5	6.2
Electrical appliances.....	8.6	5.3	11.4	8.4	6.9	6.7	7.4	5.7	5.0	7.6	7.8	8.3	8.0	8.6	6.6
Insulated wire and cable.....	16.2	19.1	11.3	15.6	22.0	18.5	18.8	15.3	17.5	16.5	22.6	19.4	15.3	18.8	18.0
Electrical equipment for vehicles.....	2.7	2.2	1.7	2.2	3.6	2.3	2.4	2.4	2.7	3.0	2.0	2.6	3.0	2.7	2.5
Electric lamps (bulbs).....	(3)	(3)	(3)	3.9	4.0	1.6	2.6	3.5	4.3	2.6	2.2	3.7	2.2	3.3	3.0
Radios and related products.....	4.7	4.3	3.9	4.3	4.6	4.2	4.5	4.1	4.9	4.2	4.7	4.0	3.9	4.5	4.5
Radio tubes.....	2.8	3.2	2.3	2.8	3.9	2.3	2.6	2.5	4.8	2.3	2.4	3.5	3.2	2.9	3.0
Miscellaneous communication equipment.....	3.9	4.5	2.7	3.6	3.0	2.7	2.9	2.5	2.7	2.5	2.7	2.3	1.4	3.0	2.6
Batteries.....	26.5	22.7	19.6	23.1	19.4	11.1	10.8	11.8	13.6	14.7	13.5	13.1	18.0	16.9	13.4
Electrical products, not elsewhere classified.....	(3)	(3)	(3)	4.4	2.8	6.2	2.3	3.5	5.4	7.0	2.2	6.5	3.1	4.6	4.7
Transportation equipment:															
Motor vehicles, bodies, and trailers.....	2.7	3.1	2.3	2.7	3.6	3.4	3.0	3.3	3.8	3.7	3.2	3.4	4.2	3.1	3.6
Motor-vehicle parts and accessories.....	3.9	4.2	3.8	4.0	4.0	4.0	4.1	4.1	4.5	5.1	4.1	3.8	5.0	4.2	4.6
Aircraft.....	2.2	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.6	1.9	2.0	1.9
Aircraft parts.....	6.0	4.5	3.6	4.7	3.8	3.8	4.3	4.4	4.8	4.7	5.0	4.5	5.0	4.3	4.7
Shipbuilding and repairing.....	17.3	15.0	11.5	14.5	16.7	20.0	14.4	14.9	17.0	17.1	18.5	15.2	17.8	17.1	17.6
Boatbuilding and repairing.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Railroad equipment.....	10.1	7.7	10.1	9.4	7.9	8.1	6.5	7.5	10.1	7.8	6.8	6.8	8.2	7.9	8.0
Instruments and related products:															
Scientific instruments.....	1.3	1.9	1.9	1.7	2.6	2.3	2.7	1.6	2.9	1.6	1.4	2.4	2.2	2.4	2.1
Mechanical measuring and controlling instruments.....	8.6	7.0	5.7	7.1	7.1	8.1	7.4	6.7	6.0	6.6	6.7	6.9	7.1	7.5	6.6
Optical instruments and lenses.....	(3)	(3)	(3)	3.3	4.0	4.0	5.3	5.3	2.7	5.4	4.4	6.2	3.4	4.1	4.6
Medical instruments and supplies.....	10.0	6.5	6.7	7.8	6.5	8.0	7.0	6.3	4.8	8.4	9.1	8.3	9.4	7.4	7.2
Photographic equipment and supplies.....	5.5	5.7	3.8	5.1	4.1	6.0	3.5	5.5	4.6	5.7	4.9	5.4	6.6	4.6	5.2
Watches and clocks.....	5.3	7.4	7.1	6.6	4.6	3.3	6.0	3.5	5.2	5.3	3.4	4.6	4.3	5.1	4.6
Miscellaneous manufacturing:															
Paving and roofing materials.....	(3)	(3)	(3)	8.5	6.2	7.5	8.8	6.7	7.0	3.0	6.7	11.5	9.1	7.7	5.9
Jewelry, silverware, and plated ware.....	3.4	5.0	13.9	7.1	8.1	8.3	7.9	6.1	7.0	10.6	10.4	7.0	10.3	7.9	7.9
Fabricated plastics products.....	17.7	16.0	15.9	16.5	17.7	15.3	15.6	16.9	19.1	17.5	20.0	14.6	15.0	17.5	18.8
Miscellaneous manufacturing.....	16.3	14.7	10.9	14.1	15.5	13.0	11.4	10.4	11.8	12.8	12.5	14.6	13.9	13.4	12.0
Ordnance and accessories.....	2.8	3.5	1.7	2.6	2.2	2.8	3.5	3.3	2.4	2.5	3.6	2.2	2.2	2.8	3.0

¹ The injury-frequency rate is the average number of disabling work injuries for each million employee-hours worked. A disabling work injury is any injury occurring in the course of and arising out of employment, which (a) results in death or permanent physical impairment, or (b) makes the injured worker unable to perform the duties of any regularly established job which is open and available to him throughout the hours corresponding to his regular shift on any one or more days after the day of injury (including

Sundays, days off, or plant shutdowns). The term "injury" includes occupational diseases.

² Rates are preliminary and subject to revision when final annual data become available.

³ Insufficient data to warrant presentation of average.

NOTE: These data are compiled in accordance with the American Standard Method of Recording and Measuring Work Injury Experience, approved by the American Standards Association, 1954.

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