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✦

Handbook of Labor Statistics

1941 Edition

✦

Volume II

Wages and Wage Regulation

Bulletin No. 694

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1942

For sale by the Superintendent of Documents, Washington, D. C. - - - - - Price 45 cents

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Bulletin No. 694 (Vol. II) of the

United States Bureau of Labor Statistics

Handbook of Labor Statistics

1941 Edition

Volume II.—Wages and Wage Regulations

Sources of Wage and Hour Statistics

Wage and hour statistics in the United States have registered marked gains, both in quality and in scope, during the past decade. Although these gains could not have been realized without advances in the science and techniques of statistics, they were due chiefly to the growing demand for sound factual material for regulatory purposes. Thus the Social Security Act, the Public Contracts Act, and the Fair Labor Standards Act require various types of wage and hour statistics for the determination of policies and the measurement of results. State and local laws have also required better and more extensive statistical material. Another important factor has been the extension of collective bargaining which has made it imperative for both labor and management to appraise the wage picture accurately.

A review of wage and hour information currently available reveals little uniformity as to purpose, quality, or form. On the one hand are series of exceedingly simple statistics, collected periodically, and designed primarily to indicate trends in wages and hours; on the other hand are detailed special studies, executed only once or very infrequently, but providing relatively complete information as to wage and hour structure at a given time. Some wage studies are based on *rates of pay* and others on *actual earnings*, which may reflect the influence of bonuses, overtime rates, or various types of deductions.

Most studies of wages and hours are based on the records or reports of employers and depend entirely on voluntary cooperation. In a few instances, however, reports which have been made mandatory for administrative purposes are incidentally employed as a basis for wage and hour statistics. The greater proportion of the wage and hour material now available refers to workers within given industries, rather than all the workers in specific areas or population groups. In spite of the expansion of such statistics in recent years, the coverage of the various industries is uneven. Thus, material on wages and hours in manufacturing industries is considerably more complete than in the service industries, and special studies of wages and hours

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have covered the low-wage industries more completely than the high-wage industries.

Undoubtedly the major source of wage and hour statistics in this country is the United States Bureau of Labor Statistics. Among other Federal agencies providing wage and hour statistics, a number rely chiefly on special studies, which usually secure data for short periods of time only. The Women's Bureau and the Children's Bureau of the Department of Labor, for example, deal chiefly with statistics related to the welfare of women and children. The Wage and Hour Division and the Public Contracts Division of the Department of Labor (responsible for administering the Fair Labor Standards Act and the Public Contracts Act, respectively), although depending primarily on studies by the Bureau of Labor Statistics, conduct occasional small studies in specific industries, often in connection with inspection activities.

A valuable and comparatively new source of information on annual earnings is the Federal Bureau of Old Age and Survivors' Insurance of the Social Security Board. These statistics cover all industries included under the old age and survivors' insurance program and apply to all earnings that are taxable under the program. The biennial Census of Manufactures throws light on the question of annual earnings. The 1940 census will also provide valuable information regarding annual wage income and annual weeks of work. The National Income Section of the Bureau of Foreign and Domestic Commerce has engaged in a number of studies of incomes of professional persons to piece out its information on national incomes. Sources of specialized data on annual earnings are the Railroad Retirement Board and the Interstate Commerce Commission. Mention should also be made of the tabulations of the Civil Service Commission of annual salary rates of Federal employees and of the periodic statistics on wages of farm labor issued by the Bureau of Agricultural Economics.

A number of official State agencies, such as departments of labor and minimum wage commissions, assemble information on wages and hours usually in the form of special studies in particular industries. Among the States whose official agencies have published studies in recent years are New York, Pennsylvania, Illinois, and Ohio. Also a few cities have made wage studies, several having been operated as WPA projects.

Among private organizations collecting wage and hour statistics the National Industrial Conference Board occupies a prominent place. Various employers' associations make studies of wages and hours among member companies and it is to be regretted that the results are infrequently made available to the public. Several labor unions have produced studies of merit, which also, unfortunately, are usually unavailable for public use.

The Bureau of Labor Statistics collects and publishes a great variety of information on wages and hours, most of which is included in the following categories: (1) Monthly and annual statistics on average hourly earnings, average weekly earnings, and average weekly hours of work for most of the important industries except farming; (2) detailed special studies of the wage and hour structure of particular industries; and (3) an annual survey of union scales of wages in some 30 trades and industries for which data are available.

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General Trend of Wages and Hours

Bureau of Labor Statistics Bulletin No. 694.
Handbook of Labor Statistics: 1941 edition.

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Wages, Hours, and Productivity of Industrial Labor, 1909 to 1940[1]

The decade of the thirties was marked by unusual changes in rates of wages and hours of work and by the rapid extension of collective bargaining. Far-reaching public policies relating to wages and hours were adopted. Adjustments to these changes and the satisfactory working out of the new policies called for available information about earlier experiences. In consequence, the Bureau of Labor Statistics undertook an extensive study and new analysis of earlier wage and hour data. These surveys made possible the computing of several new and complete series extending back as far as 1909 and the linking of these to the Bureau of Labor Statistics series already available for 1932 and later years.

The study was concerned primarily with wages,[2] but the use of data bearing on this subject led to the construction of statistical series on such related subjects as labor productivity and purchasing power, weekly hours, weekly earnings, employment, pay rolls or total wages, and wage earners' share of income paid out. For wages, hours, and employment, actual levels are shown as well as trends.

There is only a limited amount of information available for the earlier part of the period from 1909 to 1940, but it is possible, in the varied fields of manufacturing, mining, and railroad transportation, to compute hourly earnings and other series with assurance of reasonable exactness. The relative importance of manufacturing, mining, and railroad transportation combined, as measured by employment, increased in the first of the three decades and declined in the second, but the end of the third decade showed little change over its beginning. In 1940, employment in these fields as a percentage of total employment was almost the same as in 1909.

These industries are basic and extremely varied. The part they played in the Nation's total production was probably at least as im-

[1] Summary of article by Witt Bowden of the Bureau of Labor Statistics, in the Monthly Labor Review for September 1940, with revisions and later data.

[2] The study began in a project to revise the general index of average hourly earnings extending back to 1840 and first published in the Monthly Labor Review of February 1921. The long period covered by this index required the use of link relatives. For a given period one set of figures was available, and for another period, another set, with significantly different levels of wages. It was assumed that although the levels in dollars were different, the trend of each series was substantially representative of the general trend of the period. Thus, the index represented only the general trend, computed by linking the different series—a method first used extensively by Professor A. L. Bowley in the study of wages in England. The wage structure became increasingly complex, with exceptionally rapid and often divergent changes in wages, especially during the period of the World War and later during the depression beginning in 1929. As a result, there could be no assurance that the linking of earlier and current data would avoid serious distortions of the general trend of hourly wages. The general index was therefore discontinued.

The several series here presented are close approximations, not merely of the trends but also of the absolute levels, of hourly earnings in the varied and basically important fields of manufacturing, mining, and railroad transportation. It is not possible, however, to determine by any adequate tests whether or not average hourly earnings in these industries are representative of earnings in all business enterprises.

Use was made of the numerous wage and hour reports of the Bureau of Labor Statistics throughout the period, the census reports, and various other official sources. Supplementary use was made of such unofficial sources as the important pioneer work on wages and hours in 25 manufacturing industries by the National Industrial Conference Board.

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portant in 1940 as in 1909, for although their proportion of total employment was somewhat smaller, they experienced a comparatively rapid advance in labor productivity. Output per worker almost doubled in manufacturing, but increased only about 50 percent in agriculture and very slightly in such important employments as retail trade and many of the service industries. In relative importance mining and railroad transportation lost ground to competing industries, but manufacturing made extensive gains. Some of these gains, as in the manufacture of fuels, electrical goods, road-building machinery and materials, and transportation equipment, partly counteracted the losses by mines and railroads.

Summary of Changes

A general view of the whole period reveals a particularly significant rise of average hourly earnings from 20.7 cents in 1909 to 68.3 cents in 1940. Money earnings are of course affected by changes in cost of living, but even when these changes are taken into account, the resulting figures of real hourly earnings show a rise of 106.9 percent. Average hours of work fell from 51.7 in 1909 to 38.3 in 1940; weekly and annual earnings therefore did not rise as much as hourly earnings, but there was a gain of 54.0 percent in real weekly earnings, in spite of a reduction of more than a fourth in weekly hours.

Changes in real hourly earnings indicate changes in the amount of goods and services an hour's wage will buy. Real hourly earnings may in turn be compared to the output per hour of labor, commonly called the productivity of labor. Man-hour output increased much more than real earnings per hour. In manufacturing, real hourly earnings were 117.5 percent higher in 1940 than in 1909, in contrast to the much greater rise of 177.8 precent in man-hour output.

The years from 1909 to 1914 were comparatively stable. The early months of the World War were marked by sharp recession, but in general the war years brought abnormal demands, comparatively full employment, and rapid advances in prices and wage rates. During the 10 years from 1909 to 1919, both hourly and weekly earnings in manufacturing, mining, and railroads more than doubled, but prices rose so rapidly that weekly earnings would buy only 10.7 percent more in 1919 than in 1909. The average number of wage earners in manufacturing, mining, and railroads rose from 8,667,000 in 1909 to 11,322,000 in 1919. Average hours of work fell from 51.7 per week in 1909 to 46.9 in 1919. Total pay rolls in the three branches of employment almost trebled, expanding from $4,680,000,000 to $13,453,000,000, but when the change in cost of living is taken into account the increase was only 44.5 percent.

The years from 1919 to 1923 may be described as the period of post-war readjustment. It was a time of fluctuating prices; of demobilization and the curtailment of war demands; of the shifting of workers into new employments, or, for considerable numbers, into the ranks of the unemployed; and of industrial disputes in which some of the unions lost ground but from which labor as a whole emerged with gains in the form of shorter hours and higher wages. Employment was somewhat lower in 1923 than in 1919, a decline explainable in part by the fact that many women and emergency war-

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time workers on the pay rolls in 1919 were no longer employed. The volume of production was much larger in 1923 than in 1919.

From 1923 to 1929, hourly earnings, when adjusted by the index of cost of living, rose 6.2 percent. Man-hour output, in contrast, rose in most of the industries by a much larger percentage. The increase in man-hour output in manufacturing industries as a whole was 31.7 percent; in bituminous-coal mining, 8.1 percent; and in steam railroads, 18.2 percent. Conditions peculiar to anthracite mining led to a slight reduction in output per man-hour in that industry. An outstanding characteristic of these years was the decline of wages as a percentage of total income payments in manufacturing, the minerals industries as a whole, and steam railroads. Total wages fell from 63.6 percent of all income payments in these industries in 1923 to 57.1 percent in 1929. The benefits of the rising productivity of labor were not in general transferred through price reductions to consumers, for the index of cost of living was higher during most of the period than in 1923.

Between 1929 and 1932, hourly earnings in manufacturing, mining, and railroads fell sharply, but somewhat less so than cost of living. The extreme decline in hours of work (from 45.2 hours in 1929 to 37.7 in 1932), combined with the fall in hourly earnings, reduced real weekly earnings 12.8 percent in spite of the reduction in cost of living. The outstanding change was the precipitous fall in employment. The number of wage earners in the three branches of employment combined fell from 10,835,000 to 6,799,000, or 37.2 percent. At the same time, as an accompaniment to the fall in average weekly hours, the total number of man-hours was cut almost in half. There was an even greater fall in total pay rolls expressed in money wages, and even when adjusted to the cost of living the aggregate wage in these industries was only a little more than half as large as in 1929. In manufacturing, the minerals industries, and railroads, wages as a percentage of income payments declined sharply during these depression years.

TABLE 1.—*Summary of changes in employment, hours, earnings, and productivity in manufacturing, mining, and steam railroads, 1909–40* [1]

Item	1909	1919	1923	1929	1932	1940
MONEY EARNINGS						
Average hourly earnings:						
Manufacturing, mining, and steam railroads, combined	$0.207	$0.502	$0.547	$0.584	$0.487	$0.683
Manufacturing	.193	.477	.520	.566	.458	.670
Mining (bituminous, anthracite, and metalliferous)	.313	.707	.779	.693	.582	.852
Steam railroads	.219	.537	.581	.630	.591	.711
Average weekly earnings:						
Manufacturing, mining, and steam railroads, combined	10.83	23.83	25.55	26.78	18.60	26.62
Manufacturing	10.38	23.29	25.13	26.40	17.86	26.11
Mining (bituminous, anthracite, and metalliferous)	12.41	26.80	27.48	27.56	16.51	25.46
Steam railroads	11.77	24.84	26.42	28.26	23.13	31.32

[1] Most of the figures in this table and the other tables are not the results of exact measurements of the whole of the fields covered, but are estimates derived from the best available data, subjected to various tests of adequacy.

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TABLE 1.—*Summary of changes in employment, hours, earnings, and productivity in manufacturing, mining, and steam railroads, 1909–40*—Continued

Item	1909	1919	1923	1929	1932	1940
INDEXES OF "REAL" EARNINGS (MONEY EARNINGS ADJUSTED TO COST OF LIVING) (AVERAGE 1923-25=100)						
"Real" average hourly earnings:						
Manufacturing, mining, and steam railroads, combined	72.5	88.5	98.7	104.8	109.7	150.0
Manufacturing	70.7	87.9	98.1	106.1	107.8	153.8
Mining (bituminous, anthracite, and metalliferous)	80.0	90.9	102.4	90.6	95.5	137.6
Steam railroads	72.9	89.9	99.5	107.3	126.4	148.3
"Real" average weekly earnings:						
Manufacturing, mining, and steam railroads, combined	82.9	91.8	100.6	104.9	91.5	127.7
Manufacturing	80.4	90.8	100.2	104.7	88.9	126.8
Mining (bituminous, anthracite, and metalliferous)	90.4	98.3	103.0	102.8	77.3	116.3
Steam railroads	87.6	93.1	101.2	107.7	110.6	146.2
INDEXES OF LABOR PRODUCTIVITY (AVERAGE 1923-25=100)						
Output per man-hour:						
Manufacturing [2]	62.2	71.7	94.0	123.8	128.0	172.8
Bituminous-coal mining	69.5	85.1	99.2	107.2	115.0	141.2
Anthracite mining	84.8	100.0	103.5	99.8	119.0	------
Steam railroads	[3] 75.4	85.4	96.4	113.9	111.9	157.3
HOURS ACTUALLY WORKED						
Average weekly hours:						
Manufacturing, mining, and steam railroads, combined	51.7	46.9	46.1	45.2	37.7	38.3
Manufacturing	52.7	47.8	47.3	45.7	38.2	38.1
Mining (bituminous, anthracite, and metalliferous)	40.5	39.1	36.1	40.2	28.7	29.8
Steam railroads	53.9	46.3	45.5	44.8	39.1	44.1
EMPLOYMENT AND MAN-HOURS						
Employment in manufacturing, mining, and steam railroads as a percentage of all employment	28.0	33.8	--------	26.8	--------	25.6
Number of wage earners:						
Manufacturing, mining, and steam railroads, combined ..... thousands	8,667	11,322	11,076	10,835	6,799	10,100
Manufacturing ..... do	6,273	8,418	8,195	8,369	5,236	8,484
Mining (bituminous, anthracite, and metalliferous) ..... thousands	831	824	904	712	487	553
Steam railroads ..... do	1,563	2,079	1,977	1,755	1,076	1,063
Total man-hours:						
Manufacturing, mining, and steam railroads, combined ..... millions	23,327	27,620	26,543	25,479	13,328	20,114
Manufacturing ..... do	17,191	20,925	20,156	19,888	10,400	16,809
Mining (bituminous, anthracite, and metalliferous) ..... millions	1,748	1,677	1,696	1,488	727	856
Steam railroads ..... do	4,388	5,018	4,691	4,103	2,201	2,449
TOTAL MONEY WAGES (IN MILLIONS)						
Total money wages:						
Manufacturing, mining, and steam railroads, combined	$4,680	$13,453	$14,109	$14,454	$6,315	$12,805
Manufacturing	3,210	9,665	10,152	10,894	4,610	10,396
Mining (bituminous, anthracite, and metalliferous)	511	1,095	1,233	975	403	669
Steam railroads	959	2,693	2,724	2,585	1,302	1,740

[2] See table 3, footnotes 1 and 2.
[3] 1914.

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TABLE 1.—*Summary of changes in employment, hours, earnings, and productivity in manufacturing, mining, and steam railroads, 1909–40*—Continued

Item	1909	1919	1923	1929	1932	1940
INDEXES OF TOTAL "REAL" WAGES (AVERAGE 1923-25=100)						
Total "real" wages:						
Manufacturing, mining, and steam railroads, combined	67.6	97.7	104.8	106.8	58.6	115.9
Manufacturing	63.9	96.9	104.0	111.1	59.0	129.8
Mining (bituminous, anthracite, and metalliferous)	88.6	95.6	110.0	86.6	44.9	72.8
Steam railroads	72.1	102.0	105.4	99.5	62.9	82.0
WAGES AS PERCENT OF INCOME						
Wages as percent of total income payments [4] in manufacturing, minerals, and steam railroads, combined	-------	64.6	63.6	57.1	51.7	[5] 59.5

[4] See table 7, footnote 3.
[5] 1939.

After 1932, average weekly earnings rose from $18.60 in 1932 to $26.62 in 1940, an increase of 43.1 percent. Weekly earnings adjusted to cost of living increased 39.6 percent. Hourly earnings rose from 48.7 cents in 1932 to 68.3 cents in 1940, thus regaining the loss sustained after 1929 and rising to a level never previously attained. In 1940, the average number of wage earners in the combined industries was 10,100,200, a rise of 48.5 percent over 1932. The average hours of work were almost the same in 1940 as in 1932. This is explained by the fact that the extensive reductions in the normal or regularly scheduled hours of labor were accompanied by reductions in the amount of part time and by increases in overtime.

The rise in pay rolls from 1932 to 1940, when adjusted for changes in cost of living, was 97.8 percent. Aggregate wages regained a large part of the loss of the years from 1929 to 1932. Wage payments in manufacturing, all of the minerals industries, and steam railroads combined rose from 51.7 percent of all income payments in these industries in 1932 to 59.5 percent in 1939, thus regaining the losses sustained after 1929, but not those of the preceding decade.

One of the significant gains of these decades was the recognition of the profound change in the American market.[3] In earlier decades, frontier growth at home and expansion in undeveloped areas of the world were accompanied by an almost uninterrupted increase of opportunities both for the investment of surplus income and for the profitable employment of labor. New conditions made no longer possible the former dependence on an expanding national and world economy and shifted the emphasis to the internal market for consumers' goods. Wages, previously considered primarily as cost of production, came to be viewed also as the predominant part of the income flow required to sustain internal markets and to maintain without interruption the cycle of production and consumption.

The preceding paragraphs give a summary analysis. A more detailed discussion of each of the topics summarized follows.

[3] Noteworthy in this connection are the Hearings before the Temporary National Economic Committee, especially Part 1, Economic Prologue (Washington, 1939) and Part 9, Savings and Investment (Washington, 1940).

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Hourly Earnings: Extent of Change

During the decade of the World War, from 1909 to 1919, the abnormal wartime demands drained off much of the labor supply into the armed forces and at the same time brought about a rapid rise in prices. Under these conditions, wage rates naturally increased. In 1909, workers in manufacturing, mining, and railroads averaged only 20.7 cents an hour. In 1919, the average was 50.2 cents an hour, and by 1924 there was a further increase to 56.8 cents.[4] Between 1924 and 1930, there was no marked change in hourly earnings, but the period of depression beginning in 1929 was marked by a reduction from 58.4 cents in 1929 to 48.0 cents in 1933. An upward trend beginning in 1934 became most marked between 1936 and 1937 but continued throughout the remainder of the period. In 1940 hourly earnings were higher than in any previous year (table 2).

TABLE 2.—*Average hourly earnings of wage earners in manufacturing, mining, and steam railroads, and index of cost of living, 1909, 1914, 1919, 1923–40*

[Index numbers: Average 1923-25=100]

Year	Average hourly earnings								Index of cost of living [3]
	Amount (cents)				Index numbers				
	Manufacturing mining, and steam railroads	Manufacturing	Mining [1]	Steam railroads [2]	Manufacturing, mining, and steam railroads	Manufacturing	Mining [1]	Steam railroads [2]	
1909	20.7	19.3	31.3	21.9	36.9	36.0	40.7	37.1	[4] 50.9
1914	23.7	22.3	34.4	25.2	42.3	41.6	44.7	42.7	58.3
1919	50.2	47.7	70.7	53.7	89.5	88.9	91.9	90.9	101.1
1923	54.7	52.0	77.9	58.1	97.6	97.0	101.3	98.4	98.9
1924	56.8	54.5	77.1	59.2	101.3	101.6	100.2	100.2	99.2
1925	56.7	54.4	75.8	59.9	101.1	101.4	98.5	101.4	101.8
1926	57.1	54.8	75.8	59.9	101.8	102.2	98.5	101.4	102.6
1927	57.3	55.2	73.7	61.0	102.2	102.9	95.8	103.3	100.6
1928	57.9	56.0	71.5	61.8	103.3	104.4	92.9	104.6	99.5
1929	58.4	56.6	69.3	63.0	104.2	105.5	90.1	106.7	99.4
1930	57.5	55.2	69.5	63.8	102.6	102.9	90.3	108.0	96.9
1931	54.7	51.7	67.3	64.4	97.6	96.4	87.5	109.0	88.2
1932	48.7	45.8	58.2	59.1	86.9	85.4	75.6	100.1	79.2
1933	48.0	45.5	55.7	58.7	85.6	84.8	72.4	99.4	75.0
1934	55.7	54.1	69.2	59.5	99.3	100.9	89.9	100.7	77.7
1935	57.9	55.9	74.0	64.3	103.3	104.2	96.2	108.9	79.6
1936	58.6	56.4	77.1	65.1	104.5	105.2	100.2	110.2	80.4
1937	64.8	63.4	82.8	66.9	115.6	118.2	107.6	113.3	83.4
1938	65.7	63.9	84.7	70.4	117.2	119.1	110.1	119.2	81.8
1939	66.1	64.4	85.7	70.7	117.9	120.1	111.4	119.7	80.7
1940	68.3	67.0	85.9	71.1	121.8	124.9	111.7	120.4	81.2

[1] Bituminous coal, anthracite, and metalliferous. Based, in coal mining, on time at face excluding lunch.

[2] In this table and also in tables 3 to 6, steam railroad statistics apply to class I roads only. The relative importance of class I roads has been virtually constant. Their car-miles represent 98.8 percent of the total in 1915, 98.3 percent in 1923, and 99.5 percent in 1929 and 1936. The figures for 1909 are the averages of the 2 fiscal years ending June 30, 1910. Since the figures then published included all classes of roads, estimates for class I roads were computed by means of ratios for the fiscal year 1910–11. The 1914 figures were derived from data for the fiscal year ending June 30, 1915. For some of the years, data for switching and terminal companies were eliminated by means of ratios. Earnings are based on "time paid for."

[3] Revised index taking into account changes in distribution of expenditures as shown by the 1934–36 study of family expenditures of wage earners and lower-salaried workers made by the Bureau of Labor Statistics.

[4] The 1913 cost-of-living figure multiplied by the ratio of the 1909 to the 1913 index of the retail price of food.

[4] The years intervening between 1919 and 1924 were marked by considerable fluctuations in both wages and cost of living. Statistics of union rates and of general wages in selected industries indicate increases in 1920 and declines in 1921 or 1922, and thereafter an upturn in wages. The index of cost of living rose sharply between 1919 and June 1920, and thereafter, by 1922, returned approximately to the level of early 1919.

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At the beginning of the three decades, average hourly earnings were 13.5 percent higher in steam railroads than in manufacturing; and at the end of the period, only 6.1 percent higher. In mining, earnings per hour were materially higher than in manufacturing throughout the period, and with the exception of the years 1932 and 1933, higher also than in railroad transportation. In the twenties, wages of manufacturing and railroad workers remained fairly stable but the earnings of miners declined. This was largely a result of the break-down of collective bargaining and the progressive disintegration of the union-wage structure in bituminous-coal mining. After 1929, railroad workers suffered the smallest decline in their hourly earnings, and after 1932, they made the smallest gains.

Hourly Earnings: Causes of Changes

In large and varied fields of employment, there are continuous changes in the relative numbers of workers receiving various rates of pay and in the number of hours of labor at each rate level. These changes may of course have some effect on average hourly earnings (the weighted rate of pay) independently of changes in the separate rates.

When only a few occupations with widely divergent numbers and rates of pay are considered, changes in the numbers as well as changes in the separate rates may have serious effects in altering the average rate. When, however, the field covered is large and varied, any change in the average rate is mainly an effect of changes in the separate rates.[5]

The main causes of changes in rates of pay during the period 1909–40 have been the growth of collective bargaining; the adoption of public policies affecting wages; price changes; and changes in technology and the productivity of labor.

The influence of the first factor, collective bargaining, grew with unionization. From 1909 to 1940 there was an increase of only

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[5] The average wage rate has at times been viewed as being independent of the differences in the separate rates and the varying numbers receiving the different rates. The separate occupational rates in the different plants, no matter how divergent in size and in numbers receiving the rates, were converted to index numbers. These numbers (showing percentage changes in the separate rates) were added and averaged, and the simple averages of the index numbers for the years covered were viewed as an index of wage rates. Information regarding the varying amount of employment and size of pay rolls was formerly, of course, relatively inadequate, and the methods used were in a sense adapted to the limitations of the data. This was the method used, in connection with daily rates, by the Aldrich Committee in its frequently used index of "relative wages in all occupations" from 1840 to 1891, although the Committee also computed a general index by weighting the relatives for the several industries by the numbers employed or numbers gainfully occupied. (U. S. Congress, Senate, Committee on Finance, Report on Wholesale Prices, Wages, and Transportation, March 3, 1893 (Washington, 1893), part I, pp. 110–177.)

More recent conceptions of an average wage rate require that both the differences in the separate rates and the different numbers receiving them be taken into account. When the rates of pay of (let us say) 50 carpenters each receiving $1.00 an hour, 10 electricians each receiving 80 cents an hour, and 200 laborers each receiving 40 cents an hour are combined into a general rate, the separate rates should be weighted by the man-hours of employment at each rate.

But this direct method of ascertaining the separate rates and combining them on the basis of the numbers receiving each rate can be used only in limited fields. The number of rates (both time rates and piece rates) is almost infinite and there is a bewildering rapidity of change in the kinds of work demanded, in the degrees of skill required, and in the numbers receiving the separate rates. However, the equivalent of such a weighted average rate is obtainable by computing average hourly earnings. It is a relatively simple problem to obtain extensive samples of both pay rolls and man-hours. The pay-roll figures include wages paid both for piece work and for time work, and the man-hours include time worked on both a time basis and a piece basis. The number of dollars of aggregate wages divided by the number of hours of aggregate time worked therefore gives average hourly earnings, and the figure thus obtained is the equivalent of the weighted average rate.

A change in wage rates may cause or be accompanied by a shift in the proportions of workers at different rate levels or in the speed of piece workers or in other factors affecting average hourly earnings. Therefore, a change of say 10 percent in rates of pay might not be accompanied by a change of exactly 10 percent in average hourly earnings.

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about 75 percent in the number of workers who form the potential membership of labor organizations. In contrast, there was a fourfold increase in the membership of labor organizations, and therefore general advances in wages were more easily secured and retained.

A second cause of the rise in the compensation of labor, especially during the latter part of the period, was public policy, although the action of public agencies in connection with strikes and industrial disputes has tended at times to force employees to yield and accept reductions or forego advances. During the World War, public agencies were established for adjusting industrial disputes, and the provisions of Government contracts for war supplies tended to raise wages. After the World War, there was a policy of nonintervention as far as legislative and administrative agencies were concerned, but the courts were utilized extensively by employers, especially through injunctions, to check the influence of labor organizations. As a result, the Norris-LaGuardia Act was passed in 1932 to limit the use of injunctions in labor disputes. Minimum-wage legislation was enacted in some States, but unfavorable court decisions seriously halted the efforts to establish minimum wages by law. The extreme reductions of wages in some industries during the depression beginning in 1929 were followed by the enactment of the wage-and-hour provisions of the National Industrial Recovery Act, under which an attempt was made on a Nation-wide basis to establish minimum rates of pay for virtually all types of workers. The National Industrial Recovery Act also defended the workers' right to organize and to deal collectively with employers. The invalidation of the law was followed by the National Labor Relations Act for maintaining these rights of workers. Further developments in public policy relating to wages included the Public Contracts Act of 1936, the Fair Labor Standards Act of 1938, and the payment of prevailing wages in the emergency employment program.

Two other influences of outstanding importance affecting rates of wages were technology and price. Changes in prices most directly affecting wage earners are embodied in the cost-of-living index. (See table 2.) Technological changes and the accompanying rise in labor productivity and in volume of production created an economic basis for increases in the compensation of workers.

Productivity and Purchasing Power

The average amount of wages paid for an hour of labor when allowances are made for changes in cost of living measures approximately the purchasing power of wages and indicates roughly what wage earners draw out of the national product per hour of labor. The productivity of labor in the sense of the amount produced per hour of labor indicates the general level of industrial efficiency on which depends the amount produced for consumption. A comparison of real hourly earnings with man-hour productivity indicates roughly whether or not the wage earners' rate of consumption is keeping pace with the basic or man-hour rate of production.[6] Indexes of production

[6] For a further development of this conception, see Productivity, Wages, and National Income, by Spurgeon Bell, Washington, Brookings Institution, 1940. This volume emphasizes the view that it is more important for employers to distribute the benefits of increasing productivity to consumers generally through lower prices than to wage earners through higher wages.

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are available for manufacturing as a whole, for bituminous-coal mining, for anthracite mining, and for steam railroads. From these indexes of production and from the figures of employment and hours, indexes of man-hour output have been constructed (table 3) for comparison with the indexes of real hourly earnings for the same industries.

TABLE 3.—*Indexes of average hourly earnings adjusted to cost of living and indexes of output per man-hour in manufacturing, coal mining,[a] and steam railroads, 1909, 1914, 1919, 1923–40* [1]

[Average 1923–25=100]

Year	Manufacturing		Bituminous-coal mining		Anthracite mining		Steam railroads	
	Average hourly earnings adjusted by cost-of-living index	Output per man-hour [2]	Average hourly earnings adjusted by cost-of-living index	Output per man-hour [3]	Average hourly earnings adjusted by cost-of-living index	Output per man-hour [3]	Average hourly earnings adjusted by cost-of-living index	Output per man-hour [4]
1909	70.7	62.2	77.4	69.5	61.1	84.8	72.9	----------
1914	71.4	71.7	75.0	77.2	56.4	89.8	73.2	75.4
1919	87.9	71.7	91.6	85.1	76.0	100.0	89.9	85.4
1923	98.1	94.0	104.2	99.2	96.0	103.5	99.5	96.4
1924	102.4	100.1	100.0	100.9	103.6	97.7	101.0	99.3
1925	99.6	106.2	95.9	100.2	100.4	98.2	99.6	104.6
1926	99.6	110.1	93.5	99.5	99.2	98.7	98.8	107.1
1927	102.3	113.4	91.2	100.8	100.6	101.7	102.7	106.8
1928	104.9	119.1	87.8	104.5	101.1	101.5	105.1	112.1
1929	106.1	123.8	83.6	107.2	100.6	99.8	107.3	113.9
1930	106.2	127.5	86.3	111.9	102.7	97.3	111.5	113.8
1931	109.3	132.6	89.6	117.1	112.1	103.7	123.6	114.6
1932	107.8	128.0	80.2	115.0	125.0	119.0	126.4	111.9
1933	113.1	135.5	81.5	109.1	130.9	130.8	132.5	124.6
1934	129.9	140.4	105.7	111.0	127.5	122.6	129.6	125.4
1935	130.9	148.8	114.2	114.5	124.1	125.5	136.8	131.0
1936	130.8	150.3	120.5	120.5	124.4	---------	137.1	140.5
1937	141.7	147.8	125.3	123.8	125.7	---------	135.9	143.2
1938	145.6	150.7	131.1	131.8	135.2	---------	145.7	141.5
1939	148.8	163.9	134.0	142.2	137.3	---------	148.3	149.3
1940	153.8	172.8	132.8	141.2	136.6	---------	148.3	157.3

[a] The figures are subject to adjustment to the 1939 Census of Mineral Industries.

[1] Each of these indexes is derived by dividing one index by another (a production index by a man-hours index or an index of average hourly earnings by the cost-of-living index), the original indexes being on the 1923–25 base. The base-period figures of the derived indexes represent the average output (or the real hourly earnings) over the 3-year period and not the average of the 3 yearly figures.

[2] The production index used in computing man-hour output up to 1939 is the National Bureau of Economic Research index, constructed from the detailed data collected by the Bureau of the Census and published in a volume by Mr. Solomon Fabricant, The Output of Manufacturing Industries, 1899–1937. For the year 1940 the Federal Reserve Board index is linked to the National Bureau of Economic Research index.

[3] The index of production used is derived from tonnage figures. The index of man-hour output in mining is affected to an exceptional degree by factors other than technological change, such as the proportion of mining done in high-cost mines and by contractors.

[4] The production index used is derived from revenue traffic units (revenue passenger-miles times 2.6 plus revenue ton-miles).

There was an almost continuous rise from 1909 to 1940 in labor productivity. Changes during the twenties (1923 to 1929) were especially significant because of their bearing on the ensuing depression. In manufacturing, bituminous-coal mining, and steam railroads, man-hour output rose sharply and at the same time there was either a much smaller increase or a decline in real hourly earnings. (See table 3.) In railroad transportation, real hourly earnings increased 8 percent in contrast to an 18-percent rise in man-hour output. In manufacturing, real hourly earnings rose 8 percent and man-hour

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output, 32 percent. In bituminous-coal mining, real hourly earnings declined 20 percent in contrast to an 8-percent advance in man-hour output. Conditions peculiar to the anthracite industry account for the fact that from 1923 to 1929 man-hour output declined slightly, accompanying a small increase in earnings.

From 1909 to 1940, manufacturing showed a rise of 118 percent in real hourly earnings and 178 percent in man-hour output; bituminous-coal mining showed corresponding increases of 72 and 103 percent; anthracite mining (1909 to 1935), 103 and 48 percent; and railroad transportation (1914 to 1940), 103 and 109 percent.

In 1940, in manufacturing, real hourly earnings were 54 percent above the average for 1923 to 1925, and man-hour output was 73 percent above the 1923–25 level. Corresponding increases in bituminous-coal mining were 33 and 41 percent; in anthracite mining (in 1935) 24 and 26 percent; and in railroad transportation, 48 and 57 percent.

Weekly Earnings

The weekly money earnings of the average wage earner in manufacturing, mining, and railroad transportation more than doubled

TABLE 4.—*Average weekly earnings in manufacturing, mining, and steam railroads, 1909, 1914, 1919, 1923–40*

[Index numbers: Average 1923–25 = 100]

Year	Average weekly earnings [1]				Index numbers adjusted by cost-of-living index [2]			
	Manufacturing, mining, and steam railroads	Manufacturing [3]	Mining [4]	Steam railroads	Manufacturing, mining, and steam railroads	Manufacturing [3]	Mining [4]	Steam railroads
1909	$10.83	$10.38	$12.41	$11.77	82.9	80.4	90.4	87.6
1914	12.09	11.61	13.06	13.66	80.8	78.6	83.0	88.7
1919	23.83	23.29	26.80	24.84	91.8	90.8	98.3	93.1
1923	25.55	25.13	27.48	26.42	100.6	100.2	103.0	101.2
1924	25.51	25.24	26.64	26.14	100.2	100.3	99.6	99.8
1925	25.95	25.71	26.78	26.63	99.3	99.6	97.5	99.1
1926	26.44	26.00	29.74	26.91	100.4	99.9	107.5	99.3
1927	26.31	26.10	26.34	27.19	101.9	102.3	97.1	102.4
1928	26.55	26.34	26.54	27.49	103.9	104.4	98.9	104.6
1929	26.78	26.40	27.56	28.26	104.9	104.7	102.8	107.7
1930	25.06	24.53	24.95	27.57	100.7	99.8	95.5	107.7
1931	22.64	22.02	20.41	26.54	100.0	98.4	85.8	113.9
1932	18.60	17.86	16.51	23.13	91.5	88.9	77.3	110.6
1933	18.09	17.36	16.80	22.84	94.0	91.3	83.1	115.3
1934	19.65	18.93	19.93	24.11	98.5	96.0	95.1	117.5
1935	21.52	20.85	20.94	26.49	105.3	103.3	97.6	126.1
1936	23.26	22.60	23.44	27.72	112.7	110.8	108.1	130.6
1937	25.40	24.95	24.94	28.93	118.6	118.0	110.9	131.4
1938	23.47	22.70	21.92	29.98	111.7	109.4	99.4	138.9
1939	25.26	24.58	24.71	30.71	121.9	120.1	113.5	144.1
1940	26.62	26.11	25.46	31.32	127.7	126.8	116.3	146.2

[1] In manufacturing and mining, average weekly earnings for the years 1932 to 1940 were computed from the Bureau of Labor Statistics' employment and pay-roll samples. For the period from 1909 to 1932, estimated total weekly pay rolls were divided by the estimated average number of employees, and these series were then adjusted to the 1932–40 series by means of the ratios for 1932. For railroads, average weekly earnings were computed from the Interstate Commerce Commission's figures of employment and pay rolls.

[2] See table 3, footnote 1.

[3] Railroad repair shops are excluded throughout the period.

[4] Bituminous coal, anthracite, and metalliferous.

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from 1909 to 1919, but at the end of the decade, the wage earner's dollar would buy only half as much as at its beginning. The weekly average in 1909 was $10.83; in 1919, $23.83; in 1923, $25.55; and in 1929, $26.78. There followed sharp reductions in money wages and somewhat smaller declines in cost of living during the depression years, but in 1934 both money earnings and cost of living turned upward. In buying power, although not in dollars, weekly earnings were higher in 1940 than in any previous year.

The average weekly wage (table 4) is the average of the wages of all types of workers—regularly employed full-time workers and part-time and overtime workers. Part-time and overtime workers as proportions of the total vary both from industry to industry and from time to time in the same industry.[7]

Weekly Hours and Employment

Weekly hours of work (hours actually worked, not normal or regularly scheduled hours) averaged 51.7 in 1909 and 46.9 in 1919. During the next decade there was little change. Most of the sharp reduction from 45.2 hours in 1929 to 37.7 in 1932 was caused by increased part time and the sharing of work. The average in 1940 was 38.3 hours, about the same as in 1932. After 1932, the averages were influenced by two contrary tendencies. The reduction of part time tended to raise the averages. At the same time, however, a widespread reduction of the normal length of shifts and of the hours of plant operation tended to lower the averages. The reduction of normal hours was brought about largely by collective bargaining, the National Industrial Recovery Act, and the Fair Labor Standards Act.

The predominance of manufacturing in the general average for manufacturing, mining, and railroads accounts for the fact that hours of work in manufacturing conformed closely to hours in the combined industries. Throughout the period, mining was characterized by a large amount of part time and also, in many areas, by collective agreements for hours of labor materially shorter than in many other industries. These circumstances account for the fact that average hours in the mining industries were usually shorter than in manufacturing or railroad transportation. The general average in the mining industries fell from 40.5 hours in 1909 to 39.1 hours in 1919. The average in 1929 rose to 40.2 hours but fell to only 28.7 hours in 1932, rising slightly to 29.8 in 1940. Railroad workers as a rule had comparatively long hours. The average in 1909 was 53.9 hours; in 1919, 46.3; in 1929, 44.8; in 1932, 39.1; and in 1940, 44.1.

The average worker in manufacturing, mining, and railroad transportation had about 13 hours more leisure per week (2¼ hours per working day) in 1940 than in 1909. At the same time, in terms of the things a dollar could buy, for every dollar the average weekly pay envelope contained in 1909, it had $1.54 in 1940. These remarkable

[7] Average weekly earnings in manufacturing and mining are now computed on an annual basis by adding sample pay rolls for the 12 reporting weeks (usually the week ending nearest the middle of the month) and similarly by adding the number of workers (including part-time and overtime workers) on the pay rolls during the 12 weeks and by dividing the sum of the pay rolls by the sum of the workers. For the period from 1909 to 1932, the estimated average weekly pay roll in each main branch of employment was divided by the estimated average number of employees, and the resulting series were adjusted to the 1932–40 series by means of the ratios for 1932. For railroads, average weekly earnings were computed from the Interstate Commerce Commission's figures of employment and pay rolls.

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gains were accompanied by even more noteworthy advances in labor productivity.

The increase in the average number of wage earners was wholly accounted for by the growth of the manufacturing industries. The number in manufacturing was 6,273,200 in 1909 and 8,484,400 in 1940. In contrast, employment in the mining industries fell from 831,000 in 1909 to 553,200 in 1940, and in railroad transportation, from 1,562,700 in 1909 to 1,062,600 in 1940.[8]

TABLE 5.—*Average number of wage earners and average weekly hours in manufacturing, mining, and steam railroads, 1909, 1914, 1919, 1923–40*

Year	Average number of wage earners [1]				Average weekly hours [2]			
	Manufacturing, mining, and steam railroads	Manufacturing	Mining	Steam railroads	Manufacturing, mining, and steam railroads	Manufacturing	Mining	Steam railroads
1909	8,666,900	6,273,200	831,000	1,562,700	51.7	52.7	40.5	53.9
1914	8,960,600	6,614,000	863,700	1,482,900	50.3	51.0	38.7	54.1
1919	11,322,000	8,418,400	824,400	2,079,200	46.9	47.8	39.1	46.3
1923	11,075,500	8,194,700	903,800	1,977,000	46.1	47.3	36.1	45.5
1924	10,299,800	7,609,100	829,000	1,861,700	44.4	45.4	35.3	44.1
1925	10,529,600	7,875,000	803,200	1,851,400	45.2	46.3	36.1	44.5
1926	10,727,100	8,024,300	813,400	1,889,400	45.7	46.5	40.1	44.9
1927	10,494,800	7,851,500	804,700	1,838,600	45.2	46.3	36.5	44.6
1928	10,344,700	7,865,200	730,400	1,749,100	45.2	46.1	37.9	44.5
1929	10,835,100	8,368,800	711,500	1,754,800	45.2	45.7	40.2	44.8
1930	9,523,800	7,292,700	668,100	1,563,000	43.0	43.5	36.6	43.2
1931	8,071,400	6,162,300	593,200	1,315,900	40.8	41.7	31.0	41.2
1932	6,799,300	5,235,500	487,400	1,076,400	37.7	38.2	28.7	39.1
1933	7,300,700	5,790,500	489,400	1,020,800	37.5	37.8	30.6	38.9
1934	8,385,500	6,763,900	568,200	1,053,400	34.9	34.5	28.9	40.5
1935	8,821,100	7,202,600	579,700	1,038,800	36.5	36.5	28.3	41.2
1936	9,539,500	7,810,800	602,900	1,125,800	39.0	39.1	30.5	42.6
1937	10,360,200	8,570,000	625,700	1,164,500	38.6	38.6	30.2	43.2
1938	8,688,600	7,175,500	537,500	975,600	35.7	35.5	25.7	42.6
1939	9,415,600	7,887,800	502,000	1,025,800	37.8	37.6	29.0	43.5
1940	10,100,200	8,484,400	553,200	1,062,600	38.3	38.1	29.8	44.1

[1] Manufacturing excludes railroad repair shops. In railroads, the numbers receiving pay during the month are used, with ratio adjustments of middle-of-month figures before 1933; and all employees are classed as wage earners except the following groups as numbered in the Interstate Commerce Commission's current classification (or corresponding earlier groups): Groups 1–5, 13, 17, 19–22, 27, 44, 50–52, 78, 84, 85, 99, 105, 106. In mining, Census and Bureau of Labor Statistics data are used, with figures for years not covered by these agencies estimated from Bureau of Mines and State data. See footnote a to table 3.

[2] In manufacturing and mining, for years 1932 to 1940, weekly hours are from Bureau of Labor Statistics man-hour samples. In manufacturing, for years 1909 to 1932, weekly hours were computed by dividing man-hours (derived from pay rolls and hourly earnings) by employment and linking to the 1932–40 series by the 1932 ratio. In mining it was necessary to adapt methods to the varied and at times fragmentary data. For railroads, weekly hours are man-hours divided by employment.

Pay Rolls and Wage Earners' Share of Income

Total wage payments in manufacturing, mining, and steam railroads almost trebled from 1909 to 1919, rising from $4,680,000,000 to $13,453,000,000. During the next 10 years there were few extreme fluctuations. The total in 1929 was $14,454,000,000, and in 1932, $6,315,000,000, much less than half of the 1929 aggregate. The high point after 1932 was $12,805,000,000 in 1940. (See table 6.)

[8] The number of wage earners is the average of all full-time, part-time, and overtime workers on the pay rolls during the 12 reporting periods of each year. Average weekly hours, as stated above, are affected by part-time, overtime, and labor turn-over and are materially lower than full-time hours of regularly employed workers. Thus, in manufacturing as a whole, average hours actually worked in 1909, 1914, 1919, 1923, and 1929 were from 7 to 10 percent less than prevailing hours or normal hours of work as computed from census data. The later increase in part time added to the difference.

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When expressed in terms of purchasing power, total wages showed much smaller variations. There was a rise of about 99 percent in the cost-of-living index from 1909 to 1919. The rise continued until 1920, when a decline set in and the index, up to 1929, remained comparatively near the 1919 level. When pay rolls were being reduced so sharply after 1929, there was a fall in the cost of living, but so great was the reduction in wage payments that pay rolls adjusted by the cost-of-living index were 14 percent lower in 1932 than in 1914. The rise in wage payments after 1932 brought the total in 1940, when adjusted for changes in cost of living, to the highest point of the entire period.

TABLE 6.—*Pay rolls in manufacturing, mining, and steam railroads, and index of cost of living, 1909, 1914, 1919, 1923–40*

[Index numbers: Average 1923–25=100]

Year	Total wages								Index of cost of living
	Amount (millions)				Index numbers				
	Manufacturing, mining, and steam railroads	Manufacturing [1]	Mining [2]	Steam railroads	Manufacturing, mining, and steam railroads	Manufacturing [1]	Mining [2]	Steam railroads	
1909	$4,680	$3,210	$511	$959	34.4	32.5	45.1	36.7	[3] 50.9
1914	5,403	3,788	559	1,056	39.7	38.4	49.3	40.4	58.3
1919	13,453	9,665	1,095	2,693	98.8	98.0	96.7	103.1	101.1
1923	14,109	10,152	1,233	2,724	103.6	102.9	108.8	104.2	98.9
1924	13,112	9,468	1,100	2,544	96.3	96.0	97.1	97.4	99.2
1925	13,616	9,980	1,065	2,571	100.0	101.1	94.0	98.4	101.8
1926	14,138	10,285	1,202	2,651	103.9	104.2	106.1	101.5	102.6
1927	13,761	10,100	1,054	2,607	101.1	102.4	93.0	99.8	100.6
1928	13,690	10,212	964	2,514	100.6	103.5	85.1	96.2	99.5
1929	14,454	10,894	975	2,585	106.2	110.4	86.1	98.9	99.4
1930	11,896	8,818	831	2,247	87.4	89.4	73.3	86.0	96.9
1931	9,115	6,689	605	1,821	67.0	67.8	53.4	69.7	88.2
1932	6,315	4,610	403	1,302	46.4	46.7	35.6	49.8	79.2
1933	6,570	4,945	409	1,216	48.3	50.1	36.1	46.5	75.0
1934	8,243	6,368	551	1,324	60.6	64.5	48.7	50.7	77.7
1935	9,327	7,311	581	1,435	68.5	74.1	51.3	54.9	79.6
1936	10,767	8,463	672	1,632	79.1	85.8	59.3	62.5	80.4
1937	12,608	10,108	743	1,757	92.6	102.5	65.5	67.2	83.4
1938	9,831	7,742	564	1,525	72.2	78.5	49.8	58.4	81.8
1939	11,323	9,092	588	1,643	83.2	92.2	51.9	62.9	80.7
1940	12,805	10,396	669	1,740	94.1	105.4	59.1	66.6	81.2

[1] Railroad repair shops are excluded throughout the period.
[2] Bituminous coal, anthracite, and metalliferous. Pay rolls are from data collected by the Bureau of the Census and the Bureau of Labor Statistics, with figures for years not covered by these agencies computed by use of varied data, especially man-hours and average hourly earnings, with adjustments for conformity to trend. See footnote a to table 3.
[3] The 1913 cost-of-living figure multiplied by the ratio of the 1909 to the 1913 index of the retail price of food.

In manufacturing, railroad transportation, and the more important minerals industries, the statistics of total income and of wages are comparatively adequate. It is possible, therefore, on the basis of recent revisions of income statistics [9] to compute wages as percentages of total income in these industries.

[9] National Bureau of Economic Research, National Income and Capital Formation, 1919–35, by Simon Kuznets (New York, 1937); U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Income in the United States, 1929–37, by Robert R. Nathan (Washington, 1938). Revisions of the data from 1929 to 1939 were supplied by the Bureau of Foreign and Domestic Commerce. The figures of the National Bureau of Economic Research were linked by the 1929 ratios to the figures of the Bureau of Foreign and Domestic Commerce.

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In 1919, wages were 64.6 percent of all income payments in manufacturing, railroad transportation, and the minerals industries (bituminous-coal, anthracite and metalliferous mines, oil wells and natural gas, and quarrying and nonmetallic mines), and in 1920, 66.4 percent (table 7). In 1929, wages were only 57.1 percent of all income payments in these industries. This decline occurred during a period when there were large savings of income not distributed as income payments but retained by business firms for the stockholders or other owners. The decline of the comparative amount going to wages continued until 1932 when wages were 51.7 percent of the total. Income payments other than wages after 1929 were in part derived from earlier savings. After 1932, the percentage that was distributed as wages regained a part of the earlier loss and was somewhat larger in 1939 than in 1929.

TABLE 7.—*Wage and nonwage income as percentages of aggregate income paid out in manufacturing, minerals industries,[1] and steam railroads,[2] 1919–39* [3]

Year	Percentages of aggregate income going to—		Year	Percentages of aggregate income going to—	
	Wages	Income payments other than wages		Wages	Income payments other than wages
1919	64.6	35.4	1930	53.4	46.6
1920	66.4	33.6	1931	52.2	47.8
1921	61.3	38.7	1932	51.7	48.3
1922	61.8	38.2	1933	55.1	44.9
1923	63.6	36.4	1934	57.2	42.8
1924	61.8	38.2	1935	57.9	42.1
1925	61.1	38.9	1936	57.5	42.5
1926	60.5	39.5	1937	59.4	40.6
1927	58.9	41.1	1938	58.6	41.4
1928	57.4	42.6	1939	59.5	40.5
1929	57.1	42.9			

[1] Bituminous-coal, anthracite, and metalliferous mines, oil wells and natural gas, and quarrying and nonmetallic mines.
[2] Including Pullman and railway express.
[3] Computed from the income statistics of the National Bureau of Economic Research in National Income and Capital Formation, 1919–35, by Simon Kuznets (pp. 62–63), for 1919 to 1929, and of the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce for 1929 to 1939, linked by the 1929 ratios.

A fall in wages as a percentage of total income paid out may, of course, occur when there is a rise in the amount of wages paid. This occurred at times from 1919 to 1929, when total wage payments increased, though not as much as nonwage income. From 1929 to 1932, nonwage income also declined, but not so rapidly as wages. After 1932, wage payments and nonwage income both increased, but the larger increase was in wages.

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Wages and Hours by Industries and Trades

Bureau of Labor Statistics Bulletin No. 694
Handbook of Labor Statistics: 1941 edition

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Hourly Earnings, Weekly Hours, and Weekly Earnings, by Industries

The Bureau of Labor Statistics compiles and publishes monthly the hourly earnings, weekly hours of labor, and weekly earnings for workers in a large number of industries. The average hourly earnings and weekly hours are based on information furnished by such of the establishments reporting regularly to the Bureau on employment and pay rolls as are able to furnish data regarding man-hours of employment. By dividing man-hours per week by the number of employees on the weekly pay roll, the average hours per week per worker are obtained; and by dividing the weekly pay roll by the number of man-hours worked, average hourly earnings are obtained. Multiplying hourly earnings by hours per week produces, of course, the average weekly earnings per worker. The weekly per capita earnings thus obtained may differ, because of the smaller sample of plants reporting man-hour data, from the published average which is obtained by dividing total pay rolls by total employment as furnished by all reporting establishments. The difference, however, is in most cases quite small, and the average derived from the larger sample is used by the Bureau as being probably somewhat more representative than that secured from the smaller man-hour sample.

The attempt by the Bureau to secure man-hour data as a means of computing hourly earnings and weekly hours was initiated only in 1932 and for most industries it was several months before the reports were sufficiently numerous to permit of satisfactory results. There was, however, a constant increase in the number of establishments reporting man-hours until at the present time the figures compiled on hours and earnings monthly may be accepted as substantially correct for most of the industries covered by the employment and pay-roll reports. Also, while fluctuation in the number of reporting establishments may affect the strict comparability of the averages from month to month, the figures may be accepted as quite accurately indicative of the trend in hours and earnings.

Those industries for which the samples seem too small to produce fairly accurate results are omitted from the accompanying table which shows by years for 1933, 1936, 1939, and 1940 and for August 1941, the average hourly earnings, average weekly hours, and weekly per capita earnings. The averages for all manufacturing and for each of the industry groups have been weighted by the number of employees in each of the industries concerned.

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Average hours worked per week, average hourly and weekly earnings in manufacturing and nonmanufacturing industries, by years, 1933, 1936, 1939, 1940, and August 1941 (preliminary)

Industry	Average hours worked per week					Average hourly earnings (in cents)					Average weekly earnings				
	1933	1936	1939	1940	Aug. 1941	1933	1936	1939	1940	Aug. 1941	1933	1936	1939	1940	Aug. 1941
MANUFACTURING INDUSTRIES															
Total manufacturing	37.8	39.1	37.6	38.1	41.0	45.5	56.4	64.4	67.0	74.5	$17.36	$22.60	$24.58	$26.11	$31.63
Durable goods	34.7	40.8	37.8	39.2	42.6	48.5	59.7	71.0	73.4	83.0	17.80	25.24	27.83	29.88	36.52
Nondurable goods	39.7	37.7	37.4	37.0	39.4	43.7	53.7	59.1	61.2	65.8	17.04	20.09	21.54	22.03	25.38
Durable goods															
Iron and steel and their products, not including machinery	33.8	40.8	36.8	38.1	41.4	50.3	62.0	75.9	77.3	87.1	17.03	25.61	28.00	29.57	30.12
Blast furnaces, steel works, and rolling mills	32.5	40.9	35.5	37.3	40.1	53.1	67.1	84.3	84.8	96.8	17.27	27.37	29.92	31.54	38.81
Bolts, nuts, washers, and rivets	(1)	41.9	37.7	39.5	45.0	(1)	57.5	69.0	69.6	80.0	16.91	24.08	26.04	27.50	36.02
Cast-iron pipe	29.7	38.2	36.4	37.2	41.1	45.3	49.3	58.1	60.1	67.5	13.33	18.99	21.33	22.51	27.91
Cutlery (not including silver and plated cutlery) and edge tools	(1)	41.0	39.1	39.5	44.0	(1)	52.6	60.1	62.2	70.2	17.53	21.53	23.11	24.19	30.38
Forgings, iron and steel	(1)	41.7	38.4	41.3	45.9	(1)	62.7	76.7	79.1	90.5	17.28	26.11	29.45	32.56	41.41
Hardware	35.2	41.0	38.1	39.0	42.8	46.5	56.2	66.8	68.3	77.5	15.61	22.90	25.47	26.64	33.11
Plumbers' supplies	(1)	39.0	38.2	38.9	40.1	(1)	57.0	67.6	69.1	75.3	15.73	22.23	25.80	26.83	30.21
Stamped and enameled ware	(1)	40.0	38.1	39.1	41.5	(1)	55.8	62.7	65.2	72.1	15.88	22.44	23.92	25.51	29.71
Steam and hot-water heating apparatus and steam fittings	33.5	41.2	37.6	40.3	44.0	51.6	58.7	69.7	71.4	81.1	17.38	24.25	26.19	28.71	35.51
Stoves	35.8	41.7	38.1	38.8	41.5	48.2	58.2	66.6	68.0	73.7	17.67	24.12	25.25	26.33	30.48
Structural and ornamental metalwork	32.8	41.7	38.5	39.2	44.2	48.0	58.4	72.7	73.6	83.5	16.08	24.32	27.95	28.83	36.82
Tin cans and other tinware	(1)	39.3	38.8	39.0	42.9	(1)	52.5	61.1	63.0	66.9	18.95	20.69	23.61	24.46	28.42
Tools (not including edge tools, machine tools, files, and saws)	(1)	43.5	39.7	41.1	46.5	(1)	53.8	61.8	63.5	73.5	16.87	23.43	24.49	26.06	34.03
Wirework	(1)	40.4	38.1	39.5	42.0	(1)	55.4	68.3	70.3	75.5	(1)	22.36	25.96	27.74	31.68
Machinery, not including transportation equipment	33.5	41.2	38.9	41.3	45.1	54.1	61.3	72.5	74.5	84.4	18.86	25.29	28.19	30.82	38.19
Agricultural implements (including tractors)	(1)	39.4	37.7	39.1	40.1	(1)	66.1	78.9	80.0	90.7	18.86	25.94	29.61	31.18	36.31
Cash registers, adding machines, and calculating machines	(1)	41.3	37.2	40.1	44.6	(1)	71.0	82.1	82.9	91.8	24.12	28.78	30.38	33.06	40.76
Electrical machinery, apparatus, and supplies	33.1	39.9	38.5	40.7	43.9	57.1	62.4	74.0	75.8	85.3	19.83	24.98	28.43	30.72	37.44
Engines, turbines, water wheels, and windmills	34.6	40.6	40.0	43.7	46.2	57.5	66.3	79.0	81.7	99.7	19.77	26.87	31.44	35.61	46.02
Foundry and machine-shop products	32.7	42.4	38.9	41.0	45.6	53.2	60.1	71.6	73.4	82.6	17.32	25.55	27.83	30.13	37.72
Machine tools	33.9	44.6	42.9	48.2	51.2	56.8	63.6	75.2	76.8	85.0	19.44	28.40	32.25	36.97	43.53
Radios and phonographs	(1)	37.3	38.5	38.5	41.3	(1)	54.0	58.1	61.4	68.7	18.30	20.10	22.34	23.60	28.32
Textile machinery and parts	36.5	41.0	39.8	40.3	46.6	56.5	59.9	66.0	66.1	74.4	19.85	24.55	26.19	26.56	34.49
Typewriters and parts	36.3	42.1	37.3	39.5	46.4	48.0	56.9	64.3	65.7	75.4	17.04	23.98	23.98	25.94	35.01
Transportation equipment	(1)	38.3	36.3	38.9	41.9	(1)	75.9	89.4	89.9	99.0	21.05	29.08	32.30	34.65	41.23
Aircraft	(1)	42.1	41.5	43.2	45.6	(1)	63.2	74.5	74.3	85.5	27.46	26.08	30.34	31.40	38.46
Automobiles	35.2	38.5	35.5	37.9	39.0	59.3	77.4	92.9	94.9	105.7	20.96	29.75	32.90	35.88	41.14
Cars, electric- and steam-railroad	(1)	38.1	36.0	38.0	39.4	(1)	62.2	74.1	75.0	84.4	18.85	23.74	26.71	28.47	33.29
Locomotives	(1)	40.4	36.7	39.4	46.1	(1)	63.3	77.1	79.3	88.4	18.71	25.54	28.33	31.25	40.74
Shipbuilding	31.0	35.7	38.0	39.8	44.4	60.8	76.0	83.5	87.0	103.9	20.81	27.35	31.91	34.78	46.47

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Nonferrous metals and their products	(1)	41.1	39.0	40.0	43.0	(1)	57.0	67.7	70.8	80.8	17.69	23.57	26.36	28.39	34.88
Aluminum manufactures	(1)	41.3	39.2	40.4	42.6	(1)	57.0	70.1	73.3	83.7	16.85	23.52	27.55	29.64	35.67
Brass, bronze, and copper products	35.6	41.6	39.6	41.3	44.4	49.3	59.5	72.3	77.0	88.7	18.07	24.75	28.57	31.67	39.17
Clocks and watches and time-recording devices	37.7	41.9	37.9	39.4	43.1	41.9	50.5	58.7	59.9	68.0	15.26	21.50	22.27	23.64	29.29
Jewelry	(1)	39.1	39.3	39.1	42.4	(1)	55.4	58.4	58.6	60.5	18.00	21.82	23.20	23.22	25.76
Lighting equipment	(1)	41.6	37.1	38.9	41.9	(1)	55.6	69.3	70.1	77.9	17.61	23.05	25.73	27.29	32.65
Silverware and plated ware	36.2	39.0	40.7	40.6	44.1	49.1	58.4	64.3	65.5	74.1	18.06	22.90	26.03	26.46	32.33
Smelting and refining—copper, lead, and zinc	(1)	41.5	38.2	38.8	39.5	(1)	57.8	69.9	72.1	81.7	18.19	23.99	26.67	27.97	32.29
Lumber and allied products	(1)	43.0	38.9	38.7	41.8	(1)	42.4	50.1	52.1	58.8	12.63	18.34	19.71	20.37	24.65
Furniture	36.2	42.4	38.9	39.3	42.5	37.7	45.5	53.0	54.7	60.2	13.71	19.25	20.51	21.36	25.43
Lumber:															
Millwork	(1)	43.2	41.1	40.7	43.3	(1)	46.7	54.0	54.6	61.0	14.02	20.16	22.17	22.23	26.44
Sawmills	37.4	43.1	38.4	38.0	41.0	30.0	39.8	47.6	50.1	57.3	11.14	17.18	18.29	19.09	23.49
Stone, clay, and glass products	(1)	39.1	36.8	36.7	38.5	(1)	55.5	65.0	66.8	72.1	16.30	21.47	24.01	24.69	27.98
Brick, tile, and terra cotta	32.2	41.9	37.8	37.0	38.8	36.7	45.3	54.3	56.3	64.8	11.88	18.94	20.55	20.95	25.30
Cement	34.1	38.5	38.2	38.5	40.7	46.7	57.9	69.9	71.0	78.2	16.55	22.27	26.67	27.34	31.82
Glass	35.9	36.8	35.2	35.8	37.6	48.2	60.9	72.1	74.5	78.2	18.07	22.35	25.32	26.63	29.28
Marble, granite, slate, and other products	(1)	38.0	36.9	35.6	38.8	(1)	64.8	71.4	71.9	73.1	18.71	24.60	26.18	25.49	28.30
Pottery	(1)	39.9	37.2	37.2	38.3	(1)	55.3	62.5	63.4	68.7	15.82	21.22	22.74	23.10	26.22
Nondurable goods															
Textiles and their products	(1)	35.7	35.7	35.0	38.1	(1)	46.8	48.4	50.4	55.4	13.54	16.53	17.04	17.44	21.05
Fabrics	40.4	37.0	36.6	35.8	38.9	34.7	44.2	46.4	48.5	53.3	13.34	16.15	16.68	17.13	20.63
Carpets and rugs	36.8	36.7	36.1	35.2	39.7	45.5	56.3	64.4	66.9	72.1	16.68	20.61	23.25	23.56	28.53
Cotton goods	41.4	37.5	36.7	36.0	39.4	27.7	36.8	38.9	41.2	47.2	11.56	13.79	14.26	14.85	18.58
Cotton small wares	(1)	38.6	39.0	37.8	41.2	(1)	44.7	47.4	49.2	54.9	14.91	17.26	18.22	18.41	22.59
Dyeing and finishing textiles	42.4	38.9	38.6	37.6	40.1	42.5	51.7	53.5	54.5	58.2	17.97	20.17	20.82	20.62	23.57
Hats, fur-felt	(1)	34.4	32.2	32.5	37.0	(1)	67.5	70.7	73.4	83.1	19.09	23.29	22.73	23.71	30.48
Hosiery	39.9	35.5	35.6	34.0	36.2	38.4	52.2	53.6	55.3	54.0	14.03	17.89	18.98	18.69	19.51
Knitted outerwear	(1)	37.8	37.0	36.4	38.6	(1)	44.6	46.1	47.8	50.3	14.12	16.99	17.14	17.63	19.70
Knitted underwear	39.3	37.6	36.9	35.6	38.5	30.4	38.5	41.0	43.1	45.8	12.19	14.47	15.05	15.29	17.75
Knitted cloth	(1)	38.9	38.4	38.0	40.3	(1)	43.5	46.8	48.9	54.4	13.79	16.56	18.15	18.91	22.45
Silk and rayon goods	37.1	36.2	36.5	35.7	37.8	35.6	42.6	42.9	45.5	50.8	13.29	15.44	15.78	16.33	19.37
Woolen and worsted goods	41.3	36.2	36.4	36.1	39.6	39.6	50.1	52.8	56.4	63.6	16.26	18.11	19.21	20.33	25.21
Wearing apparel	(1)	33.4	34.0	33.4	36.4	(1)	51.2	52.2	53.9	59.6	14.44	17.63	18.10	18.31	22.18
Clothing, men's	(1)	32.2	33.2	32.5	36.3	(1)	56.0	58.1	59.3	64.7	14.30	18.39	19.32	19.31	23.68
Clothing, women's	(1)	33.3	33.9	33.8	36.0	(1)	52.9	51.9	53.8	60.8	17.03	18.81	19.20	19.65	23.45
Corsets and allied garments	(1)	35.0	37.5	35.7	37.4	(1)	44.6	45.6	47.5	51.6	14.16	15.78	17.15	17.17	19.49
Men's furnishings	(1)	36.5	35.9	34.4	36.4	(1)	34.2	38.3	41.4	44.8	11.49	13.92	14.16	14.56	16.77
Millinery	(1)	(1)	(1)	34.1	33.6	(1)	(1)	(1)	69.9	74.0	16.22	20.46	22.19	24.07	28.54
Shirts and collars	(1)	35.3	34.9	34.1	37.4	(1)	37.3	39.4	41.1	44.8	10.92	13.10	13.64	13.91	16.69
Leather and its manufactures	(1)	36.3	36.2	34.9	39.2	(1)	51.1	52.8	55.0	61.5	16.15	18.49	19.09	19.07	23.97
Boots and shoes	(1)	35.6	35.7	34.2	38.8	(1)	49.8	50.3	52.6	59.0	15.41	17.47	17.83	17.85	22.90
Leather	41.1	39.2	38.7	37.6	40.7	44.6	56.1	63.4	64.7	71.4	19.06	21.99	24.43	24.27	28.86
Food and kindred products	(1)	41.1	40.3	40.0	41.3	(1)	53.0	61.8	63.0	65.8	18.75	21.78	24.74	24.72	26.31
Baking	(1)	42.3	41.7	41.4	41.8	(1)	54.4	62.1	63.8	67.2	21.66	22.98	25.70	26.32	28.06
Beverages	41.7	40.5	39.0	39.0	42.4	66.1	78.4	86.5	88.3	91.5	27.80	31.50	33.46	34.06	38.49
Butter	(1)	47.3	46.7	46.2	47.5	(1)	44.3	48.4	48.6	51.7	20.58	21.38	22.60	22.71	24.77
Canning and preserving	(1)	36.5	36.9	36.3	39.8	(1)	39.3	46.4	46.5	52.0	11.35	14.14	16.77	16.61	20.27
Confectionery	37.2	39.5	38.1	38.1	38.6	36.6	41.8	49.2	50.5	55.5	13.65	16.38	18.64	19.16	21.39

[1] Data not available.

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Average hours worked per week, average hourly and weekly earnings in manufacturing and nonmanufacturing industries, by years, 1933, 1936, 1939, 1940, and August 1941—Continued

Industry	Average hours worked per week					Average hourly earnings (in cents)					Average weekly earnings				
	1933	1936	1939	1940	Aug. 1941	1933	1936	1939	1940	Aug. 1941	1933	1936	1939	1940	Aug. 1941
MANUFACTURING INDUSTRIES—continued															
Nondurable goods—Continued															
Food and kindred products—Continued.															
Flour	43.4	43.8	42.3	41.4	42.9	46.0	53.6	60.5	61.1	64.4	$20.34	$23.60	$25.80	$25.42	$28.07
Ice cream	47.6	47.4	46.2	45.5	46.0	52.3	55.5	62.6	64.0	64.1	25.06	26.56	29.24	29.47	29.64
Slaughtering and meat packing	43.3	42.2	40.6	40.2	39.6	46.2	56.5	68.6	68.6	76.6	20.00	23.89	27.85	27.60	30.31
Sugar, beet	49.0	43.8	42.9	43.1	36.4	42.6	49.5	58.5	61.4	77.4	19.26	21.38	24.68	26.07	27.64
Sugar, refining, cane	(1)	38.8	37.6	37.6	43.5	(1)	57.9	63.6	64.6	68.0	22.83	22.71	23.91	24.25	29.56
Tobacco manufactures	(1)	36.2	35.4	36.2	37.2	(1)	41.0	47.6	49.3	52.0	12.60	14.95	16.84	17.81	19.37
Chewing and smoking tobacco and snuff	38.8	35.7	34.1	34.9	36.6	34.2	44.4	51.4	53.5	57.8	13.46	15.81	17.53	18.61	21.08
Cigars and cigarettes	(1)	35.7	35.6	36.3	37.3	(1)	40.5	47.1	48.7	51.4	12.40	14.77	16.69	17.64	19.06
Paper and printing	(1)	39.3	38.5	38.4	40.1	(1)	69.9	77.3	79.2	82.4	23.25	26.25	28.45	29.10	32.04
Boxes, paper	(1)	40.9	40.2	39.2	41.9	(1)	48.1	54.7	56.2	61.8	17.15	19.55	21.78	21.92	5.722
Paper and pulp	40.6	41.6	40.3	40.5	43.1	44.3	53.7	62.0	64.6	72.5	17.97	22.33	24.92	26.13	31.18
Printing and publishing:															
Book and job	(1)	38.6	38.3	38.5	39.9	(1)	74.2	80.4	81.1	81.6	25.14	28.41	30.30	30.78	32.23
Newspapers and periodicals	(1)	37.0	36.1	35.9	35.7	(1)	92.2	100.4	103.3	107.0	31.18	35.15	37.58	38.22	38.88
Chemical, petroleum, and coal products	(1)	39.2	38.6	38.7	40.0	(1)	63.0	74.5	76.3	83.7	21.24	24.34	28.85	29.80	33.78
Petroleum refining	37.9	35.8	36.1	36.1	38.0	65.5	82.7	97.4	97.4	102.5	26.46	29.36	34.97	34.98	38.57
Other than petroleum refining	(1)	40.4	39.5	39.7	40.6	(1)	55.7	66.1	69.0	78.0	18.76	22.29	26.25	27.81	32.16
Chemicals	41.0	40.6	40.0	40.0	41.3	56.6	65.3	78.4	80.4	88.7	23.42	26.54	31.30	32.17	36.65
Cottonseed—oil, cake, and meal	(1)	49.1	44.3	43.7	38.7	(1)	22.0	30.2	33.5	37.1	9.70	10.75	13.70	15.10	14.82
Druggists' preparations	(1)	39.5	39.8	39.6	40.4	(1)	55.0	59.6	60.7	63.6	19.90	22.18	25.06	25.08	26.95
Explosives	35.2	39.6	38.9	39.6	43.0	57.7	70.6	81.2	84.7	89.4	20.55	27.95	31.62	33.50	38.46
Fertilizers	40.0	38.5	35.8	35.4	36.1	26.5	33.2	41.2	43.0	51.7	10.39	12.77	14.71	15.07	18.67
Paint and varnishes	40.5	41.9	40.5	40.6	41.7	51.2	60.0	70.4	72.2	78.4	20.95	25.12	28.48	29.26	32.65
Rayon and allied products	41.2	38.6	37.9	39.1	39.3	42.0	53.2	64.6	67.9	72.8	17.01	20.52	24.52	26.51	28.60
Soap	40.5	39.4	39.8	39.8	41.3	46.9	60.1	70.7	71.5	79.0	18.94	23.69	28.11	28.45	32.66
Rubber products	(1)	37.6	36.9	36.9	39.4	(1)	69.8	76.7	77.9	86.1	19.25	26.08	28.22	28.62	33.78
Rubber boots and shoes	(1)	38.6	37.5	38.3	41.4	(1)	52.3	60.7	61.7	71.5	17.45	20.20	22.80	23.64	29.60
Rubber tires and inner tubes	31.6	35.4	35.0	34.8	37.0	64.2	87.3	95.7	96.7	106.2	20.53	30.72	33.36	33.55	39.17
Rubber goods, other	37.9	40.3	38.9	38.7	41.3	45.5	53.5	60.5	62.1	70.0	17.19	21.39	23.34	23.80	28.76
NONMANUFACTURING INDUSTRIES															
Coal mining:															
Anthracite	31.4	30.8	27.7	27.2	38.8	81.8	83.3	92.3	92.4	98.9	25.74	25.63	25.67	24.94	33.56
Bituminous	29.5	28.8	27.1	28.1	32.7	50.1	79.4	88.6	88.3	103.3	14.47	22.71	23.88	24.71	33.85
Metalliferous mining	39.1	42.0	40.0	40.9	41.9	49.5	60.5	70.5	73.3	80.8	19.32	25.45	28.05	29.86	33.68

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Quarrying and nonmetallic mining	36.3	41.4	39.2	39.3	43.7	41.0	47.5	55.0	56.8	64.1	14.64	19.69	21.61	22.33	27.91
Crude-petroleum producing	(1)	38.2	38.3	37.8	37.9	(1)	76.8	87.3	88.1	93.5	27.51	29.93	34.09	34.03	36.26
Public utilities:															
Telephone and telegraph [2]	(1)	(1)	39.1	39.4	40.2	(1)	(1)	80.0	80.6	79.2	26.11	29.29	31.07	31.60	31.75
Electric light and power [2]	42.0	40.1	39.6	39.7	40.3	69.3	80.3	86.9	88.4	91.5	29.23	32.22	34.38	35.10	36.75
Street railways and busses [2]	45.4	46.3	45.9	46.1	47.4	57.7	63.8	71.4	72.2	96.3	26.56	30.03	33.13	33.75	36.67
Trade:															
Wholesale [2]	(1)	42.6	41.7	41.2	41.1	(1)	66.7	71.5	73.9	79.8	26.11	28.53	29.85	30.39	32.60
Retail [2]	(1)	43.5	43.0	42.9	42.8	(1)	52.2	53.4	53.9	57.4	19.18	20.68	21.17	21.17	22.43
Hotels (year-round) [2 3]	(1)	48.3	47.1	46.3	46.1	(1)	28.7	32.4	33.2	34.7	12.79	13.97	15.25	15.52	16.13
Laundries	(1)	42.5	42.7	43.0	43.2	(1)	37.4	41.7	42.2	44.1	14.74	16.06	17.69	18.10	18.94
Dyeing and cleaning	(1)	42.8	41.8	42.9	43.2	(1)	44.2	49.0	48.9	50.8	16.78	18.65	19.96	20.44	21.44
Brokerage [2]	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	33.83	37.28	36.63	37.46	39.47
Insurance [2]	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	34.29	37.99	36.32	36.55	37.33
Building construction	(1)	32.8	32.6	33.1	------	(1)	82.4	93.2	95.9	------	(1)	27.08	30.34	31.62	------

[1] Data not available.

[2] Figures prior to 1939 are not strictly comparable with figures for 1939, 1940, and 1941 as the latter exclude data for corporation officers, executives, and other employees whose duties are mainly supervisory.

[3] Earnings relate to cash payments only. The additional value of board, room, and tips cannot be computed.

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Table 2 shows average hours worked per week, average hourly earnings, and average weekly earnings, by principal industry groups, for selected months in 1940 and 1941.

TABLE 2.—*Average hours worked per week, average hourly earnings, and average weekly earnings, by principal industry groups, for selected months in 1940 and 1941*

Year and month	Manufacturing								
	Total manufacturing			Durable-goods group			Nondurable-goods group		
	Average hours worked per week	Average hourly earnings	Average weekly earnings	Average hours worked per week	Average hourly earnings	Average weekly earnings	Average hours worked per week	Average hourly earnings	Average weekly earnings
1940		*Cents*			*Cents*			*Cents*	
March	37.5	66.5	$25.46	38.3	72.8	$28.90	36.9	61.0	$21.86
June	37.5	67.2	25.79	38.7	73.2	29.48	36.4	61.7	21.81
September	38.8	67.1	26.54	40.2	73.7	30.57	37.5	61.1	22.20
December	39.8	68.3	27.89	41.2	74.9	31.96	38.4	61.7	23.09
1941									
March	40.4	69.7	29.11	42.0	76.8	33.49	38.8	62.4	23.63
June	41.3	73.8	31.88	43.1	82.2	36.91	39.4	65.0	25.11
September	40.9	75.8	32.06	42.3	84.3	36.82	39.5	66.8	25.78
December	41.2	78.7	33.68	42.8	87.1	38.65	39.4	69.5	26.92

Year and month	Mining								
	Anthracite			Bituminous coal			Metalliferous		
1940									
March	26.3	92.5	24.22	26.5	88.4	23.57	41.2	73.0	29.88
June	29.3	93.0	26.85	26.8	88.7	23.48	40.1	72.5	28.95
September	28.4	93.6	25.96	28.7	88.3	25.25	41.1	73.2	29.97
December	29.7	91.9	27.60	31.0	88.7	27.12	42.2	74.6	31.41
1941									
March	29.9	92.7	27.79	31.6	88.3	27.64	41.0	75.4	30.85
June	34.0	100.2	34.20	31.7	102.3	32.37	42.7	80.2	34.07
September	33.4	98.2	32.60	31.5	103.4	32.75	41.6	82.1	34.04
December	23.6	100.7	24.05	31.6	106.8	33.38	43.0	85.4	36.76

Year and month	Mining—Continued						Public utilities		
	Quarrying and nonmetallic			Crude-petroleum production			Telephone and telegraph		
1940									
March	36.9	56.0	20.67	37.8	88.4	34.02	39.4	81.1	31.73
June	40.2	56.7	22.89	37.4	88.3	33.74	39.5	80.3	31.54
September	41.8	56.7	23.75	36.9	89.5	33.98	39.7	80.1	31.66
December	40.0	58.7	23.42	36.9	89.4	33.96	39.5	81.1	31.88
1941									
March	38.9	58.9	22.85	37.3	89.3	34.25	39.8	80.6	31.93
June	42.8	63.5	27.19	37.1	93.5	35.67	40.2	80.2	32.02
September	43.6	64.3	28.07	38.5	96.2	38.28	40.3	79.3	31.75
December	41.9	66.7	27.74	38.3	98.8	38.92	40.7	82.6	33.39

Year and month	Public utilities—Continued						Trade		
	Electric light and power			Street railways and busses			Wholesale		
1940									
March	39.9	87.6	34.96	46.3	71.8	33.60	41.2	73.1	30.08
June	39.3	89.0	35.03	46.3	72.3	33.80	41.2	73.7	30.41
September	39.1	89.2	34.86	46.5	72.6	34.15	41.5	74.8	31.08
December	39.1	90.4	35.37	47.4	73.0	34.91	41.5	75.6	31.25
1941									
March	39.3	91.4	35.82	46.6	73.2	34.59	40.6	77.2	31.17
June	39.3	92.9	36.44	47.7	74.5	35.91	41.4	79.8	32.57
September	40.0	92.5	36.81	46.4	77.1	36.20	41.0	81.2	33.28
December	40.3	94.0	37.73	46.8	77.9	36.94	41.3	82.0	33.69

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TABLE 2.—*Average hours worked per week, average hourly earnings, and average weekly earnings, by principal industry groups, for selected months in 1940 and 1941*—Continued

Year and month	Trade—Continued			Hotels (year-round) [1]			Service		
	Retail						Laundries		
	Average hours worked per week	Average hourly earnings	Average weekly earnings	Average hours worked per week	Average hourly earnings	Average weekly earnings	Average hours worked per week	Average hourly earnings	Average weekly earnings
1940		*Cents*			*Cents*			*Cents*	
March	42.6	54.0	21.02	46.2	32.9	15.44	43.0	41.7	17.87
June	42.9	54.8	21.51	46.3	33.3	15.47	43.9	42.2	18.51
September	43.2	53.3	21.16	46.2	33.6	15.51	42.8	42.7	18.20
December	42.9	52.2	20.37	45.7	33.9	15.78	43.2	42.6	18.36
1941									
March	42.7	54.8	21.59	46.0	33.7	15.67	43.3	42.6	18.37
June	42.8	57.2	22.31	45.8	34.2	15.86	43.7	43.9	19.09
September	42.4	56.8	22.11	45.4	35.6	16.27	43.3	44.9	19.33
December	42.3	56.1	21.59	45.1	36.5	16.79	42.9	46.1	19.59
	Service—Continued			Brokerage			Insurance		
	Dyeing and cleaning								
1940									
March	42.4	48.8	20.10			36.95			36.79
June	45.0	49.1	21.57			36.73			36.90
September	44.3	49.2	21.30			35.97			35.89
December	42.4	48.6	20.09			37.71			36.95
1941									
March	42.4	49.4	20.34			37.85			37.24
June	44.7	50.6	22.27			39.32			37.65
September	44.7	51.9	22.69			39.79			37.25
December	42.3	52.4	21.69			40.47			38.33
	Private building construction								
1940									
March	30.9	97.1	29.93						
June	33.8	94.8	31.95						
September	34.8	94.7	32.92						
December	33.8	96.7	32.63						
1941									
March	32.8	100.0	32.61						
June	35.3	99.7	35.15						
September	36.5	101.7	37.10						
December									

[1] Cash payments only; additional value of board, room, and tips not included.

Ammunition Industry—Earnings and Hours, October 1937 [1]

The Census of Manufactures in 1935 included in the ammunition and related products industry "establishments engaged primarily in the manufacture of ammunition for small arms (not including grenades and bombs), and of blasting and detonating caps." These are private plants, thus excluding the production of ammunition in arsenals and other establishments under the Federal Government. The present survey conformed to this definition of the industry.

[1] Abstract of article in the Monthly Labor Review for May 1938, prepared by J. Perlman, P. L. Jones, and O. R. Witmer, of the Bureau of Labor Statistics.

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In 1935, the Census of Manufactures reported for the industry 13 establishments with a total of 5,599 wage earners. The Bureau of Labor Statistics found 12 plants, which employed 5,823 workers, and all of these were covered by the study. Of the total, 7 plants with 1,758 wage earners made blasting and detonating caps, and 5 establishments with 4,065 employees manufactured small-arms ammunition.

Many of the plants in the ammunition and related products industry are integrated with those in other industries, especially explosives.

The establishments in this industry are quite well distributed geographically: One in California, three in Connecticut, one in Illinois, one in Minnesota, one in New York, one in New Jersey, one in Ohio, and three in Pennsylvania. Because of the element of hazard involved, all but two of these establishments are located in relatively small towns.

The hazardous nature of the ammunition and related products industry is naturally attributable to the extensive use of explosive powders in its manufactured products. Seasonal demand also plays some part in connection with certain products manufactured by this industry, as for example, small-arms ammunition for the hunting season. The information obtained covered the month of October 1937, which is fairly representative of the entire year.

Trade-union organization plays only a small role in the ammunition and related products industry. One establishment had an oral agreement with an affiliated trade-union. Several of the large plants, however, reported the existence of company unions.

Average Hourly Earnings

Of the total number of employees covered, 59.0 percent were paid on a straight time-rate basis, 29.2 percent on a straight piece-rate basis, and 11.8 percent under some production-bonus plan. Time workers were found in each of the plants included, and in all but two they constituted a majority of the wage earners. Piece workers were found in only 5 establishments, in 3 of which they were numerous. Production-bonus plans existed in 8 of the plants, but in 5 of these they covered a relatively small number of the employees.

In 7 of the 12 establishments, overtime, when worked, was paid for at time and one-half to all except a few salaried workers. In four plants, the overtime compensation was on a pro rata basis, and in one establishment overtime was prohibited altogether.

The average hourly earnings of the 5,823 employees covered in the ammunition and related products industry were 58.7 cents in October 1937. This average covers a wide range of individual earnings, from a figure under 27.5 cents to one over $1.25 (table 1). It should be mentioned that the industry average is considerably influenced by the wages paid in two relatively high-wage plants; exclusive of these plants the industry average is 56.4 cents, instead of 58.7 cents.

Of the 5,823 employees covered in all plants, 3,140, or 53.9 percent, were males. Their average hourly earnings amounted to 66.1 cents in October 1937. Table 2 gives the percentage distribution of male ammunition workers by average hourly earnings and by skill.

In spite of the generally hazardous nature of the industry, there is a large proportion of women employed by it. They number 2,683,

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which is 46.1 percent of the total labor force. Only a few of these women (13 forewomen) may be regarded as skilled. They have not been distinguished from the semiskilled in table 3 which gives a distribution of female ammunition workers similar to that shown in table 2.

TABLE 1.—*Distribution of ammunition workers by average hourly earnings in October 1937*

Average hourly earnings	Number of employees	Simple percentage	Cumulative percentage	Average hourly earnings	Number of employees	Simple percentage	Cumulative percentage
Under 27.5 cents	15	0.3	0.3	67.5 and under 72.5 cents	396	6.8	81.0
27.5 and under 32.5 cents	45	.7	1.0	72.5 and under 77.5 cents	429	7.3	88.3
32.5 and under 37.5 cents	201	3.5	4.5	77.5 and under 82.5 cents	206	3.6	91.9
37.5 and under 42.5 cents	416	7.1	11.6	82.5 and under 87.5 cents	174	2.9	94.8
42.5 and under 47.5 cents	916	15.8	27.4	87.5 and under 92.5 cents	95	1.7	96.5
47.5 and under 52.5 cents	983	16.8	44.2	92.5 and under 100.0 cents	82	1.4	97.9
52.5 and under 57.5 cents	702	12.1	56.3	100.0 and under 110.0 cents	81	1.4	99.3
57.5 and under 62.5 cents	503	8.6	64.9	110.0 and under 125.0 cents	37	.6	99.9
62.5 and under 67.5 cents	537	9.3	74.2	125.0 cents and over	5	.1	100.0

TABLE 2.—*Percentage distribution of male ammunition workers by average hourly earnings in October 1937, by skill*

Average hourly earnings	All male employees	Skilled	Semiskilled	Unskilled
Under 27.5 cents				
27.5 and under 32.5 cents	0.2		0.4	
32.5 and under 37.5 cents	.6		1.3	
37.5 and under 42.5 cents	2.6		1.9	7.2
42.5 and under 47.5 cents	4.8	0.2	6.5	6.9
47.5 and under 52.5 cents	10.2	2.0	9.8	20.6
52.5 and under 57.5 cents	14.3	3.2	17.0	22.3
57.5 and under 62.5 cents	13.2	9.9	14.8	14.4
62.5 and under 67.5 cents	14.5	17.0	14.5	11.8
67.5 and under 72.5 cents	8.8	8.7	9.8	7.0
72.5 and under 77.5 cents	11.3	13.6	12.4	6.7
77.5 and under 82.5 cents	5.8	9.5	5.5	2.2
82.5 and under 87.5 cents	4.5	9.8	3.3	.4
87.5 and under 92.5 cents	2.8	7.5	.9	.5
92.5 and under 100.0 cents	2.5	6.8	1.0	
100.0 and under 110.0 cents	2.6	7.5	.8	
110.0 and under 125.0 cents	1.1	3.8	.1	
125.0 cents and over	.2	.5		
Average of all employees (in cents)	66.1	78.2	62.6	57.1

TABLE 3.—*Percentage distribution of female ammunition workers by average hourly earnings in October 1937, by skill*

Average hourly earnings	All female employees	Semiskilled[1]	Unskilled	Average hourly earnings	All female employees	Semiskilled[1]	Unskilled
Under 27.5 cents	0.6	0.6		67.5 and under 72.5 cents	4.5	4.7	3.0
27.5 and under 32.5 cents	1.4	1.3	3.0	72.5 and under 77.5 cents	2.8	2.9	1.0
32.5 and under 37.5 cents	6.8	6.8	7.6	77.5 and under 82.5 cents	.8	.9	
37.5 and under 42.5 cents	12.4	12.4	12.1	82.5 and under 87.5 cents	1.3	1.3	
42.5 and under 47.5 cents	28.6	29.1	22.2	87.5 and under 92.5 cents	.3	.4	
47.5 and under 52.5 cents	24.6	23.9	33.9	92.5 and under 97.5 cents	.1	.1	
52.5 and under 57.5 cents	9.5	9.4	10.6				
57.5 and under 62.5 cents	3.3	3.2	4.0	Average of all employees (in cents)	49.5	49.5	48.5
62.5 and under 67.5 cents	3.0	3.0	2.6				

[1] Includes also 13 skilled employees (forewomen).

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Average Weekly Hours

In 10 out of the 12 plants covered in the ammunition and related products industry, the full-time operations extended over 5 days, or 40 hours per week. In one establishment, the scheduled hours for most wage earners were 42½ for females and 43⅓ for males, the work also extending over 5 days. The full-time hours for nearly all employees in the remaining plant amounted to 48 for females and 50 for males, with operations covering 5½ days in the week. Hence, as in the case of average hourly earnings, the prevailing tendencies in weekly hours in this industry are also obscured by the considerably longer hours in two of the establishments.

The average weekly hours actually worked by all employees were 40.4 in October 1937, while the weighted average of scheduled hours was approximately 42. According to table 4, nearly one-sixth of the employees worked less than 40 hours per week.

TABLE 4.—*Distribution of ammunition workers by weekly hours in October 1937, by sex*

Weekly hours	All employees			Males			Females		
	Number	Simple percentage	Cumulative percentage	Number	Simple percentage	Cumulative percentage	Number	Simple percentage	Cumulative percentage
Under 16 hours	42	0.7	0.7	19	0.6	0.6	23	0.9	0.9
16 and under 24 hours	43	.8	1.5	14	.5	1.1	29	1.0	1.9
24 and under 32 hours	100	1.7	3.2	41	1.3	2.4	59	2.2	4.1
32 and under 36 hours	334	5.7	8.9	108	3.4	5.8	226	8.5	12.6
36 and under 40 hours	392	6.7	15.6	135	4.3	10.1	257	9.5	22.1
Exactly 40 hours	3,694	63.5	79.1	1,845	58.8	68.9	1,849	69.0	91.1
Over 40 and under 44 hours	323	5.5	84.6	217	6.9	75.8	106	3.9	95.0
44 and under 48 hours	334	5.8	90.4	263	8.3	84.1	71	2.7	97.7
48 and under 56 hours	465	8.0	98.4	403	12.9	97.0	62	2.3	100.0
56 hours and over	96	1.6	100.0	95	3.0	100.0	1	(1)	100.0
Total	5,823	100.0		3,140	100.0		2,683	100.0	
Average of all employees		40.4			41.7			38.9	

[1] Less than a tenth of 1 percent.

Average Weekly Earnings

In October 1937 average weekly earnings of all employees in the ammunition and related products industry amounted to $23.71. A distribution of ammunition workers by average weekly earnings is shown in table 5.

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TABLE 5.—*Distribution of ammunition workers by average weekly earnings, October 1937, by sex*

Average weekly earnings	Males			Average weekly earnings	Females		
	Number of employees	Simple percentage	Cumulative percentage		Number of employees	Simple percentage	Cumulative percentage
Under $5	5	0.2	0.2	Under $5.00	13	0.5	0.5
$5 and under $10	18	.5	.7	$5.00 and under $7.50	19	.7	1.2
$10 and under $15	30	1.0	1.7	$7.50 and under $10.00	22	.8	2.0
$15 and under $20	380	12.1	13.8	$10.00 and under $12.50	63	2.4	4.4
$20 and under $25	893	28.4	42.2	$12.50 and under $15.00	272	10.1	14.5
$25 and under $30	903	28.8	71.0	$15.00 and under $17.50	427	15.9	30.4
$30 and under $35	483	15.4	86.4	$17.50 and under $20.00	1,014	37.8	68.2
$35 and under $40	192	6.1	92.5	$20.00 and under $22.50	427	15.9	84.1
$40 and under $45	101	3.2	95.7	$22.50 and under $25.00	102	3.8	87.9
$45 and under $50	63	2.0	97.7	$25.00 and under $27.50	111	4.2	92.1
$50 and under $60	52	1.7	99.4	$27.50 and under $30.00	130	4.8	96.9
$60 and under $70	17	.5	99.9	$30.00 and under $32.50	40	1.5	98.4
$70 and over	3	.1	100.0	$32.50 and under $35.00	31	1.2	99.6
				$35.00 and over	12	.4	100.0
Total	3,140	100.0		Total	2,683	100.0	

Army and Navy—Pay of Enlisted Personnel[1]

Enlisted men joining the United States Army for the first time as privates receive base pay of $21 monthly; for Navy recruits entering as apprentice seamen, the base pay on entrance is also $21. Men who attain the highest grade in both services receive a minimum of $126 a month, which is increased on a fixed schedule, according to length of service, until a maximum base pay plus longevity credit of $157.50 is reached. In all cases, the base pay is supplemented by a number of allowances, including food and lodging and medical and dental attention. Extra payment is made for hazardous and highly skilled work, special assignments, and medals received for distinguished service. Retirement pay is provided up to a maximum of $133.88 per month, allowances included.

Base Pay Plus Longevity Credit

The monthly rates of pay for enlisted Army and Navy personnel are shown in tables 1 and 2, by grade and class, according to length of service.

[1] From Monthly Labor Review, July 1940, with later data.

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TABLE 1.—*Monthly rates of pay of enlisted men of the Army*

Group	Service of—					
	Less than 4 years	Over 4 years	Over 8 years	Over 12 years	Over 16 years	Over 20 years
Fifst grade (master sergeant)	$126	$132.30	$138.60	$144.90	$151.20	$157.50
Second grade (first sergeant and technical sergeant)	84	88.20	92.40	96.60	100.80	105.00
Third grade (staff sergeant)	72	75.60	79.20	82.80	86.40	90.00
Fourth grade (sergeant)	54	56.70	59.40	62.10	64.80	67.50
Fifth grade (corporal)	42	44.10	46.20	48.30	50.40	52.50
Sixth grade (private, 1st class), basic rate	30	31.50	33.00	34.50	36.00	37.50
Specialist rate:						
First class	60	61.50	63.00	64.50	66.00	67.50
Second class	55	56.50	58.00	59.50	61.00	62.50
Third class	50	51.50	53.00	54.50	56.00	57.50
Fourth class	45	46.50	48.00	49.50	51.00	52.50
Fifth class	36	37.50	39.00	40.50	42.00	43.50
Sixth class	33	34.50	36.00	37.50	39.00	40.50
Seventh grade (private), basic rate	21	22.05	23.10	24.15	25.20	26.25
Specialist rate:						
First class	51	52.05	53.10	54.15	55.20	56.25
Second class	46	47.05	48.10	49.15	50.20	51.25
Third class	41	42.05	43.10	44.15	45.20	46.25
Fourth class	36	37.05	38.10	39.15	40.20	41.25
Fifth class	27	28.05	29.10	30.15	31.20	32.25
Sixth class	24	25.05	26.10	27.15	28.20	29.25

TABLE 2.—*Monthly rates of pay of enlisted men in the Navy*

Pay grade	Base pay	Base pay plus 10 percent	Base pay plus 15 percent	Base pay plus 20 percent	Base pay plus 25 percent
First grade (chief petty officer)	$126	$138.60	$144.90	$151.20	$157.50
First grade (A) (chief petty officer, acting)	99	108.90	113.85	118.80	123.75
Second grade (petty officer, 1st class)	84	92.40	96.60	100.80	105.00
Third grade (petty officer, 2d class)	72	79.20	82.80	86.40	90.00
Fourth grade (petty officer, 3d class)	60	66.00	69.00	72.00	75.00
Fifth grade (nonrated, 1st class)	54	59.40	62.10	64.80	67.50
Sixth grade (nonrated, 2d class)	36	39.60	41.40	43.20	45.00
Seventh grade (nonrated, 3d class)	21	23.10	24.15	25.20	26.25

Promotion Including Reenlistment

As noted above, a recruit who enters the Army receives a base pay of $21 a month as a private. There is no automatic promotion in grade. A Navy recruit is designated an apprentice seaman upon enlistment and is also paid a basic wage of $21 a month. He is sent to a naval training station for a 12-weeks' course of training. Following this course, he is transferred to general service at sea unless selected for special service school instruction. After 4 months' total service, including recruit training, an apprentice seaman is promoted to seaman second class, and seaman second class may be rated firemen third class as vacancies occur, if selected for engineering duty. The monthly pay of these ratings is $36. Ex-members of the armed services who reenlist are promoted in 1 month in place of 4 months, provided their previous service and training warrant such advancement.

The length-of-service pay granted in addition to the base pay is shown in tables 1 and 2. In the Army, enlisted men receive the maximum pay addition for length of service—that is, 25 percent over the appropriate base rate—at the end of 20 years' service. This maximum is reached in the Navy after 16 years. The increments in

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the Army consist of additions of 5 percent after each 4 years of service up to a total of 5 additions. In the Navy, the increase is 10 percent after the first 4 years and 5 percent thereafter for 3 successive 4-year periods.

In the absence of an automatic promotion system in the Army, enlisted men in the two lower grades are permitted to qualify as specialists with the corresponding increases in pay indicated in table 1. Outside of the length-of-service increase in pay, promotion depends entirely upon the individual's personal qualifications and the number of vacancies resulting from retirement, death, and related factors.

A man who reenlists in either the Army or Navy, within 3 months of the day of a discharge under honorable conditions, receives a reenlistment allowance of $50 for each year of service in the last expiring enlistment (maximum $150 in the Army and $300 in the Navy), provided he is rated in the first three grades of the Army, or is a chief petty officer, petty officer first class or second class in the Navy. The allowance for lower ratings in the fourth to seventh pay grades in both services, is $25 for each year of service (maximum $75 in the Army and $150 in the Navy).

Under the revised schedule of reenlistment pay adopted in 1941 men in the first 3 pay grades of the Navy (mates, chief petty officers with permanent appointments, and chief petty officers with acting appointment) receive a cash bonus of $100 per year's service in previous enlistment, provided they reenlist within 24 hours on the same ship or station where they have been serving. For lower pay grades the bonus is $50 per year.

Allowances

A man enlisting in the Army is credited with a clothing allowance and all clothing drawn is charged against this sum. Upon first enlistment, a Navy recruit is furnished with an outfit of clothing free of charge. The value of this outfit was $113 in the early part of 1940.

Enlisted men in the Army are entitled to an allowance for quarters and rations not to exceed $4 per day, if food and lodging are not supplied. The regulations in effect at present provide for an allowance of $1.20 a day for subsistence when mess facilities are not furnished and $1 a day if such facilities are furnished. The allowance for quarters is 75 cents a day. Higher rates are paid on special duty and while a man is in a travel status.

For Navy personnel, the allowance in place of food is 50 cents a day, but is subject to change. Enlisted men on certain classes of duty ashore may receive a subsistence and quarters allowance of from $1.95 to $3.75 a day in place of the ration and quarters not supplied in kind.

By act of October 7, 1940, a man in the first 3 pay grades of the Army or Navy receives a rental allowance of $34.50 monthly if he has a wife, child under 18, or dependent mother.

In both services, men who have been awarded medals of honor for a distinguished act or service, such as the Distinguished Service Medal, are entitled to a permanent monthly addition to wages of $2 for each such medal awarded. The same allowance is made for each "bar" added to the medal, a bar being awarded instead of a medal for each succeeding deed or service.

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In the Army, expert gunners, expert riflemen, expert bombers, expert aerial gunners, and pistol experts (dismounted) may be paid $5 extra each month, under certain conditions. The qualification terms are subject to change. A 50-percent addition to base pay is made to enlisted Army men when they are engaged in actual flying duty.

Temporary monthly additions to pay are provided for as follows in the Navy: $5 when the man is detailed to mess duty; $15 to $30 for duty as mail clerk, $10 for duty as assistant mail clerk (except at the Naval Station, Guantanamo Bay, Cuba, where the allowance is $15); 50 percent increase over the regular pay when individual flight orders have been issued and the required number of aerial flights have been made; $10 to $30 when the enlisted man is designated as a diver, plus $5 an hour for each hour or fraction thereof if he is employed in diving in depths over 90 feet; $5 to $30, depending on detail, rating, and qualification, for duty on board submarines; $2 when detailed as listeners on submarines, as qualified sound operators or repairmen; and $1 to $5 for qualification in the use of arms.

A man who is discharged from the Army at a point other than the place of enlistment is given travel pay at the rate of 5 cents a mile from the place of discharge to the place of enlistment, except that for any sea travel involved, transportation in kind and subsistence en route are furnished.

At expiration of enlistment and discharge from the Navy, a man is entitled to travel allowance which is paid to him in cash at the rate of 5 cents a mile for all land travel, and to transportation in kind (including subsistence) for sea travel, from the place of discharge to the place of acceptance for enlistment.

Retired Pay

After 30 years of service, an enlisted man may retire on three-fourths pay of his rating, including all permanent additions, plus $15.75 a month allowance in lieu of rations, quarters, and fuel and light. The maximum retirement pay is $133.88 a month in both services. Reduced pensions are authorized for short-service men. All pensioners, regardless of years of service, receive $15.75 monthly as commutation of quarters, fuel, light, and rations.

Bakery Industry—Union Wages and Hours, 1940[1]

The average hourly wage rate of union bakery workers in 62 cities[2] was $0.753 on June 1, 1940. Actual rates ranged from $0.262 for woman beginners in machine shops in Portland Maine, to $1.643 for first hands in machine shops doing Hebrew baking in New York City.

Wage payments under bakery agreements are almost universally established on a time basis. Agreements with large factory bakeries generally specify hourly rates, whereas those with the smaller shops

[1] Abstract of article in the Monthly Labor Review for January 1941, prepared by Frank S. McElroy, of the Bureau of Labor Statistics.

[2] See footnote 2, p. 46, for list of cities surveyed. Effective union agreements for bakery workers were reported in only 62 of the 72 cities listed.

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specify daily or weekly rates. In order to achieve comparability, these daily and weekly wage scales have been converted to an hourly basis and are so presented throughout this report. The averages cited include all of the occupations specified in the agreements, except apprentices.

Hourly Wage Rates

Nearly 75 percent of the bakery-union membership in the cities studied had hourly rates between 40 and 90 cents per hour. Only 2 percent of the membership had hourly rates of less than 40 cents. (See table 1.) Generally the rates of $1 and over per hour applied to members in shops doing specialty baking, such as Hebrew baking (which accounted for over 80 percent of the members having such rates), Polish baking, French pastry baking, and cake baking. In a number of cities there were rates of $1 and over per hour for foremen or for journeymen on night shifts, but for journeymen doing ordinary baking on day shifts scales of $1 and higher were reported only in Butte, Los Angeles, Newark, New York, Phoenix, Portland, Oreg., St. Louis, San Francisco, Seattle, Spokane, and Washington, D. C.

Because of the lack of uniformity in the occupational designations and in the division of work among the rated occupations in the various cities, no distribution based upon particular occupations was possible. Examination of the reports, however, indicated that the great majority of the rates of less than 60 cents per hour applied to members in the auxiliary occupations, such as icers, slicers, wrappers, packers, checkers, pan greasers, janitors, and general helpers. In the main these occupations were reported only under the agreements with large factory-type bakeries in which the occupational divisions were frequently quite extensive. In the bakers' classifications, rates for benchmen or machinemen, the predominating journeyman designations, were seldom less than 60 cents per hour and were most frequently at least 70 cents per hour. Mixers and ovenmen generally had the highest rates specified in each agreement.

TABLE 1.—*Distribution of union members in the bakery trades, by hourly rates, June 1, 1940*

Classified hourly rates	1940	Classified hourly rates	1940
Average hourly rate	$0.753	Percent of members whose hourly rates were—	
Percent of members whose hourly rates were—		90 cents and under $1.00	7.6
Under 40 cents	2.0	$1.00 and under $1.10	4.6
40 and under 50 cents	14.8	$1.10 and under $1.20	2.5
50 and under 60 cents	12.9	$1.20 and under $1.30	2.3
60 and under 70 cents	16.1	$1.30 and under $1.40	1.2
70 and under 80 cents	18.0	$1.40 and under $1.50	1.8
80 and under 90 cents	13.1	$1.50 and under $1.60	2.2
		$1.60 and under $1.70	.9

Overtime Rates

Time and one-half was predominantly specified as the initial overtime rate in the bakery agreements. This rate was reported in 88 percent of the quotations and applied to 80 percent of the total membership reported.

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The overtime rates provided and the proportion of the union members affected are shown in the following statement:

	Number of quotations	*Percent of union members affected*
No overtime rate provided	20	2.9
Straight time	165	5.4
Time and one-third	41	3.1
Time and one-half	2,212	79.9
Double time	7	1.7
Specified amounts, not a multiple of regular rate	28	1.2
Overtime prohibited	39	5.8

Maximum Weekly Hours, 1940

The average maximum workweek provided in the union agreements for bakery workers on June 1, 1940, was 41.3 hours. Forty hours constituted the basic workweek for 60.1 percent of the total membership. (See table 2.) Only 1.2 percent of the members included in the survey had agreements permitting more than 48 hours' work in any week without payment for overtime. On the other hand 5.8 percent of the members had workweeks of less than 40 hours.

Generally speaking, the workweek in machine shops was limited to 40 hours. Practically all of the hour scales in excess of 42 hours per week applied to hand shops. The only 50-hour scales reported applied to hand shops in Indianapolis and Worcester. The 54-hour scales applied to smaller shops doing Italian-style baking in New York City, and the only 56-hour scale applied not to regular bakers but to plant firemen who were working on a 7-day basis in Des Moines. All the 36-hour workweeks reported were in Portland, Oreg., San Francisco, and Seattle, where the 6-hour day has been widely adopted. The 35-hour week was in effect only for a part of the Bohemian- and French-style baking in New York City. All the workweeks of less than 35 hours, reported in Chicago, New York, and Philadelphia, represented work-sharing restrictions imposed upon the members of the unions.

TABLE 2.—*Distribution of union members in the bakery trades by hours per week, June 1, 1940*

Classified weekly hours	1940	Classified weekly hours	1940
Average weekly hours	41.3	Percent of members whose hours per week were—	
Percent of members whose hours per week were—		40 hours	60.1
24 hours	0.4	42 hours	10.4
24½ hours	.6	44 hours	6.2
26¼ hours	1.1	45 hours	5.8
32 hours	.2	47 hours	.1
35 hours	.2	48 hours	10.4
36 hours	2.4	50 hours	.1
37½ hours	.7	54 hours	1.1
39 hours	.2	56 hours	(1)

[1] Less than a tenth of 1 percent.

Trend of Wages and Hour Scales

Data based upon comparable quotations for the bakery trades, from which inferences relating to trends may be drawn, are available

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only for the past 4 years. Since 1936, however, the movement of wage rates has been consistently upward and that of allowed weekly hours has been consistently downward.

In 1937 the wage rates of union bakery workers were 5.1 percent higher on the average than in 1936. The 1938 study showed an average increase of 2.3 percent over 1937, and in 1939 the reports indicated a further rise of 1.2 percent over 1938. The advance of 2.7 percent on the average between June 1, 1939, and June 1, 1940, indicated by the reports upon which this study is based, was proportionately greater than that of either of the two preceding years, but only slightly more than half as great as the rise from 1936 to 1937.

The year-to-year changes in allowed weekly hours since 1936 have all been small. In 1937, weekly hours, on the average, were 1.6 percent less than in 1936. Subsequent changes have not amounted to more than 0.5 percent in any one year. The average reductions shown for each year in comparison with the immediately preceding year were 0.4 percent in 1938, 0.2 percent in 1939, and 0.5 percent in 1940.

Scope of the Study

This study was one of a series of annual surveys started in 1907, covering union scales in various trades in the principal cities of the United States. The number of cities included has been gradually increased from 39 in the earliest surveys to 72 in those of recent years. These cities are located in 40 States and the District of Columbia. Effective union agreements providing wage and hour scales for bakery workers were reported in 62 of the 72 cities covered in 1940.

Barber Shops—Union Wages and Hours, 1938 [1]

This report covers the rates and hours of union barbers in 173 cities and towns in 43 States, as indicated in collective agreements which were in force all or a substantial part of 1938. It does not include data for all cities which have union rates and hours in effect but only those for which the Bureau has copies of agreements.

No exact figures are available as to the extent of unionization in the entire trade, although it is estimated that about one of every five barbers in the United States belongs to a barbers' union. The union admits to active membership any competent journeyman barber, hairdresser, waver, marceller, cosmetician, or manicurist (except Orientals), not over 50 years of age. Persons over 50 may be admitted as nonbeneficiary members (i. e., with no participation in sick and death benefits). Women have been admitted to membership only since 1924. Self-employed barbers in "one-chair" shops are admitted, as well as two or more partners who practice the trade in their own shops without employing others. Proprietors, however, who employ one or more barbers are not eligible.

[1] Abstract of article in the Monthly Labor Review for June 1939, prepared by Don Q. Crowther, of the Bureau of Labor Statistics.

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Rates and Hours

The prevailing method of wage payment found in barbers' agreements was a weekly guaranty of a definite amount, plus a stipulated percentage of all receipts over a certain amount taken in by the individual barber during the week. Almost as common, however, was the method of paying union barbers on a flat percentage basis—an agreed percentage of all receipts from the individual barber's work—with a guaranteed weekly amount in some cases and no guaranty in others. In no case were the wages of full-time barbers stated in terms of definite daily or weekly amounts with no relation to the receipts.

The weekly guaranties ranged from $10 to $30, the most common amounts being from $20 to $25. Usually, when the weekly guaranteed wage was comparatively high, the total receipts from the individual barber's work had to be a relatively large amount before he could get any additional compensation from the percentage arrangement. In cases where the weekly guaranty was as high as $30, for example, the barbers received nothing in addition to the guaranteed amount unless their receipts for the week exceeded $42 in some cities and $45 in others, in which cases the barbers received from 50 to 70 percent of the excess. Where the weekly guaranties were low, on the other hand, the barbers began to share in receipts exceeding amounts as low as $15 and $18 per week. Where the barbers were paid on a straight percentage basis with no weekly guaranty, the percentage of total receipts paid as wages ranged from 60 to 75, with the most common figures 65 and 70 percent.

Barbering is one trade in which the weekly hours of work have remained comparatively high. Although the 8-hour day (Monday to Friday) has been established in many cities and towns, the 9- and 10-hour days are not at all uncommon. Barbers usually work long hours on Saturdays. In most of the cities covered by this study the barbers worked 10 or more hours on Saturdays and in some cases as long as 12 and 13 hours. Reading, Pa., was the only city covered which had a short Saturday. Generally speaking, the weekly working hours of barbers in the cities covered were somewhere between 50 and 60, with the established hours in a large number of cities being around 54 and 55 hours. In 15 of the 173 cities, however, the weekly hours of at least some of the union barbers were in excess of 60, and in 24 cities the union hours were less than 50.

As a general rule no overtime is worked in the barbering trade and the union agreements make no provision for overtime rates. The agreements usually provide definitely that the doors of the shops shall be locked and the blinds pulled down promptly at the agreed closing time and that the shops shall not open before the regular hour on the succeeding day. It is usually agreed, however, that the barbers shall take care of all customers who enter the shop before the closing hour and the time spent on this work after the shops close is not reg rded as overtime. Barbers paid on a percentage basis profit from this work only insofar as their total receipts, on which their pay is based, are increased.

In quite a number of cities a few extra or part-time barbers are employed to help take care of the increased volume of business at the end of each week. These extra men usually work on Saturdays and

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quite often on Fridays—all day or just in the evenings. In most cases these extras did not have other occupations or employment, but a few had part-time employment elsewhere—some in factories, some on WPA projects, etc. Many agreements included definite provisions for payment of these part-time men. Some of them provided for payment on a straight percentage basis and others for a daily guaranty, plus a stipulated percent of daily receipts exceeding a certain basic sum.

Licensing or Registration of Barbers[2]

All States except three (Maryland, New York, and Virginia) have State laws which establish certain standards and requirements for obtaining a license to practice barbering. Most States have created administrative agencies, most commonly called Boards of Barber Examiners, to conduct examinations, determine the qualifications, and pass upon the fitness of applicants to practice barbering. Examinations are held in most States at regular intervals and each applicant who meets all requirements and pays the established fees is issued a numbered certificate and his name is entered on the State records as a registered barber. Ordinarily, the certificate is renewed each year, upon payment of the renewal fee, without further requirements. In some States, however, barbers must have a physical examination each year and present a certificate of good health from a registered physician in order to have their certificates renewed. The requirements for obtaining original certificates in the various States are quite uniform on some points and vary a great deal on others. In practically all States, applicants are required to be of good moral habits and free from any infectious or contagious disease.

In 34 States the minimum age at which applicants can receive certificates is 18 years. The Iowa, Massachusetts, Montana, and Washington laws do not specify any age limit; the minimum age in Pennsylvania is 16 years; in Connecticut, Delaware, Kansas, Missouri, and North Carolina, 19 years; in Illinois, 19½ years; and in Wisconsin, 21 years.

Although some States have specified no educational requirements—the ability to read and write English intelligently being apparently sufficient—quite a number of States require an eighth-grade grammar-school education or its equivalent, and in Kentucky and Wisconsin the standard is as high as the tenth grade or 2 years of high school. In some cases, where the applicant cannot present proof of his educational attainments, provision is made for giving him a preliminary examination to determine whether he has an education equivalent to that required.

There is a great variation in the amount of the fees charged for conducting the examinations and issuing the original certificates of registration as well as in the fees for renewing the certificates annually. The highest fee for examination and certificate is $35 in Arizona and the lowest $5 in Arkansas, Kansas, Maine, Pennsylvania, Rhode Island, and Washington. The highest annual renewal fee is $7.50 in Alabama and the lowest $1 in Washington. The most common fees range from $10 to $15 for the original examination and certificate and from $2 to $5 for renewals each year.

[2] Based on data compiled by the Bureau's Division of Labor Law Information.

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There is also a great variation in the amount of training necessary to obtain a barber's license in the various States. Most of the laws providing for the examination and licensing of barbers provide also for the examination and registration of apprentices. The term "apprentice" is used in most of the laws and is applied to those engaged in learning the trade under the supervision of a registered barber.

The periods of "apprenticeship" training required for obtaining a barber's license in the different States vary from 6 months in Michigan to 3 years in Connecticut, Delaware, and Wisconsin. In Georgia and Washington no period of training is specified; in these States applicants merely have to be able to pass the required examinations. In some States, time spent in a barbers' school or practicing in another State can be substituted in satisfying the "apprenticeship" training requirements, while in others the completion of a course in a qualified barbers' school is required in addition to the training period specified. In 11 States—Florida, Indiana, Louisiana, Minnesota, Montana, Nebraska, Nevada, North Dakota, Ohio, Oregon, and Texas—the laws require that applicants have 18 months of training as "apprentices" and be graduates from approved barbers' schools.

Bituminous-Coal Mining—Earnings and Hours, 1935 and 1936[1]

Wage earners in the bituminous-coal mining industry worked an average of 32.3 hours per week and earned an average of 77.3 cents per hour and $24.96 per week in the latter part of 1936, according to a survey of wages, hours, and working conditions in this industry made by the Bureau of Labor Statistics.

These figures are based primarily on data for a pay-roll period near the close of 1936. A few months later, however, a new wage agreement was negotiated between the mine owners and the United Mine Workers. This is known as the Appalachian Agreement, and became effective on April 2, 1937. It provided primarily for a substantial increase in wages.[2] As regards hours of work, the 7-hour day and the 35-hour week were continued in the 1937 agreement, but in an effort to discourage overtime it was provided that all overtime worked by mine workers paid on an hourly or daily basis in excess of the established hours of work was to be paid for at the rate of time and one-half.

Previous surveys of wages and hours in the bituminous-coal mining industry, made by the Bureau of Labor Statistics in 1922, 1924, 1926, 1929, 1931, and 1933, covered only underground mines and were limited to the 11 principal coal-producing States, namely: Alabama, Colorado, Illinois, Indiana, Kansas, Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia—with the addition of Utah,

[1] Abstract of article in the Monthly Labor Review for November 1937, prepared by Victor S. Baril and Abner C. Lakenan, of the Bureau of Labor Statistics.

[2] Although this agreement covered only the Appalachian area, including Pennsylvania, Maryland, Ohio, Michigan, West Virginia, Virginia, eastern Kentucky, and northern Tennessee, it served as a basis for all other bituminous-coal agreements. Under the Appalachian agreement, yardage and deadwork rates were increased 10 percent; tonnage rates were advanced 10 percent or more; time rates were increased from 8.7 to 12.9 percent in the northern district and from 9.6 to 14.2 percent in the southern district; miners doing mechanical loading, whether in underground or open-pit mines, received an increase of 70 cents per day if they were time workers or an equivalent increase if they were tonnage or piece workers.

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Washington, and Wyoming in the 1922 survey. In 1936, however, the scope of the survey was extended to include underground mines in 9 additional States—Arkansas, Iowa, Maryland, Missouri, Montana, New Mexico, Oklahoma, Utah, and Wyoming—and also to include open-pit or strip mines in 4 States. As a result, information was obtained for 94,074 wage earners employed in 516 mines in 20 important coal-producing States. Of these 516 mines, 499, employing 92,658 wage earners, were underground, and 17, employing 1,416 workers, were strip mines.

Very few companies keep a daily record of the hours worked by miners and loaders. In order to obtain accurate time records for this group of workers, it was necessary to arrange with mine officials to have a special day-by-day record kept of the hours worked by each worker in this group for one pay-roll period. The remaining employees, whether inside or outside, presented no special problems, as they are time workers and a record of their time is always available.

The method of presentation of the 1936 data differs somewhat from that used in former years. In addition to time at the face, including lunch, and time in the mine, including lunch and travel time, the actual hours worked at the face or place of work were also computed for miners and loaders. This not only makes it possible to show for these workers the actual hours worked at the face per start and per week and the average earnings received per hour, but it also permits the presentation of average hours and earnings of all wage earners in the industry as a whole and in each State and wage district. Another departure is the discontinuance of the practice of showing figures for a half month, all data on hours and earnings having been reduced to a 1-week basis.

Earnings and Hours, 1936

Averages covering all wage earners in the industry for the United States, as well as for the various States, are presented in table 1.

TABLE 1.—*Average hours and earnings of wage earners in bituminous-coal mining, 1936, by State*

State	Number of mines covered	Number of wage earners covered	Average hours actually worked per week [1]	Average earnings—	
				Per hour	Per week
United States	516	94,074	32.3	$0.773	$24.96
Alabama	16	3,834	32.5	.543	17.65
Arkansas	10	784	28.8	.635	18.26
Colorado	16	1,669	33.8	.831	28.12
Illinois	43	8,757	35.1	.837	29.37
Indiana	24	2,268	34.8	.841	29.23
Iowa	18	1,770	27.9	.738	20.56
Kansas	11	754	30.3	.686	20.79
Kentucky	49	10,760	32.3	.719	23.23
Maryland	6	636	29.4	.745	21.89
Missouri	15	1,064	31.4	.624	19.58
Montana	4	345	33.2	.886	29.43
New Mexico	4	561	35.4	.724	25.62
Ohio	27	6,082	32.0	.775	24.81
Oklahoma	10	699	34.4	.659	22.69
Pennsylvania	128	26,152	31.5	.799	25.21
Tennessee	11	1,517	31.5	.631	19.87
Utah	5	576	37.1	.955	35.40
Virginia	14	2,809	33.0	.679	22.42
West Virginia	97	22,099	31.8	.801	25.50
Wyoming	8	968	35.8	.908	32.48

[1] These figures exclude lunch time and travel time.

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Underground Mines

Wage earners employed in and in connection with underground mines fall into two broad groups, namely: miners and loaders and "other than miners and loaders." The first group is made up exclusively of inside workers, who are generally paid on a tonnage or piece-work basis, whereas the second includes all inside workers other than miners and loaders, and all surface workers. Workers in the latter group are paid on a time rather than a tonnage or piece basis.

Miners and loaders.—Miners and loaders constitute the largest and most important group in underground mines. In 1936, slightly over 60 percent of the wage earners in underground mines were in this group. Miners and loaders may be either hand or machine workers. Also included in this classification are miners' and loaders' helpers. For this group it is possible to compute average daily and weekly working time and average hourly earnings on a threefold basis, namely: time actually worked at the face or place of work in the mine;[3] time actually spent at the face, including lunch time; and total time spent in the mine, including lunch and travel time.

The average earnings of all miners and loaders, based on time actually worked at the face or place of work in the mine, were 80.7 cents per hour, $5.42 per start (day), and $24.02 per week. Averages by States are shown in table 2.

TABLE 2.—*Average starts (days), hours, and earnings of miners and loaders in underground mines, 1936, by State*

State	Number of mines covered	Number of wage earners covered	Average starts (days) in 1 week	Average hours based on time—						Average earnings—				
				Actually worked at face		At face, including lunch		In mine		Per hour based on time			Per start (day)	Per week
				Per start (day)	Per week	Per start (day)	Per week	Per start (day)	Per week	Actually worked at face	At face, including lunch	In mine		
United States	499	56,395	4.4	6.7	29.8	7.2	31.8	8.0	35.3	$0.807	$0.756	$0.681	$5.42	$24.02
Ala.	16	2,152	4.4	6.9	30.4	7.4	32.5	8.3	36.4	.551	.517	.461	3.82	16.79
Ark.	10	538	3.9	6.7	26.0	7.2	28.0	7.8	30.3	.643	.598	.552	4.33	16.73
Colo.	16	1,020	4.6	6.9	31.8	7.4	34.1	8.2	37.6	.864	.806	.730	5.98	27.49
Ill.	40	4,005	4.7	6.8	32.3	7.2	34.2	7.9	37.3	.897	.847	.778	6.14	28.99
Ind.	19	805	4.6	6.6	30.6	7.1	32.7	7.6	35.2	1.001	.937	.870	6.63	30.61
Iowa	18	1,299	3.9	6.8	26.2	7.3	28.2	7.7	30.1	.751	.699	.655	5.07	19.70
Kans.	6	369	3.2	6.7	21.5	7.2	23.2	8.0	25.8	.605	.563	.506	4.04	13.03
Ky.	49	6,644	4.6	6.7	30.4	7.0	32.0	7.8	35.4	.761	.725	.655	5.08	23.17
Md.	6	430	4.2	6.5	27.5	7.1	30.0	7.7	32.5	.759	.696	.643	4.96	20.89
Mo.	11	624	3.8	6.7	25.6	7.2	27.5	7.6	28.7	.607	.565	.541	4.09	15.54
Mont.	4	134	4.5	6.8	31.0	7.3	33.1	7.9	35.8	1.000	.936	.866	6.84	30.99
N. Mex.	4	348	4.8	6.6	31.8	7.1	34.2	7.8	37.5	.703	.654	.597	4.66	22.40
Ohio	27	3,989	4.5	6.6	29.9	7.2	32.3	8.0	36.1	.774	.716	.640	5.13	23.11
Okla.	10	455	4.7	6.9	32.4	7.4	34.8	8.0	37.8	.683	.636	.586	4.68	22.13
Pa.	128	17,207	4.4	6.8	29.6	7.3	31.8	8.1	35.4	.821	.764	.686	5.55	24.29
Tenn.	11	1,011	4.5	6.4	28.4	6.9	30.6	7.3	32.8	.617	.572	.534	3.92	17.52
Utah	5	235	4.6	6.9	31.5	7.4	33.8	8.1	37.1	1.168	1.090	.994	8.08	36.84
Va.	14	1,633	4.3	7.0	30.4	7.5	32.5	8.1	35.3	.680	.637	.586	4.76	20.68
W. Va.	97	12,956	4.4	6.6	29.2	7.0	31.1	7.9	35.1	.865	.813	.720	5.70	25.27
Wyo.	8	541	4.9	7.0	34.1	7.5	36.5	8.3	40.7	.979	.913	.821	6.84	33.37

[3] Time at the "face" or place of work in the mine includes all productive time spent in mining or loading coal, as well as any on-duty nonproductive time incidental to mining and loading, such as waiting for mine cars.

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Other wage earners.—Approximately 40 percent of the workers covered in this survey were found in this group, which includes inside workers other than miners and loaders and all outside workers. In 1936, wage earners other than miners and loaders worked an average of 35.7 hours per week and earned 72.9 cents per hour and $26.03 per week. Averages by States are presented in table 3.

TABLE 3.—*Hours and earnings of wage earners other than miners and loaders in underground mines, 1936, by State*

State	Number of mines covered	Number of wage earners covered	Average hours actually worked per week	Average earnings—	
				Per hour	Per week
United States	499	36,263	35.7	$0.729	$26.03
Alabama	16	1,682	35.1	.534	18.75
Arkansas	10	246	34.8	.622	21.62
Colorado	16	649	37.0	.786	29.10
Illinois	40	4,208	36.1	.781	28.21
Indiana	19	1,147	37.6	.755	28.34
Iowa	18	471	32.3	.710	22.94
Kansas	6	70	29.4	.622	18.25
Kentucky	49	4,116	35.3	.661	23.33
Maryland	6	206	33.3	.721	23.99
Missouri	11	199	35.5	.517	18.34
Montana	4	211	34.6	.821	28.43
New Mexico	4	213	41.2	.749	30.88
Ohio	27	2,093	36.1	.776	28.05
Oklahoma	10	214	38.7	.617	23.88
Pennsylvania	128	8,945	35.3	.765	26.97
Tennessee	11	506	37.7	.651	24.58
Utah	5	341	40.9	.842	34.41
Virginia	14	1,176	36.6	.678	24.84
West Virginia	97	9,143	35.6	.726	25.84
Wyoming	8	427	37.9	.827	31.36

Strip Mines

The amount of bituminous coal mined mechanically in open pits has increased slowly but steadily in recent years. Yet in 1935 the open-pit or strip mines, according to reports of the Bureau of Mines, accounted for only 6.4 percent of the total bituminous tonnage produced. This type of mine was surveyed by the Bureau of Labor Statistics for the first time in 1936. Data were obtained for 1,416 wage earners in 17 open-pit or strip mines located in 4 of the principal States in which strip mining is carried on. These 1,416 wage earners, according to reports of the Bureau of Mines, represented 12.8 percent of all wage earners in strip mines in 1935. On an average, wage earners in the 17 strip mines covered in the survey worked 42.5 hours per week and received 80.7 cents per hour and $34.33 per week.

The much higher average weekly earnings in strip mines as compared with those in underground mines ($34.33 in strip mines as against $24.02 for miners and loaders and $26.03 for other than miners and loaders in underground mines) were due largely to the longer workweek found in strip mines.

Wages and Hours in Underground Mines, 1929 to 1936

A limited comparison of wage and hour figures can be made for the years 1929, 1931, 1933, and 1936. Of necessity, this comparison must be confined to the 11 States covered in the earlier surveys and

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to workers in underground mines.[4] The data covering miners and loaders will be discussed separately from those relating to wage earners other than miners and loaders.

Miners and loaders.—An examination of table 4 reveals the fact that not only was the sharp decline in the average hourly earnings of miners and loaders between 1929 and 1933 checked by 1936, but also that actually in the latter year miners and loaders averaged more per hour than in 1929.

TABLE 4.—*Average starts (days), hours, and earnings of miners and loaders, 1929, 1931, 1933, and 1936*

Year	Number of mines covered	Number of wage earners covered	Average starts (days) worked per week	Average hours based on time—				Average earnings—			
				At face, including lunch		In mine		Per hour, based on time—		Per start (day)	Per week
				Per start (day)	Per week	Per start (day)	Per week	At face, including lunch	In mine		
1929	535	99,405	-------	8.0	-------	8.8	-------	$0.687	$0.626	$5.50	-------
1931	469	90,063	3.2	8.0	25.9	8.8	28.4	.599	.546	4.82	$15.54
1933	444	78,896	3.4	8.0	27.1	8.9	30.0	.395	.357	3.18	10.69
1936	427	51,791	4.5	7.2	31.9	8.0	35.5	.759	.682	5.43	24.19

Other wage earners.—Between 1929 and 1933 the average hourly earnings of wage earners other than miners and loaders in the 11 States dropped from 60.5 to 43.9 cents. Not only was this decrease wiped out by 1936, but the 1936 average of 72.8 cents shows a gain of approximately 20 percent over 1929. (See table 5.)

TABLE 5.—*Hours and earnings of wage earners other than miners and loaders in underground mines, 1929, 1931, 1933, and 1936*

Year	Number of mines covered	Number of wage earners covered	Average hours actually worked per week	Average earnings—	
				Per hour	Per week
1929	535	52,806	----------	$0.605	----------
1931	469	47,725	32.3	.595	$19.25
1933	444	41,438	31.9	.439	13.90
1936	423	33,735	35.7	.728	25.99

Annual Earnings, 1935[5]

The average annual earnings of bituminous-mine workers in 1935 amounted to $917. This average applies to all wage earners in all occupations whose names appeared on the pay rolls of the companies

[4] The 1936 sample for the 11 States is smaller than that of former years. Only 20 percent of the wage earners were covered in 1936, instead of approximately one-third as in previous surveys. However, a larger number of small mines was scheduled in 1936 than in former years. This is evidenced by the fact that the drop in the number of employees scheduled was greater than that in the number of mines scheduled. (See table 4.)

[5] Extract from an article by Edward K. Frazier, of the Bureau of Labor Statistics, in Monthly Labor Review for July 1937.

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covered by the Bureau's survey. Thus, it is possible that the same name may have appeared on the pay rolls of more than one firm, but it is believed that such duplication was not of sufficient extent to have any material influence on the average quoted.

The most fortunate employees were those whose names appeared in each of the 24 half-month pay-roll periods during the year. These constituted 50.2 percent of all the wage earners scheduled and their annual earnings averaged $1,146. Those employees who had work during 9 months or more of the year (i. e., during 18 or more half-month pay-roll periods) constituted 79.4 percent of the total, and their annual earnings averaged $1,045.

The annual earnings shown here are gross, as they include certain occupational expenses which in most instances must be borne by inside workers in underground mines. These expenses cover such items as explosives, tool sharpening, rental of safety lamps, cost of carbide for open lights, purchase of tools, etc. Moreover, the annual earnings reported are limited to those made by a worker in 1935 within a single establishment, thus excluding the earnings he may have obtained from other companies during the year. The figures plainly indicate, however, that in 1935 the great majority of the employees worked for one company only, as nearly 80 percent obtained some work during 18 or more half-month pay-roll periods during the year.

The number of pay-roll periods over which an employee's work was spread, it should be pointed out, by no means expresses the actual number of days or hours worked during the year. The amount of time worked during a half-month pay-roll period varies seasonally, and there are sometimes differences between the working time of mines even during the same season.

The normalcy of the year should also be considered. On the basis of tonnage, the amount produced in 1935 was less than for any year between 1909 and 1931 and only 11.6 percent greater than in 1933. Likewise, the average number of days operated in 1935 was lower than for any year between 1925 and 1930, and only 12 days higher than in 1933, when the figure was 167. In view of these facts, 1935 conditions in this industry must be classed as below normal.

Workers in Underground Mines

The average yearly earnings of the inside employees whose work was spread over 24 half-month pay-roll periods amounted to $1,133 in 1935. This amount exceeds by $102 the average of $1,031 for those whose work extended over 18 or more half-month pay-roll periods. The average for those whose work was spread over 12 or more half-month periods amounted to $985, as compared with $904 for all employees who worked any part of 1935.

Regularity of employment was greater among outside workers than those employed underground. The average annual earnings of those whose work was spread over 24 half-month periods amounted to $1,179. This is $90 more than the average of $1,089 for employees whose work extended over 18 or more half-month periods. The latter figure in turn is $39 higher than that of $1,050 for those who secured some work in 12 or more half-month periods. The average for all employees who worked any part of 1935 was $962. Each of the above averages is higher than the corresponding figure for inside workers.

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Building Trades—Union Wages and Hours, 1940[1]

The average union wage rate per hour was $1.369 for all of the building trades in the 72 cities covered in a survey by the Bureau of Labor Statistics on June 1, 1940. The average for the journeyman trades was $1.487, and for the helper and laborer trades, $0.898.

Union scales of wages and hours in the building trades have been collected by the Bureau of Labor Statistics each year since 1907. The early studies were made in 39 cities and included 14 journeyman trades and 4 helper and laborer trades. The study has been gradually extended to cover 72 cities, and now includes 28 journeyman trades and 9 helper and laborer trades. These cities are located in 40 States and the District of Columbia.[2]

A union scale is a wage rate or schedule of hours agreed to by an employer (or group of employers) and a labor organization for persons who are actually working or would be working if there were work to be done in that locality. A union scale usually fixes a limit in one direction, that is, a minimum wage rate and maximum hours of work, with specific provisions for overtime.

Trend of Union Wage Rates and Hours, 1907 to 1940

As shown in table 1, throughout the period covered by the series, from 1907 to date, the index numbers almost consistently reflected an upward trend in the hourly wage rates and a decline in the scales of weekly hours of union members in the building trades.

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[1] Abstract of article in the Monthly Labor Review for November 1940, prepared by Frank S. McElroy, of the Bureau of Labor Statistics.

[2] The following were the cities covered in 1940:

North and Pacific

Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Butte, Mont.
Charleston, W. Va.
Chicago, Ill.
Cincinnati, Ohio.
Cleveland, Ohio.
Columbus, Ohio.
Davenport, Iowa. (Included in Rock Island (Ill.) district.)
Dayton, Ohio.
Denver, Colo.
Des Moines, Iowa.
Detroit, Mich.
Duluth, Minn.
Erie, Pa.
Grand Rapids, Mich.
Indianapolis, Ind.
Kansas City, Mo.
Los Angeles, Calif.
Madison, Wis.
Manchester, N. H.
Milwaukee, Wis.
Minneapolis, Minn.
Moline, Ill. (Included in Rock Island (Ill.) district.)
Newark, N. J.
New Haven, Conn.
New York, N. Y.
Omaha, Nebr.
Peoria, Ill.
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Maine.
Portland, Oreg.
Providence, R. I.
Reading, Pa.
Rochester, N. Y.
Rock Island (Ill.) district.
St. Louis, Mo.
St. Paul, Minn.
Salt Lake City, Utah.
San Francisco, Calif.
Scranton, Pa.
Seattle, Wash.
South Bend, Ind.
Spokane, Wash.
Springfield, Mass.
Toledo, Ohio.
Washington, D. C.
Wichita, Kans.
Worcester, Mass.
York, Pa.
Youngstown, Ohio.

South and Southwest

Atlanta, Ga.
Birmingham, Ala.
Charleston, S. C.
Charlotte, N. C.
Dallas, Tex.
El Paso, Tex.
Houston, Tex.
Jackson, Miss.
Jacksonville, Fla.
Little Rock, Ark.
Louisville, Ky.
Memphis, Tenn.
Nashville, Tenn.
New Orleans, La.
Norfolk, Va.
Oklahoma City, Okla.
Phoenix, Ariz.
Richmond, Va.
San Antonio, Tex.

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TABLE 1.—*Indexes of union hourly wage rates and weekly hours in all building trades, 1907 to 1940*

Year	Index numbers (1929=100)						Year	Index numbers (1929=100)					
	All building trades		Journeymen		Helpers and laborers			All building trades		Journeymen		Helpers and laborers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours		Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1907	31.5	110.0	31.7	109.3	30.7	113.1	1924	85.7	101.9	85.6	101.8	84.9	102.6
1908	33.5	108.3	33.8	107.7	32.1	110.8	1925	89.0	101.9	88.8	101.8	87.7	102.4
1909	35.1	106.8	35.5	106.4	33.2	108.5	1926	94.8	101.7	94.7	101.6	95.6	102.2
1910	36.5	105.5	37.0	105.2	34.3	106.6	1927	98.1	101.5	97.9	101.4	97.3	102.2
1911	37.1	105.1	37.6	104.8	34.5	106.4	1928	98.7	100.9	98.7	100.7	98.3	102.1
1912	37.9	104.8	38.5	104.5	34.8	106.1	1929	100.0	100.0	100.0	100.0	100.0	100.0
1913	38.8	104.6	39.4	104.2	35.8	106.1	1930	104.2	97.2	104.1	97.1	105.1	97.8
1914	39.6	104.2	40.3	103.9	36.2	105.5	1931	104.5	96.0	104.5	95.8	104.5	97.0
1915	39.9	104.1	40.6	103.8	36.5	105.4	1932	89.3	94.3	89.3	94.1	89.2	94.8
1916	41.2	103.7	42.0	103.4	37.7	105.1	1933	86.8	94.0	86.9	93.8	85.2	94.4
1917	43.8	103.5	44.3	103.2	41.4	104.7	1934	87.4	90.5	87.4	90.3	87.7	91.4
1918	48.6	102.9	49.0	102.6	48.0	104.3	1935	88.4	89.8	88.4	89.6	88.2	90.8
1919	55.7	102.4	56.0	102.2	55.5	103.3	1936	91.6	89.8	91.3	89.6	93.4	91.0
1920	75.2	101.9	74.9	101.7	80.5	102.7	1937	98.0	90.2	97.6	90.0	101.5	91.3
1921	76.6	101.8	76.3	101.6	81.3	102.7	1938	106.7	88.7	106.1	88.4	111.7	89.9
1922	71.8	101.8	71.9	101.7	74.0	102.4	1939	107.4	88.5	106.8	88.3	112.6	89.7
1923	79.4	101.9	79.2	101.8	78.5	102.6	1940	109.1	88.4	108.3	88.3	114.8	89.2

Trends in Individual Trades, 1929 to 1940

The indexes of hourly wage rates and maximum weekly hours for the separate crafts from 1929 to 1940 are shown in table 2.

Compared to the base year (1929), the average rate for steam and sprinkler fitters' helpers advanced more than that of any other trade, their 1940 wage-rate index being 123.2.

TABLE 2.—*Indexes of union hourly wage rates and weekly hours in each building trade, 1929 to 1940*

[1929=100]

Year	Asbestos workers		Bricklayers		Carpenters		Cement finishers		Electricians (inside wiremen)		Elevator constructors	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	105.8	96.3	102.4	97.6	104.0	96.9	106.6	96.1	101.8	97.6	104.7	96.8
1931	106.8	94.0	102.2	96.1	104.2	95.4	107.0	95.0	103.2	96.6	105.2	95.0
1932	89.0	92.8	87.5	93.9	85.4	93.0	93.4	93.9	98.5	94.3	97.9	95.0
1933	88.7	91.8	85.2	94.9	85.2	91.6	91.2	95.7	89.9	94.3	91.0	93.0
1934	88.6	91.7	84.5	93.3	86.7	90.8	92.1	92.2	90.1	88.7	91.2	92.2
1935	89.8	91.0	84.2	93.2	87.8	90.4	92.6	92.0	94.4	85.1	91.3	91.9
1936	93.4	91.3	84.7	93.2	92.3	90.5	95.0	91.6	96.9	85.4	92.4	92.6
1937	100.6	91.0	90.6	94.1	98.3	90.3	101.9	91.7	101.1	89.6	96.0	92.4
1938	110.3	89.5	100.1	91.0	107.1	88.6	111.3	88.9	111.4	89.1	107.7	91.7
1939	110.8	89.5	100.6	91.1	107.3	88.6	111.7	88.9	112.0	88.8	109.5	89.5
1940	112.0	89.0	102.8	90.8	110.0	88.6	112.7	89.1	113.9	88.8	111.2	89.1

Year	Engineers (portable and hoisting)		Glaziers		Granite cutters		Lathers		Marble setters		Mosaic and terrazzo workers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	107.7	95.1	104.6	96.8	105.1	95.2	104.3	94.3	100.3	94.7	104.7	94.5
1931	107.7	93.7	105.3	95.1	105.2	94.4	103.7	93.8	100.8	93.0	105.6	93.6
1932	100.7	92.6	88.2	92.9	94.2	94.8	93.1	93.3	92.3	92.0	97.2	89.8
1933	99.6	91.7	88.0	92.9	90.7	93.6	89.7	92.9	89.2	91.9	89.5	91.0
1934	101.4	89.7	93.2	88.1	90.6	92.1	92.1	87.5	88.8	90.9	90.8	90.9
1935	103.1	89.2	94.1	87.5	90.5	92.1	93.1	87.4	89.4	90.9	90.8	90.3
1936	104.2	89.7	95.5	87.8	90.5	91.5	95.5	86.5	89.9	90.8	91.1	89.4
1937	112.6	89.5	104.6	87.9	91.0	91.9	101.8	87.7	95.1	90.8	95.4	90.0
1938	116.0	89.3	112.2	86.3	96.3	85.3	112.7	86.1	103.2	90.8	106.0	87.7
1939	117.4	89.2	113.0	86.1	97.7	85.3	116.4	85.4	103.5	90.8	107.5	87.7
1940	118.4	89.1	114.3	86.1	97.7	85.3	117.2	85.2	105.2	86.7	108.0	87.7

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TABLE 3.—*Indexes of union hourly wage rates and weekly hours in each building trade, 1929 to 1940*—Continued

Year	Painters		Plasterers		Plumbers and gas fitters		Roofers—composition		Roofers—slate and tile		Sheet-metal workers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	105.6	98.9	105.0	97.7	103.9	95.4	106.0	96.1	103.1	95.7	104.6	96.3
1931	106.1	98.0	104.7	97.0	105.1	94.1	106.7	94.9	103.5	94.1	106.2	94.7
1932	89.6	97.9	87.1	95.2	91.4	93.7	93.2	93.9	89.9	94.1	92.1	93.3
1933	87.8	97.7	83.7	97.2	90.6	93.3	91.2	95.1	87.7	94.1	89.4	93.2
1934	86.4	85.6	84.6	93.1	91.4	92.4	93.0	92.6	87.2	93.8	89.7	91.9
1935	86.7	85.5	85.6	91.6	92.8	91.8	95.6	92.5	89.5	92.6	90.4	92.0
1936	91.1	85.9	86.1	90.1	95.2	90.6	96.2	93.1	90.2	93.4	92.2	91.9
1937	97.7	85.9	94.9	90.2	100.4	91.1	103.7	93.2	96.9	93.3	98.9	92.0
1938	104.2	86.0	106.1	86.5	112.5	86.5	114.8	91.5	103.4	92.2	108.8	90.1
1939	105.0	85.7	107.0	86.5	113.5	86.8	115.2	91.6	104.4	92.2	110.4	90.1
1940	105.2	86.1	107.5	86.3	115.3	85.9	117.9	91.2	106.2	92.1	112.4	90.1

Year	Sign painters		Steam and sprinkler fitters		Stonecutters		Stonemasons		Structural-iron workers[1]		Tile layers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	99.9	99.1	104.9	95.5	100.7	96.9	101.5	96.6	105.5	96.9	104.5	94.8
1931	99.8	98.1	105.5	94.5	101.0	96.4	102.0	94.9	106.5	95.8	105.6	93.6
1932	90.1	97.6	90.9	93.6	93.7	94.3	90.5	94.5	92.3	93.4	91.1	92.6
1933	83.2	97.8	88.2	93.1	84.7	94.3	84.5	93.8	91.3	93.1	88.3	92.4
1934	82.9	95.1	89.2	92.5	85.1	93.0	84.4	93.4	92.5	91.8	88.3	86.2
1935	85.6	93.1	90.7	92.2	85.1	92.7	84.2	93.3	93.2	90.7	89.0	86.2
1936	87.6	92.9	93.7	92.4	86.3	92.8	85.2	93.3	95.6	90.6	90.7	86.1
1937	96.8	92.9	98.8	92.5	88.3	92.8	94.1	93.3	104.4	90.2	97.1	89.8
1938	97.7	92.0	111.4	87.6	96.1	91.7	102.1	90.2	112.7	89.2	106.4	89.8
1939	97.9	91.9	112.2	88.0	96.5	91.8	102.4	90.2	114.0	89.1	106.5	89.8
1940	98.1	92.1	112.5	88.0	96.8	91.7	101.9	90.1	114.4	89.1	106.7	89.8

Year	Building laborers		Hod carriers (masons' tenders)		Plasterers' laborers		Elevator constructors' helpers		Marble-setters' helpers		Steam and sprinkler fitters' helpers		Tile layers' helpers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	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
1930	105.5	98.1	103.8	99.3	106.0	97.4	105.4	96.2	101.7	95.9	109.3	92.1	108.5	93.6
1931	103.9	97.0	103.5	98.8	105.6	96.6	105.7	94.7	101.8	94.2	109.3	91.8	108.5	92.6
1932	89.4	93.6	85.8	96.6	87.6	96.3	96.9	94.7	93.2	93.8	94.3	91.7	95.8	91.4
1933	84.2	93.2	84.7	96.1	82.5	94.7	88.9	92.5	90.7	94.0	91.6	91.6	91.4	91.5
1934	87.3	89.1	90.3	94.3	84.8	91.8	88.4	91.8	90.9	92.3	91.9	91.1	91.5	87.6
1935	88.6	89.0	87.4	94.2	86.2	90.7	88.6	91.5	91.5	92.3	93.0	91.1	94.6	76.3
1936	96.2	89.5	92.1	94.0	88.0	89.2	89.5	92.1	91.6	92.2	93.2	91.5	96.0	76.3
1937	105.3	89.7	99.1	94.3	95.8	89.2	91.8	91.7	97.0	92.2	100.0	91.8	101.2	81.6
1938	112.9	89.3	109.1	93.2	108.1	85.1	104.5	91.1	105.4	92.2	121.8	82.3	111.6	81.6
1939	113.6	89.2	109.4	92.9	109.0	84.8	107.9	86.8	105.9	92.2	122.5	82.2	111.9	81.6
1940	115.4	88.7	113.6	92.8	109.2	84.5	108.9	86.6	108.2	88.3	123.2	82.2	112.1	81.6

[1] Included rodmen prior to 1938.

Maximum Weekly Hours

In comparison with the base year (1929), all of the trades had reductions in their average allowed weekly hours. The greatest decline was that of tile layers' helpers, with an hour index of 81.6.

Average Union Wage Rates, 1940

The average union rate per hour for all building trades in the 72 cities studied was $1.369 per hour on June 1, 1940. The journeyman average was $1.487 and that of the helpers and laborers was $0.898. (See table 3.)

The bricklayers' average of $1.711 was higher than that of any other trade, although the plasterers were a close second with an average of

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$1.704. The structural-iron workers ($1.614) and the lathers ($1.602) were next in line.

The extreme range of journeyman rates was from $0.55 per hour, for glaziers, paperhangers, and some of the painters in Charleston, S. C., to $2.50 per hour, for bucket-hoist operators in New York City. Nearly 99 percent of the journeymen, however, had rates between $1 and $2.10, with about 65 percent receiving between $1.20 and $1.70.

TABLE 3.—*Distribution of union members in the building trades, by hourly wage rates, June 1, 1940*

Trade	Average rate per hour	Percent of union journeymen whose rates (in cents) per hour were—												
		Under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and under 210	210 and over
Journeymen	$1.487	0.9	4.2	7.1	17.1	12.1	4.7	16.2	14.5	8.1	6.2	1.1	7.5	0.3
Asbestos workers	1.470	7.1	.6	1.2	12.0	31.6	9.0	4.1	12.2	9.2	-----	-----	13.0	-----
Boilermakers	1.576	-----	-----	-----	6.0	2.6	-----	62.4	5.1	3.9	-----	20.0	-----	-----
Bricklayers	1.711	-----	.8	.3	4.5	3.4	1.8	23.1	10.3	19.7	2.1	.1	33.9	-----
Carpenters	1.425	.8	4.4	12.2	23.4	11.8	8.5	6.4	13.7	3.3	15.5	-----	-----	-----
Cement finishers	1.439	-----	4.0	3.6	31.5	15.3	3.8	9.2	11.0	19.8	1.3	-----	.5	-----
Electricians, inside wiremen	1.552	.2	4.1	2.2	13.5	20.9	.8	11.6	17.8	7.5	1.2	-----	20.2	-----
Elevator constructors	1.511	.1	.8	1.6	9.8	12.5	20.9	23.7	15.7	2.7	9.3	2.9	-----	-----
Engineers, portable and hoisting	1.539	1.0	5.0	3.0	13.8	12.0	3.1	23.8	9.2	9.7	2.4	2.6	11.0	3.4
Glaziers	1.412	2.7	11.9	14.1	20.1	10.6	5.6	5.4	1.8	-----	13.9	13.9	-----	-----
Granite cutters	1.342	-----	18.3	18.4	4.4	41.0	4.7	.3	-----	.4	-----	-----	12.5	-----
Lathers	1.602	.3	.9	7.9	5.2	8.0	2.5	20.1	15.9	24.5	-----	.9	6.0	7.8
Machinists	1.500	-----	1.1	.3	25.2	6.7	-----	9.4	53.5	3.8	-----	-----	-----	-----
Marble setters	1.589	-----	-----	.2	5.9	17.1	1.5	17.9	14.6	41.5	1.3	-----	-----	-----
Mosaic and terrazzo workers	1.451	-----	1.8	1.8	29.1	15.4	6.7	14.8	8.5	21.9	-----	-----	-----	-----
Painters	1.390	1.8	7.5	10.8	19.1	8.1	.2	27.1	25.4	-----	-----	-----	-----	-----
Paperhangers	1.367	2.7	7.7	13.3	18.8	21.5	-----	4.2	31.8	-----	-----	-----	-----	-----
Plasterers	1.704	-----	.1	1.0	3.7	11.6	-----	19.5	11.2	17.3	.8	-----	34.8	-----
Plumbers and gas fitters	1.537	.2	2.1	.9	11.3	13.8	16.4	20.0	3.9	17.0	-----	-----	14.4	-----
Rodmen	1.454	-----	2.1	6.4	25.1	12.4	5.2	16.0	7.2	23.1	-----	-----	2.5	-----
Roofers, composition	1.276	9.1	16.4	9.0	25.6	9.3	5.1	4.5	13.8	5.8	-----	-----	1.4	-----
Roofers, slate and tile	1.417	1.0	13.6	7.2	17.2	9.1	2.9	11.2	17.6	12.3	7.9	-----	-----	-----
Sheet-metal workers	1.447	-----	3.5	3.1	26.3	23.7	.6	16.3	2.4	8.0	16.1	-----	-----	-----
Sign painters	1.500	.1	7.7	2.3	20.8	12.6	3.3	14.4	8.4	13.8	13.7	-----	-----	2.9
Steam and sprinkler fitters	1.585	.1	1.8	2.1	5.2	19.5	5.0	19.3	3.6	26.1	-----	-----	17.3	-----
Stonecutters	1.389	8.4	5.6	9.6	26.2	6.5	1.8	2.3	31.1	1.7	-----	6.5	.3	-----
Stonemasons	1.540	-----	.4	(1)	21.2	3.5	10.9	32.5	7.1	6.8	1.2	8.5	7.9	-----
Structural-iron workers	1.614	-----	.1	-----	7.6	12.5	.7	28.8	13.9	14.4	.1	15.8	6.1	-----
Tile layers	1.469	-----	-----	2.3	20.2	18.9	3.4	21.5	33.7	-----	-----	-----	-----	-----

Trade	Average rate per hour	Percent of union helpers and laborers whose rates (in cents) per hour were—												
		Under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160
Helpers and laborers [2]	$0.898	1.9	7.1	10.0	15.4	20.5	5.5	15.1	10.0	10.1	1.1	1.7	1.6
Building laborers	.812	3.0	10.7	14.5	13.3	27.8	3.6	17.8	9.3	-----	(1)	-----	-----
Elevator constructors' helpers	1.096	-----	-----	.1	.7	6.8	11.7	43.3	22.7	-----	14.7	-----	-----
Hod carriers (masons' tenders)	.974	.9	2.2	3.7	24.5	10.5	6.4	8.0	4.5	39.2	.1	-----	-----
Marble setters' helpers	1.058	-----	.8	2.9	11.0	12.9	17.4	14.7	6.2	-----	34.1	-----	-----
Plasterers' laborers	1.085	-----	3.7	3.3	6.8	5.2	9.1	15.3	26.1	6.3	.2	20.2	3.8
Steam and sprinkler fitters' helpers	1.095	-----	.3	7.1	22.8	11.9	6.4	7.5	4.9	-----	-----	-----	39.1
Tile layers' helpers	1.001	-----	1.1	1.9	16.9	13.6	18.9	6.3	12.7	28.5	.1	-----	-----

[1] Less than a tenth of 1 percent.
[2] Includes also plumbers' laborers and composition roofers' helpers, not shown separately because of the small number of quotations obtained for these trades.

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Average Rates in Each City

Averages of the combined journeyman rates and of the combined helper and laborer rates in each city, grouped according to population, are presented in table 4.[3]

TABLE 4.—*Average union hourly wage rates in the building trades, by cities and population groups, June 1, 1940*

City and population group	Average hourly rate
Journeymen	
Population, over 1,000,000:	
New York, N. Y.	$1.796
Chicago, Ill.	1.663
Average for group	*1.698*
Detroit, Mich.	1.396
Philadelphia, Pa.	1.364
Los Angeles, Calif.	1.189
Population, 500,000 to 1,000,000:	
Washington, D. C.	1.661
Pittsburgh, Pa.	1.561
St. Louis, Mo.	1.521
Cleveland, Ohio	1.445
Average for group	*1.415*
Boston, Mass.	1.413
Baltimore, Md.	1.329
Buffalo, N. Y.	1.327
San Francisco, Calif.	1.303
Milwaukee, Wis.	1.218
Population, 250,000 to 500,000:	
Newark, N. J.	1.708
Cincinnati, Ohio	1.439
Toledo, Ohio	1.434
Denver, Colo.	1.419
Kansas City, Mo.	1.411
Indianapolis, Ind.	1.360
Average for group	*1.359*
Rochester, N. Y.	1.350
Seattle, Wash.	1.334
Birmingham, Ala.	1.318
Minneapolis, Minn.	1.305
Columbus, Ohio	1.304
Houston, Tex.	1.286
St. Paul, Minn.	1.286
Louisville, Ky.	1.285
Dallas, Tex.	1.259
New Orleans, La.	1.247
Providence, R. I.	1.239
Memphis, Tenn.	1.235
Portland, Oreg.	1.234
Atlanta, Ga.	1.122
Population, 100,000 to 250,000:	
Dayton, Ohio	1.422
Peoria, Ill.	1.402
Youngstown, Ohio	1.365
Spokane, Wash.	1.320
Des Moines, Iowa	1.296
Erie, Pa.	1.287
Springfield, Mass.	1.284
Scranton, Pa.	1.274
Oklahoma City, Okla.	1.270
South Bend, Ind.	1.264
Rock Island (Ill.) district [1]	1.258
Average for group	*1.249*
Journeymen—Continued	
Population, 100,000 to 250,000—Continued.	
San Antonio, Tex.	$1.244
Reading, Pa.	1.236
New Haven, Conn.	1.233
El Paso, Tex.	1.226
Nashville, Tenn.	1.210
Omaha, Nebr.	1.204
Grand Rapids, Mich.	1.179
Duluth, Minn.	1.169
Worcester, Mass.	1.158
Salt Lake City, Utah	1.157
Richmond, Va.	1.100
Jacksonville, Fla.	1.089
Wichita, Kans.	1.084
Norfolk, Va.	1.066
Population, 40,000 to 100,000:	
Butte, Mont.	1.474
Charleston, W. Va.	1.252
Phoenix, Ariz.	1.209
Madison, Wis.	1.186
Jackson, Miss.	1.184
Average for group	*1.177*
Manchester, N. H.	1.150
Little Rock, Ark.	1.101
Charlotte, N. C.	1.057
Charleston, S. C.	1.044
York, Pa.	.989
Portland, Maine	.983
Helpers and laborers	
Population, over 1,000,000:	
New York, N. Y.	1.169
Average for group	*1.046*
Chicago, Ill.	1.037
Detroit, Mich.	.851
Philadelphia, Pa.	.734
Los Angeles, Calif.	.710
Population, 500,000 to 1,000,000:	
St. Louis, Mo.	.941
Cleveland, Ohio	.919
San Francisco, Calif.	.910
Boston, Mass.	.886
Milwaukee, Wis.	.883
Pittsburgh, Pa.	.876
Average for group	*.848*
Washington, D. C.	.834
Baltimore, Md.	.686
Buffalo, N. Y.	.664
Population, 250,000 to 500,000:	
Newark, N. J.	1.073
Seattle, Wash.	.925
Kansas City, Mo.	.908
Minneapolis, Minn.	.903
Helpers and laborers—Continued	
Population, 250,000 to 500,000—Continued.	
Cincinnati, Ohio	$0.851
Toledo, Ohio	.801
Denver, Colo.	.799
Indianapolis, Ind.	.793
St. Paul, Minn.	.793
Portland, Oreg.	.789
Average for group	*.766*
Rochester, N. Y.	.731
Providence, R. I.	.717
Columbus, Ohio	.679
Houston, Tex.	.609
New Orleans, La.	.601
Dallas, Tex.	.598
Louisville, Ky.	.584
Birmingham, Ala.	.466
Population, 100,000 to 250,000:	
Spokane, Wash.	1.001
Peoria, Ill.	.879
Worcester, Mass.	.839
Salt Lake City, Utah	.789
South Bend, Ind.	.786
New Haven, Conn.	.767
Des Moines, Iowa	.763
Scranton, Pa.	.734
Dayton, Ohio	.720
Springfield, Mass.	.716
Rock Island (Ill.) district [1]	.709
Average for group	*.698*
Reading, Pa.	.683
Youngstown, Ohio	.682
Duluth, Minn.	.643
Erie, Pa.	.632
Omaha, Nebr.	.629
Oklahoma City, Okla.	.570
Grand Rapids, Mich.	.549
San Antonio, Tex.	.546
El Paso, Tex.	.516
Nashville, Tenn.	.481
Richmond, Va.	.481
Wichita, Kans.	.469
Jacksonville, Fla.	.439
Population, 40,000 to 100,000:	
Butte, Mont.	.872
Madison, Wis.	.726
Manchester, N. H.	.[illegible]
Phoenix, Ariz.	.685
York, Pa.	.675
Average for group	*.664*
Portland, Maine	.627
Charleston, W. Va.	.535
Jackson, Miss.	.462
Charleston, S. C.	.448

[1] Includes Rock Island, Ill., Davenport, Iowa, and Moline, Ill.

[3] The averages are weighted according to the number of members in each local union covered by the reported rates. While a comparison of average rates between cities where averages include the influence of the membership factor may be somewhat misleading where membership in particular trades is unusually large or small in comparison with the same trades in other cities, a weighted average of this kind is obviously more realistic than a simple average of specific rates. In the latter case, a wage rate for a trade including half a dozen members would be given the same importance as a trade including several hundred members.

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The highest city averages for the journeymen trades were those of New York ($1.796 per hour) and Newark ($1.708). Chicago ($1.663), Washington ($1.661), Pittsburgh ($1.561), and St. Louis ($1.521) averaged above $1.50 per hour.

Overtime and Sunday Rates

Double time was reported as the agreed-upon initial overtime rate in exactly half of the total quotations. Nearly all of the other quotations gave time and one-half as the initial overtime rate.

Of the total journeyman membership, 89 percent had a double-time rate for Sunday and 10 percent had a time and one-half rate. The helpers and laborers had a double-time rate for over 96 percent of their total membership and a rate of time and one-half for about 3 percent.

Union Hours, 1940

The average maximum workweek provided in the union agreements of all building trades was 38.3 hours on June 1, 1940. The average for the journeyman trades was 38 hours, and for the helper and laborer trades, 39.1 hours (table 5).

TABLE 5.—*Distribution of union members in each building trade, by weekly hours, June 1, 1940*

Trade	Average hours per week	Percent of union members whose hours per week were							
		30	32	35	40	42	44	45	48
All building trades	38.3	9.5	0.1	[1] 19.6	66.9	0.1	2.8	0.1	[2] 0.9
Journeymen	38.0	10.2	.1	[1] 20.3	67.8	.1	.8	------	[2] .7
Asbestos workers	38.5	14.5	------	1.8	80.0	3.1	.6	------	------
Boilermakers	38.8	1.5	------	20.0	78.5	------	------	------	------
Bricklayers	37.9	1.6	------	38.7	59.1	------	.6	------	------
Carpenters	38.7	2.5	------	20.9	75.7	------	.9	------	------
Cement finishers	38.8	1.6	------	22.7	73.2	------	1.4	------	1.1
Electricians, inside wiremen	37.4	22.6	------	7.3	69.8	------	.1	------	.2
Elevator constructors	40.0	.5	------	9.8	76.2	.9	12.6	------	------
Engineers, portable and hoisting	40.8	3.3	------	1.4	79.4	.6	1.0	------	[2] 14.3
Glaziers	38.4	1.5	------	30.7	66.0	------	1.8	------	------
Granite cutters	37.0	------	------	60.1	39.9	------	------	------	------
Lathers	37.0	26.3	------	7.6	65.7	------	.4	------	------
Machinists	39.8	------	------	3.8	95.4	------	.5	------	.3
Marble setters	[illegible]	.5	------	36.8	62.6	------	.1	------	------
Mosaic and terrazzo workers	3[illegible]	1.0	------	23.5	73.9	------	1.6	------	------
Painters	3[illegible]	20.5	------	36.4	42.5	------	.6	------	------
Paperhangers	[illegible].3	32.3	------	11.0	55.5	------	1.2	------	------
Plasterers	35.2	44.7	2.2	4.0	48.4	------	.7	------	------
Plumbers and gas fitters	37.8	15.5	------	14.3	69.0	------	1.2	------	------
Rodmen	39.5	3.3	------	2.5	94.2	------	------	------	------
Roofers, composition	39.3	1.0	------	[1] 15.7	79.3	1.7	.4	------	1.9
Roofers, slate and tile	39.4	.4	------	15.0	79.8	3.0	1.0	------	.8
Sheet-metal workers	38.9	2.4	------	17.0	80.3	------	.3	------	------
Sign painters	39.2	1.0	------	18.4	73.5	2.2	4.9	------	------
Steam and sprinkler fitters	37.8	19.2	------	6.4	74.3	------	.1	------	------
Stonecutters	39.6	------	------	8.5	90.4	.5	.6	------	------
Stonemasons	38.7	.8	------	23.7	75.4	------	.1	------	------
Structural-iron workers	39.2	5.2	------	5.7	89.1	------	------	------	------
Tile layers	39.8	1.4	------	1.6	96.2	------	.8	------	------
Helpers and laborers [3]	39.1	6.4	------	16.7	63.7	(4)	10.9	.5	1.8
Building laborers	40.1	1.7	------	9.8	71.8	------	14.2	.7	1.8
Elevator constructors' helpers	39.8	1.3	------	11.6	75.2	.1	11.8	------	------
Hod carriers (masons' tenders)	38.6	1.0	------	39.1	45.7	------	11.1	.2	2.9
Marble setters' helpers	38.2	1.0	------	35.0	63.8	------	.2	------	------
Plasterers' laborers	36.6	33.5	------	4.3	59.6	------	2.0	.3	.3
Steam and sprinkler fitters' helpers	35.8	39.1	------	6.2	54.6	------	.1	------	------
Tile layers' helpers	39.9	1.3	------	1.4	96.0	------	.2	------	1.1

[1] Includes 0.3 percent of the composition roofers having a 36.9-hour scale, amounting to less than a tenth of 1 percent in the journeyman and all building trades totals.

[2] Includes less than a tenth of 1 percent of the engineers, reported as having a 54-hour week.

[3] Includes also plumbers' laborers and composition roofers' helpers, not shown separately because of the small number of quotations obtained for these trades.

[4] Less than a tenth of 1 percent.

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The plasterers' average of 35.2 hours per week was the lowest of any trade, and the average of 40.8 hours for the engineers was the highest. This high average was due to the fact that many of the agreements for engineers specify a 48-hour week for street or road work.

Building Trades—Wage Rates and Hours, 1936[1]

The Bureau of Labor Statistics, in cooperation with the Works Progress Administration, undertook an extensive survey of the wage rates and hours of labor that actually prevailed in the building industry in the fall of 1936. This survey included both union and nonunion workers.[2]

In order to obtain a representative cross section of wages and hours of labor in the building industry, information was obtained from contractors located in 105 cities in 48 States and the District of Columbia. Since the object of the survey was to secure an all-round picture of prevailing wage rates in the principal occupations in the building trades (excluding apprentices and foremen), care was exercised to secure an adequate sample in each city. Among other factors considered in building up the sample were type of construction (whether residential or nonresidential), type of financing (whether public or private), organization status of the workers (whether union or nonunion), size of firms, and class of work performed.

In all, the records of over 6,000 contractors were examined and scheduled, but only 5,450, covering 13,267 projects, were used in compiling the report. From these pay rolls the wages paid to and the hours worked by 186,145 employees were recorded. It is impossible to state definitely what percentage this number was of all employees working in the building trades at the time of the survey, but it probably represented between 25 and 30 percent of the total.

Average Hourly Wage Rates

For the building-construction industry as a whole, or, more precisely, for the 186,145 workers covered in the survey, the average hourly rate paid in 1936 was 91.8 cents. Of the 186,145 employees scheduled, 126,014, or 67.7 percent, were union and 60,131, or 32.3 percent, were nonunion employees. Skilled workers numbered 105,662, or 56.8 percent; semiskilled 42,850, or 23.0 percent; and unskilled 37,633, or 20.2 percent.

Although the average hourly rate for all workers in 1936 was 91.8 cents, there were wide variations in the different occupational groups. Table 1 shows these variations by regions and by union affiliation. The highest rates paid are reported for hoisting engineers, with an average hourly rate of $1.343. Ranking next were the structural-iron workers, with an average of $1.332 an hour.

[1] Abstract of articles by Edward P. Sanford, of the Bureau of Labor Statistics, in the Monthly Labor Review for August and October 1937.

[2] The Bureau of Labor Statistics makes annual surveys of union scales of wages and hours in the building trades, but this is the only general survey of actual wages and hours, both union and nonunion, ever made by the Bureau.

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TABLE 1.—*Average union and nonunion hourly wages in selected occupations in the building trades, 1936, by geographic divisions*

Occupation	United States			New England			Middle Atlantic		
	Total	Union	Non-union	Total	Union	Non-union	Total	Union	Non-union
All occupations	$0.918			$0.899			$1.062		
Bricklayers	1.304	$1.351	$0.972	1.210	$1.248	$1.034	1.399	$1.447	$0.939
Carpenters	1.048	1.150	.805	.980	1.066	.803	1.165	1.241	.845
Cement finishers	1.119	1.222	.783	1.164	1.249	.898	1.265	1.295	.798
Helpers	.865	.922	.519	.654	.703	.563	.919	.937	.579
Electricians (inside wiremen)	1.300	1.361	.862	1.106	1.172	.896	1.483	1.521	.889
Helpers	.648	.720	.502	.637	.723	.531	.776	.811	.593
Engineers, hoisting (2 or more drums)	1.343	1.419	.942	1.323	1.352	.979	1.605	1.618	1.305
Helpers, not elsewhere classified	.667	.781	.489	.594	.719	.513	.748	.802	.570
Hod carriers	.781	.850	.577	.676	.759	.561	.850	.897	.602
Laborers, common	.516	.629	.420	.601	.671	.485	.538	.572	.483
Lathers, wood	1.091	1.277	.704	1.268	1.309	.900	1.220	1.367	.671
Lathers, metal	1.304	1.342	.949	1.398	1.418	.881	1.348	1.387	.962
Mixer operators	.871	1.038	.667	.890	1.210	.829	1.147	1.193	.964
Painters	.935	1.092	.702	.885	1.001	.686	1.038	1.139	.749
Plasterers	1.292	1.354	.938	1.271	1.303	1.011	1.415	1.467	.953
Plumbers	1.224	1.284	.954	1.128	1.208	.925	1.309	1.363	.992
Helpers	.612	.699	.482	.530	.585	.494	.721	.763	.556
Reinforcing steel workers (rodmen)	1.089	1.155	.876	1.252	1.284	1.018	1.045	1.099	.640
Roofers, composition	.944	1.123	.716	.961	1.193	.684	1.122	1.184	.862
Roofers, slate or tile	1.083	1.213	.907	1.112	1.154	.965	1.147	1.219	1.099
Sheet-metal workers	1.079	1.202	.819	1.140	1.245	.803	1.259	1.295	1.011
Helpers	.511	.607	.457	.522	.687	.462	.553	.618	.446
Steam fitters	1.260	1.302	.950	1.201	1.291	.902	1.311	1.324	1.083
Helpers	.723	.786	.548	.678	.754	.540	.831	.872	.550
Stonemasons	1.278	1.354	.870	1.149	1.258	.931	1.342	1.428	.888
Structural-iron workers	1.332	1.396	1.111	1.201	1.244	.759	1.486	1.505	1.388
Tile layers	1.205	1.248	.927	1.204	1.261	1.016	1.302	1.344	.825
Helpers	.719	.792	.477	.774	.800	.695	.887	.935	.472
Truck drivers:									
Under 1½ tons	.518	.580	.471	.475		.483	.575	.750	.470
1½ to 5 tons	.630	.718	.535	.528	.646	.511	.639	.667	.600
Over 5 tons	.822	.876	.648	.673	.702	.624	.870	.895	.550

Occupation	East North Central			West North Central			South Atlantic		
	Total	Union	Non-union	Total	Union	Non-union	Total	Union	Non-union
All occupations	$0.982			$0.880			$0.788		
Bricklayers	1.314	$1.335	$1.030	1.273	$1.328	$1.022	1.199	$1.287	$0.950
Carpenters	1.132	1.224	.802	.995	1.103	.765	.937	1.149	.756
Cement finishers	1.124	1.212	.791	1.057	1.178	.828	.985	1.242	.643
Helpers	.798	.883	.540	.481	.573	.469	.379	.582	.332
Electricians (inside wiremen)	1.321	1.341	1.024	1.201	1.258	.832	1.231	1.355	.791
Helpers	.731	.771	.545	.634	.765	.551	.522	.589	.452
Engineers, hoisting (2 or more drums)	1.334	1.382	1.072	1.172	1.418	.718	1.321	1.531	.873
Helpers, not elsewhere classified	.805	.868	.516	.595	.746	.456	.487	.585	.440
Hod carriers	.750	.801	.653	.806	.859	.557	.521	.604	.463
Laborers, common	.613	.704	.494	.593	.735	.435	.431	.560	.374
Lathers, wood	1.179	1.330	.678	.995	1.167	.681	.896	1.071	.699
Lathers, metal	1.300	1.365	.908	1.275	1.281	.983	1.236	1.263	1.018
Mixer operators	.988	1.160	.682	.664	.781	.597	.731	1.107	.499
Painters	1.045	1.246	.731	.955	1.110	.704	.797	1.047	.668
Plasterers	1.324	1.372	.961	1.227	1.255	.960	1.158	1.248	.897
Plumbers	1.286	1.310	1.001	1.234	1.275	.921	1.127	1.253	.867
Helpers	.651	.761	.523	.502	.598	.470	.452	.509	.392
Reinforcing steel workers (rodmen)	1.052	1.143	.677	1.213	1.296	.835	1.127	1.274	.870
Roofers, composition	1.038	1.200	.740	.954	1.157	.770	.771	1.019	.675
Roofers, slate or tile	1.148	1.247	.805	1.247	1.394	.850	1.021	1.192	.857
Sheet-metal workers	1.057	1.192	.823	1.055	1.201	.851	.997	1.245	.772
Helpers	.560	.668	.504	.511	.578	.476	.430	.594	.404
Steam fitters	1.317	1.329	.997	1.295	1.309	1.004	1.120	1.260	.898
Helpers	.669	.693	.636	.721	.778	.533	.614	.685	.455
Stonemasons	1.337	1.383	.825	1.069	1.196	.562	1.350	1.384	1.097
Structural-iron workers	1.269	1.348	1.090	1.292	1.345	.883	1.365	1.565	.818
Tile layers	1.236	1.282	.923	1.105	1.135	.929	1.242	1.339	.922
Helpers	.764	.816	.527	.698	.757	.517	.592	.707	.408
Truck drivers:									
Under 1½ tons	.592	.623	.558	.506	.534	.466	.355		.344
1½ to 5 tons	.721	.773	.598	.667	.737	.541	.554	.659	.471
Over 5 tons	1.018	1.027		.738	.752	.730			

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TABLE 1.—*Average union and nonunion hourly wages in selected occupations in the building trades, 1936, by geographic divisions*—Continued

Occupation	East South Central			West South Central			Mountain			Pacific		
	Total	Union	Non-union	Total	Union	Non-union	Total	Union	Non-union	Total	Union	Non-union
All occupations	$0.645	.....	.....	$0.675	.....	.....	$0.901	.....	.....	$0.921	.....	.....
Bricklayers	1.197	$1.211	$1.005	1.138	$1.208	$0.894	1.278	$1.320	$0.915	1.348	$1.410	$0.928
Carpenters	.847	.896	.708	.883	.983	.753	1.086	1.187	.801	1.043	1.088	.924
Cement finishers	.806	1.005	.648	.947	1.008	.808	1.103	1.174	.925	1.125	1.163	1.012
Helpers	.450	.....	.450	.386	.538	.366	.694	.788	.624	.742	.780	.697
Electricians (inside wiremen)	.989	1.043	.779	1.072	1.118	.874	1.171	1.207	.919	1.174	1.244	.828
Helpers	.487	.500	.438	.565	.599	.482	.654	.692	.532	.616	.744	.471
Engineers, hoisting (2 or more drums)	1.019	1.070	.836	1.006	1.008	1.000	1.170	1.224	.833	1.147	1.167	1.038
Helpers not elsewhere classified	.413	.468	.409	.437	.461	.429	.565	.665	.512	.650	.700	.553
Hod carriers	.571	.575	.425	.455	.551	.401	.818	.859	.606	1.004	1.042	.606
Laborers, common	.338	.352	.337	.359	.363	.359	.497	.512	.444	.627	.650	.570
Lathers, wood	.917	1.030	.850	.633	.....	.601	1.188	1.338	.688	1.283	1.321	1.018
Lathers, metal	1.027	1.073	.788	1.116	1.148	.914	1.104	1.148	1.000	1.337	1.343	1.211
Mixer operators	.609	.683	.563	.801	.848	.685	.752	.901	.617	.922	1.001	.765
Painters	.839	.923	.650	.763	.960	.637	1.067	1.164	.771	.932	.982	.800
Plasterers	1.085	1.108	1.010	1.057	1.161	.857	1.195	1.347	.838	1.336	1.351	1.141
Plumbers	1.116	1.152	.930	1.183	1.249	.991	1.250	1.284	1.000	1.177	1.209	1.054
Helpers	.439	.491	.416	.461	.609	.408	.648	.733	.532	.649	.709	.565
Reinforcing steel workers (rodmen)	.855	.893	.665	.946	.936	.993	1.089	1.136	.917	1.147	1.171	1.086
Roofers, composition	.561	.607	.526	.603	.611	.602	.909	1.045	.847	.949	1.093	.774
Roofers, slate or tile	.795	.940	.675	.820	1.100	.768	.949	1.042	.725	.995	1.119	.785
Sheet-metal workers	.907	.936	.772	1.095	1.245	.828	.965	1.142	.711	.995	1.102	.799
Helpers	.437	.444	.431	.425	.460	.419	.520	.633	.426	.552	.606	.500
Steam fitters	1.144	1.165	.921	1.190	1.195	1.125	1.205	1.228	.967	1.262	1.296	1.065
Helpers	.550	.521	.571	.573	.642	.430	.628	.708	.514	.693	.716	.651
Stonemasons	1.156	1.182	.922	.994	1.205	.748	1.165	1.201	1.000	1.308	1.317	.....
Structural-iron workers	1.028	1.123	.912	1.004	1.013	.974	1.183	1.224	1.007	1.220	1.290	1.069
Tile layers	.987	1.044	.839	1.156	1.187	1.013	1.137	1.218	1.045	1.105	1.110	.857
Helpers	.456	.533	.434	.480	.490	.471	.661	.756	.558	.723	.723	.....
Truck drivers:												
Under 1½ tons	.354	.....	.354	.408	.446	.391	.....	.....	.....	.555	.637	.504
1½ to 3 tons	.459	.612	.415	.448	.....	.448	.676	.738	.577	.698	.744	.638
Over 5 tons	.668	.668	.....	.532	.....	.532	.850	.850	.....	.800	.875	.....

Because metal lath and composition board have been replacing wooden lath in the building industry, the occupation of wood lather is slowly disappearing. Only 589 wood lathers were reported by the contractors. In 63 of the 105 cities studied, none were found working. In 25 cities no lathers of any kind were reported, the work being done by carpenters. Metal lathers were reported in 72 cities, and in 31 cities both metal and wood lathers were found.

Geographic differences.—As shown in table 1, hourly rates paid in the building trades not only varied widely among occupations, but as in most other industries showed sharp regional differences. In 1936, the highest average rate, $1.062 an hour, was shown for the Middle Atlantic region and the lowest, 64.5 cents an hour, for the East South Central division, a spread of 41.7 cents an hour. Ranking next to the Middle Atlantic States was the East North Central region, with an average rate of 98.2 cents. Other areas with relatively high average rates were the Pacific and Mountain regions. The average hourly rate in New England, 89.9 cents, was 15 percent below that for the Middle Atlantic States.

Rates of union and nonunion workers.—In a study so extensive, it was impracticable to check every one of the employees scheduled, in

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order to learn if he were a union member in good standing at the time the pay roll was scheduled. Even with this limitation, the results of the survey, as shown in table 1, indicated that for all occupations and in all parts of the country, union rates are substantially above nonunion rates. These differences are further indicated in table 2 for a few sample occupations in typical selected cities.

TABLE 2.—*Average hourly union and nonunion wages in sample building-trades occupations in typical cities, 1936*

City	Bricklayers				Carpenters			
	Total	Union rate	Nonunion rate	Difference	Total	Union rate	Nonunion rate	Difference
Atlanta, Ga	$0.996	$1.126	$0.775	$0.351	$0.723	$1.004	$0.673	$0.331
Chicago, Ill	1.487	1.487	(1)		1.460	1.495	1.000	.495
Cleveland, Ohio	1.375	1.375	(1)		1.216	1.252	.703	.549
Denver, Colo	1.160	1.234	.831	.403	1.046	1.217	.761	.456
New Orleans, La	.981	(2)	.981		.683	.750	.672	.078
New York, N. Y	1.443	1.501	.926	.575	1.302	1.390	.907	.483
St. Louis, Mo	1.445	1.464	.971	.493	1.173	1.235	.730	.505
San Francisco, Calif	1.491	1.491	(1)		1.095	1.108	1.053	.055
	Electricians				Plumbers			
Atlanta, Ga	$0.985	$1.042	$0.875	$0.167	$1.081	$1.125	$0.971	$0.154
Chicago, Ill	1.465	1.465	(1)		1.495	1.495	(1)	
Cleveland, Ohio	1.503	1.503	(1)		1.375	1.375	(1)	
Denver, Colo	1.222	1.250	1.000	.250	1.239	1.294	1.019	.275
New Orleans, La	1.250	1.250	(1)		1.039	1.050	1.025	.025
New York, N. Y	1.660	1.700	.883	.817	1.452	1.494	1.060	.434
St. Louis, Mo	1.420	1.478	.786	.692	1.352	1.439	.853	.586
San Francisco, Calif	1.248	1.251	1.181	.070	1.199	1.201	1.171	.030
	Sheet-metal workers				Structural-iron workers			
Atlanta, Ga	$0.820	$1.031	$0.768	$0.263	$1.250	$1.250	(1)	
Chicago, Ill	1.435	1.496	1.158	.338	1.342	1.481	$1.124	$0.357
Cleveland, Ohio	1.189	1.245	.995	.250	1.375	1.375	(1)	
Denver, Colo	1.150	1.245	.580	.665	1.247	1.247	(1)	
New Orleans, La	.864	1.050	.808	.242	1.175	(2)	1.175	
New York, N. Y	1.397	1.399	1.369	.030	1.603	1.609	1.562	.047
St. Louis, Mo	1.303	1.372	.789	.583	1.476	1.476	(1)	
San Francisco, Calif	1.039	1.040	1.025	.015	1.387	1.387	(1)	

[1] No nonunion workers reported. [2] No union workers reported.

Wage rates by size of city.—As in most other trades and industries, wage rates in building construction tend to vary directly with the size of city. Rates are highest in the large metropolitan areas and are progressively lower as the size of the cities decreases. The average hourly rate paid to both union and nonunion workers in cities with a population of 500,000 to 1,000,000 was 6.9 percent less than in cities with a population of 1,000,000 or over. The margin was progressively widened until in cities with a population of 50,000 to 100,000 the average rate was 23.4 percent less than that in cities with a population of more than 1,000,000.

Racial differences.—Of the 186,145 workers included in the Bureau's survey, 21,894 (11.8 percent) were colored. Most of these were employed in semiskilled and unskilled occupations in the Southern States. Only 1.4 percent of the workers covered on skilled occupations were colored.

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The rates of Negro workers in the building trades were below those of white workers of the same skills in all parts of the country. (See table 3.) The greatest difference occurred in the rates of skilled workers. Compared with an average of $1.156 an hour for skilled white workers, skilled colored workers averaged only 79.1 cents. Semiskilled colored employees received an average of 13.9 cents an hour less than white workers of the same class, and unskilled colored workers avèraged 14.1 cents an hour less than unskilled white workers. Wage differences between white and colored workers were found in all geographic divisions.

TABLE 3.—*Average hourly wages of white and Negro workers in building trades in 1936*

Geographic division	Skilled		Semiskilled		Unskilled	
	White	Negro	White	Negro	White	Negro
United States	$1.156	$0.791	$0.714	$0.575	$0.572	$0.431
New England	1.101		.630	.615	.608	.468
Middle Atlantic	1.229	1.188	.818	.662	.550	.507
East North Central	1.203	1.101	.773	.768	.628	.569
West North Central	1.103	.706	.604	(1)	.592	.613
South Atlantic	1.057	.723	.547	.435	.468	.417
East South Central	.957	.734	.473	.451	.357	.331
West South Central	.967	.711	.463	.427	.370	.355

[1] The average hourly rate paid to colored semiskilled workers in the West North Central region is distorted because of preponderance of colored workers reported from St. Louis and Kansas City, Mo.

Full-Time Weekly Hours

The working time of 70.7 percent of the workers for whom information was obtained was 40 hours per week, 9.3 percent worked 30 hours a week, and 1.6 percent worked over 30 and under 40 hours; 10.4 percent worked 44 hours; 4.9 percent worked 48 hours, and only 2.6 percent worked over 48 hours per week. (Table 4.)

TABLE 4.—*Distribution of building-trades workers by weekly hours in 1936, and by geographic divisions*

Weekly hours worked	Percent working classified full-time weekly hours in—									
	United States	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
30 hours	9.3	5.5	11.4	6.8	11.8	3.0	1.0	9.2	10.0	20.5
Over 30 and under 36 hours	1.4	(1)	1.0	.8	3.8	.5		.1	19.3	1.2
36 and under 40 hours	.2			(1)	.8	(1)		.5	.2	.5
40 hours	70.7	74.6	80.5	77.2	62.2	66.0	76.6	48.5	38.0	62.8
Over 40 and under 44 hours	(1)	(1)	(1)	.1	(1)	(1)	(1)	(1)	.3	(1)
44 hours	10.4	11.9	5.0	8.4	6.6	20.3	9.3	30.0	12.6	4.6
Over 44 and under 48 hours	.5	.3	.1	.9	.3	1.3	1.0	.8	.1	.1
48 hours	4.9	5.3	.6	3.3	13.7	1.8	5.5	9.3	17.2	9.9
Over 48 and under 54 hours	1.4	.2	.1	1.5	.6	5.6	2.8	.9	.3	
54 and under 60 hours	.8	2.2	.5	.9	.2	1.4	1.3	.2	1.7	.4
60 hours and over	.4	(1)	.8	.1	(1)	.1	2.5	.5	.3	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

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Regional differences in hours of labor.—In general, working time was longer in the South than in other parts of the country, but the geographical differences in hours of labor were much less marked than were the wage-rate difference.

Differences by broad occupational groups and union membership status.—Skilled, union, building-trade workers do not, as a rule, work as long hours as nonunion men and less skilled workers. (Table 5.) Of all skilled employees studied, 82.2 percent worked 40 hours and under 44 hours per week, as compared with 36.2 percent of the skilled nonunion workers. Although 2.7 percent of the nonunion skilled employees worked between 30 and 36 hours per week, 13.8 percent union skilled men fell in this group.

TABLE 5.—*Distribution of building-trades workers by weekly hours in 1936, and by skill and union status*

[Percent working classified full-time weekly hours]

Hours of labor per full-time week	United States	Skilled			Semiskilled			Unskilled		
		Total	Union	Non-union	Total	Union	Non-union	Total	Union	Non-union
30 hours	9.3	9.1	11.2	2.3	11.4	16.0	2.5	7.3	9.3	5.7
Over 30 and under 36 hours	1.4	2.1	2.6	.4	.7	.9	.4	.5	1.0	.1
36 and under 40 hours	.2	.1	.1	.2	.2	-------	.5	.2	.4	.1
40 hours	70.7	71.3	82.1	36.1	70.1	79.7	51.7	69.8	85.7	56.3
Over 40 and under 44 hours	(1)	(1)	(1)	.1	.1	.2	.1	-------	-------	-------
44 hours	10.3	10.8	3.1	35.4	8.7	2.0	21.5	10.9	2.2	18.4
Over 44 and under 48 hours	.5	.5	-------	2.0	.5	.1	1.3	.7	(1)	1.2
48 hours	4.9	4.1	.8	15.0	6.1	1.1	15.6	5.9	1.0	10.0
Over 48 and under 54 hours	1.4	1.2	(1)	5.2	.8	(1)	2.2	2.4	(1)	4.4
54 and under 60 hours	.9	.5	.1	2.0	1.3	(1)	3.8	1.3	.4	2.0
60 hours and over	.4	.3	-------	1.3	.1	-------	.4	1.0	-------	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

Canning and Preserving Industries—Annual Earnings, 1937 and 1938[1]

Canneries packing vegetables and deciduous fruits in 1937 operated only from 5 to 8 weeks on the average when one seasonal product was canned, and from 11 to 49 weeks when one or more seasonal or nonseasonal products were added. Sixty-four percent of the workers had less than 8 weeks' employment in the year. Only 5 percent of the workers earned as much as $600 during the year.

Pineapple canneries and plants engaged in cold packing of berries and fruits and the preparation of frosted fruits and vegetables also had short operating seasons, but establishments which canned citrus fruits and juices and packed dried fruit were in operation for comparatively longer periods of the year. Although the dried-fruit industry operated for a longer period during the year than most of the other canning and preserving industries, only one-sixth of the workers in these plants had worked as many as 39 weeks in 1937.

[1] Abstract of an article by Bertha M. Nienburg, U. S. Women's Bureau, in the Monthly Labor Review for February 1941.

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These facts were revealed in a survey of the canning and preserving industries made in 1938 and 1939 by the United States Women's Bureau.[2] The survey covered 693 plants in 19 States[3] in 1939 and 4 plants in Hawaii. The maximum number employed in these plants was 153,328, representing nearly half of the workers in the industry.

The following table shows the annual employment and earnings in these canning and preserving industries:

Annual employment and earnings in canning and preserving, by product

Weeks worked in year	Vegetables and deciduous fruits (1937)		Dried fruit (1937)		Hawaiian pineapple (1938)		
	Percent of employees working classified weeks	Average year's earnings	Percent of employees working classified weeks	Average year's earnings	Percent of employees working classified weeks	Average year's earnings	
						Men	Women
Total	100.0	$140.90	100.0	$272.45	100.0	$169.00	$115.00
Under 4 weeks	33.3	20.10	21.2	20.40	5.4	16.30	15.00
4 and under 8 weeks	31.5	74.90	21.6	81.60	13.5	67.40	50.70
8 and under 12 weeks	15.5	149.10	13.2	151.60	28.3	128.00	92.65
12 and under 16 weeks	6.7	223.35	9.3	210.05	12.8	177.00	115.00
16 and under 20 weeks	3.8	294.55	5.0	278.05	3.4	248.00	137.00
20 weeks	.7	298.25	1.0	310.50	.4	(1)	(1)
21 and under 26 weeks	2.3	374.95	4.4	350.85	2.5	280.00	174.00
26 weeks	.3	446.35	.8	375.20	.6	(1)	(1)
27 and under 33 weeks	1.3	492.20	3.7	424.85	6.3	354.00	209.00
33 and under 39 weeks	1.1	593.15	3.0	530.35	3.9	440.00	254.00
39 weeks	.1	602.10	.5	552.85	.6	486.00	(1)
40 and under 46 weeks	.8	708.40	3.6	612.35	1.9	562.00	294.00
46 and under 52 weeks	1.1	905.30	7.6	849.40	6.2	586.00	358.00
52 weeks	1.9	1,078.10	5.1	1,079.50	14.2	891.00	370.00

[1] Base too small to warrant computation of an average.

Carpet and Rug Industry—Earnings and Hours, 1939[4]

The survey of wages and hours in the carpet and rug industry included the manufacture of wool carpets and rugs, woolen and worsted carpet yarns, paper-fiber and grass rugs, and carpets and rugs made of cotton yarns.

According to the Census of Manufactures for 1937 (covering plants having an annual product valued at $5,000 or more), the wool carpet and rug industry embraced 55 establishments employing on the average 30,779 wage earners during the year. There were 15 independent carpet yarn-spinning plants, with an average employment of 2,548 workers, and 9 paper-fiber and grass carpet and rug mills employing 788 wage earners. The Census of Manufactures does not present separate figures on number of plants and employees for cotton carpets and rugs. The analysis of products in the cotton-goods industry, however, shows that the annual output in 1937 was valued at $477,076 for cotton braided rugs and $1,969,335 for cotton woven rugs. These figures do not include cotton bath mats.

[2] U. S. Department of Labor. Women's Bureau. Bulletin No. 176: Application of Labor Legislation in the Fruit and Vegetable Canning and Preserving Industries. Washington, 1940.

[3] Arkansas, California, Florida, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Virginia, Washington, and Wisconsin.

[4] Abstract of article in the Monthly Labor Review for July 1940, prepared by H. E. Riley, of the Bureau of Labor Statistics.

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The data obtained from a majority of the mills cover a pay period in November or December 1939. This was a period of considerable activity in the wool carpet and rug branch of the industry. The coverage includes a selected sample of wool carpet and rug, wool carpet yarn, and cotton carpet and rug establishments, and all of the paper-fiber and grass-rug mills that could be located at the time the field work was done.

In choosing the wool carpet and yarn plants to be scheduled, consideration was given to the principal factors that might have some influence on the industry's wage structure. Among these factors were geographical location, size of plant, size of community, type of product, and un[illegible]nization.

The coverage in the paper-fiber and grass-rug branch included 6 plants with 590 wage earners. According to the Census of Manufactures, there were 828 wage earners in this branch during the same month (November) in 1937.

According to the best available information, the cotton carpet and rug branch includes 34 establishments with a total employment ranging from 1,000 to 1,500 wage earners. The survey covered 17 plants with 789 workers. The coverage included 5 plants in Pennsylvania and 3 in New York. The remaining establishments scheduled were located in the States of California, Georgia, Illinois, Massachusetts, North Carolina, and Rhode Island.

Wool Carpets and Rugs and Carpet Yarns

The bulk of the United States wool carpet and rug output is produced by plants that perform both the yarn processing and weaving operations. There are several mills, however, that have no spinning departments, but buy their yarns from the independent carpet yarn-spinning establishments. In addition, a few plants utilize reworked fibers obtained from old carpets and rugs, although these materials may be supplemented with new yarns.

The products of the industry include several types of carpets and rugs, differing chiefly in the method of weaving employed. Most important among these varieties are the Wiltons, Brussels,[2] velvets, tapestries, Axminsters, chenilles, and punched felts. In general, the Wiltons, Brussels, and chenilles are highest in quality, while the bulk of the Axminsters and punched felts are inexpensive grades.

The industry is largely confined to a few States in the eastern part of the country. According to the report of the Census of Manufactures for 1937, New York was the leading State, with half (50.1 percent) of the employees in the industry. Pennsylvania was next in importance, with 17.3 percent of the total wage earners, followed by New Jersey and Massachusetts with 10.2 percent and 5.6 percent, respectively. The remaining workers were employed in scattered plants located in other States.

Although a majority of both wool-carpet and rug-weaving mills and independent yarn establishments are relatively small in size, the bulk of the employment is in large plants. Labor organization is

[2] The Bureau has no specific reports of Brussels rug production in any of the plants scheduled. It is quite likely, however, that some of the establishments reporting Wilton production were also making Brussels, as both types are produced with the same equipment.

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extensive in the industry, although largely confined to the carpet-weaving mills.

Nearly three-fourths (73.1 percent) of the employees in wool carpet and rug-weaving mills, and nearly two-thirds (63.5 percent) of those in independent yarn establishments were males. (See table 1.) Skilled wage earners constituted about one-fifth (21.8 percent) of the total in independent yarn mills, as against two-fifths (39.8 percent) in weaving establishments. Over two-thirds (67.1 percent) of the independent yarn-mill employees were semiskilled, whereas only about two-fifths (41.6 percent) of the workers in weaving plants were in this category. The semiskilled group included virtually all of the females in the independent yarn mills and about two-thirds of those in the weaving establishments.

Average Hourly Earnings [3]

Over half (52.6 percent) of the wage earners covered in the wool branch of the industry were paid on a straight hourly rate basis. The use of piece-rate and production-bonus systems was pronounced in certain occupations, particularly in the weaving operations. Thus, virtually all Axminster, chenille, tapestry, and broad velvet weavers, and all of the setters were paid exclusively by piece work or some production-bonus method.

The earnings of all workers in the wool carpet and rug industry averaged 65.5 cents an hour in November and December 1939. (See table 1.) Male employees averaged 68.2 cents an hour, as against 57.8 cents for females. The highest average (84.5 cents) was received

TABLE 1.—*Average hourly earnings of wool carpet and rug workers, November and December 1939, by type of mill, skill, and sex*

Type of mill	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
All mills	$0.655	$0.682	$0.578	$0.817	$0.845	$0.671	$0.571	$0.582	$0.557	$0.516	$0.520	$0.466
Independent yarn	.615	.667	.521	.805	.808	(1)	.569	.622	.520	.509	.513	(1)
Carpet and rug	.658	.683	.585	.818	.847	.671	.572	.577	.564	.516	.521	.467
	Number of workers (weighted)											
All mills	30,558	22,104	8,454	11,716	9,666	2,050	13,324	7,382	5,942	5,518	5,056	462
Independent yarn	2,367	1,500	867	515	503	12	1,589	747	842	263	250	13
Carpet and rug	28,191	20,604	7,587	11,201	9,163	2,038	11,735	6,635	5,100	5,255	4,806	449
	Percent of workers											
All mills	100.0	72.4	27.6	38.4	31.7	6.7	43.6	24.2	19.4	18.0	16.5	1.5
Independent yarn	100.0	63.5	36.5	21.8	21.3	.5	67.1	31.6	35.5	11.1	10.6	.5
Carpet and rug	100.0	73.1	26.9	39.8	32.6	7.2	41.6	23.5	18.1	18.6	17.0	1.6

[1] Not a sufficient number of workers to permit computation of an average.

[3] The data shown in this section are based on earnings at regular rates of pay, excluding extra payments for overtime work. With the payments at extra rates included, the average for all employees was 65.7 cents as compared with the average of 65.5 cents based on regular rates of pay.

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by the skilled males, while the unskilled females had the lowest earnings (46.6 cents).

Hourly earnings averaged 61.5 cents in the independent yarn mills, as compared with 65.8 cents in the carpet and rug weaving mills. As shown by table 1, hourly earnings were lower in independent yarn than in weaving mills for every skill-sex group except the semiskilled males, who averaged 62.2 cents in the former as compared with 57.7 cents in the latter establishments.

An examination of the distribution in table 2 reveals that the earnings of half (50.9 percent) of the workers averaged between 47.5 and 67.5 cents an hour.

TABLE 2.—*Percentage distribution of workers in all mills in wool carpet and rug industry according to average hourly earnings, November and December 1939, by sex and skill*

Average hourly earnings (in cents)	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
30.0 and under 32.5	0.6	0.5	0.7	0.1	0.2	------	1.1	1.1	1.0	0.3	0.3	------
32.5 and under 35.0	.6	.4	1.1	.5	.1	2.4	.5	.3	.7	1.1	1.2	------
35.0 and under 37.5	1.0	.9	1.2	.3	.2	.7	1.1	1.1	1.1	2.1	1.8	5.4
37.5 and under 40.0	1.4	.9	2.6	.3	.1	1.1	2.1	1.4	3.0	1.9	1.7	3.2
40.0 and under 42.5	2.9	2.6	3.6	1.0	.5	3.1	2.4	2.3	2.6	8.0	6.9	19.0
42.5 and under 47.5	6.8	5.8	9.5	1.6	1.2	3.9	8.7	7.8	9.7	13.3	11.7	31.0
47.5 and under 52.5	13.7	13.6	14.1	2.6	2.7	2.3	16.7	16.6	16.8	29.9	29.9	31.3
52.5 and under 57.5	16.2	14.6	20.7	3.3	3.0	4.4	23.2	19.5	27.5	27.0	29.0	4.3
57.5 and under 62.5	11.6	9.9	16.0	7.0	5.4	14.2	16.7	16.0	17.6	9.1	9.7	2.8
62.5 and under 67.5	9.4	9.4	9.3	8.3	7.4	12.5	12.9	16.3	8.8	3.2	3.3	1.9
67.5 and under 72.5	6.9	6.7	7.6	10.1	7.9	20.1	6.6	8.8	3.8	1.3	1.3	1.1
72.5 and under 77.5	5.8	6.4	4.2	10.6	10.8	9.9	3.2	3.7	2.6	1.7	1.9	------
77.5 and under 82.5	5.1	5.3	4.8	10.5	10.3	11.8	2.2	1.9	2.7	.6	.7	------
82.5 and under 87.5	4.7	5.7	1.9	10.4	11.5	4.5	1.6	2.0	1.2	.1	.1	------
87.5 and under 92.5	3.8	4.6	1.7	9.4	9.9	6.9	.4	.7	.1	.3	.3	------
92.5 and under 100.0	2.9	3.8	.5	7.1	8.4	1.4	.4	.5	.2	.1	.2	------
100.0 and under 110.0	2.6	3.5	.3	6.6	7.9	.6	.1	(1)	.2	(1)	(1)	------
110.0 and under 120.0	1.9	2.5	.2	4.8	5.8	.2	.1	------	.3	------	------	------
120.0 and over	2.1	2.9	(1)	5.5	6.7	------	(1)	------	.1	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	30,558	22,104	8,454	11,716	9,666	2,050	13,324	7,382	5,942	5,518	5,056	462

[1] Less than a tenth of 1 percent.

Average hourly earnings by occupational groups are shown in table 3. The averages ranged from $1.079 an hour for the male broad-loom [4] Wilton weavers to 37.8 cents for the female learners.

Among the skilled males, the most important occupations as measured by number of employees were the broad-loom Axminster weavers, the broad- and narrow-loom Wilton weavers, and the mule spinners. The earnings of loom fixers, also an important group, averaged $1.043, which was exceeded only by the average for the male broad-loom Wilton weavers. The relatively small group of narrow-loom chenille weavers received 57.6 cents an hour, which was the lowest average shown for any skilled male occupation.

[4] For the purpose of this analysis the Bureau has defined a broad loom as one of 6/4 size (54 inches wide) or larger. The United States Census of Manufactures defines a broad loom as one of 8/4 size or over. An examination of the earnings data reveals, however, that the 6/4 loom should be considered a broad, rather than a narrow loom. The data for various broad-loom weavers also include earnings of a few weavers operating 2 narrow looms.

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TABLE 3.—*Average earnings and hours of wool carpet and rug workers, November and December 1939, by sex, skill, and occupation*

Skill, sex, and occupation	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	**$0.655**	**38.1**	**$24.94**
Skilled workers	**.817**	**37.9**	**30.95**
Males	.845	38.7	32.69
Blacksmiths	.823	41.4	34.03
Card grinders	.866	40.1	34.71
Card strippers	.658	39.5	26.01
Carpenters	.786	40.8	32.06
Electricians	.810	41.1	33.30
Engineers	.866	45.7	39.52
Fixers, machine (other than loom)	.738	40.1	29.59
Foremen, working	.958	41.7	39.92
Inspectors, carpets and rugs	.634	39.3	24.92
Loom fixers	1.043	40.0	41.78
Machinists	.813	40.4	32.87
Millwrights	.792	40.4	31.98
Painters	.670	40.6	27.17
Pipefitters, plumbers, and steamfitters	.770	41.3	31.77
Spinners, mule	.787	37.9	29.84
Subforemen, working	.780	41.0	31.97
Tinsmiths	.812	40.1	32.54
Weavers—			
Axminister, broad loom	.856	39.4	33.72
Axminster, narrow loom	.609	38.8	23.63
Chenille, broad loom	.812	40.6	32.93
Chenille, narrow loom	.576	39.9	22.99
Tapestry, broad loom	.993	38.3	38.03
Tapestry, narrow loom	.771	30.4	23.44
Velvet, broad loom	.870	37.6	32.71
Velvet, narrow loom	.605	33.5	20.29
Wilton, broad loom	1.079	37.8	40.81
Wilton, narrow loom	.828	36.4	30.18
Welders	.792	39.7	31.43
Miscellaneous maintenance workers	.815	40.5	32.99
Miscellaneous skilled workers, other	.821	38.5	31.59
Females	.671	34.0	22.78
Forewomen	.676	40.6	27.43
Inspectors, carpets and rugs	.526	34.9	18.37
Setters (Axminister)	.696	32.7	22.74
Weavers (Axminster), narrow loom	.640	33.8	21.62
Weavers (chenille), weft	.563	37.0	20.84
Miscellaneous skilled workers	.683	36.8	25.16
Semiskilled workers	**.571**	**38.0**	**21.69**
Males	.582	39.4	22.90
Balers and packers	.573	39.1	22.41
Beam tiers	.544	40.4	21.97
Beamer tenders	.600	40.9	24.58
Card tenders	.570	38.6	21.97
Chain hangers (Axminster)	.615	40.0	24.60
Checkers and weighers	.571	39.1	22.34
Clerks, factory	.616	40.0	24.64
Cop sizers	.598	40.8	24.37
Creelers, Wilton	.464	38.4	17.83
Cutters	.607	40.5	24.57
Dryer operators	.600	37.0	22.18
Dyers	.616	37.3	23.00
Firemen	.617	42.9	26.44
Frame builders and repairers (Axminster)	.551	39.5	21.77
Semiskilled workers—Con.			
Males—Continued.			
Helpers, machine fixers	$0.661	40.5	$26.77
Helpers, maintenance	.594	40.6	24.15
Packers, yarn	.548	41.5	22.74
Picker tenders	.563	40.1	22.58
Piecers	.669	39.5	26.47
Reelers	.491	40.9	20.10
Scouring-machine tenders	.596	40.2	23.99
Sewing-machine operators	.624	37.7	23.50
Shearers	.657	39.9	26.24
Spool-storage hands	.821	38.1	31.32
Starchers and dryers, carpets	.591	40.7	24.05
Steamer operators	.600	40.4	24.24
Stock men	.634	40.6	25.74
Threaders (Axminster)	.793	39.4	31.29
Truck drivers	.636	44.7	28.44
Twister tenders	.488	41.3	20.15
Weft cutters	.708	41.4	29.28
Winders	.620	32.7	20.27
Wiremen	.555	39.3	21.79
Miscellaneous machine operators	.591	39.1	23.14
Miscellaneous semiskilled workers, other	.595	38.3	22.82
Females	.557	36.2	20.19
Beamer tenders	.601	35.4	21.26
Burlers	.623	36.4	22.68
Clerks, factory	.464	39.2	18.18
Reelers	.559	34.1	19.06
Sewers, hand	.491	40.4	19.87
Sewing-machine operators	.534	39.5	21.11
Spinners, frame	.560	37.5	21.00
Spoolers	.532	33.1	17.62
Twister tenders	.540	37.1	20.05
Winders	.525	37.1	19.46
Miscellaneous semiskilled workers	.533	37.4	19.91
Unskilled workers	**.516**	**38.8**	**20.03**
Males	.520	38.9	20.26
Creelers, beaming	.505	39.1	19.73
Doffers	.567	36.1	20.48
Elevator operators	.491	40.0	19.68
Floor hands	.502	39.1	19.63
Helpers, processing	.521	39.4	20.52
Helpers, shipping	.497	40.3	20.03
Janitors	.464	37.9	17.61
Labelers	.570	39.9	22.78
Laborers—			
Dye house	.572	34.7	19.86
General	.507	38.0	19.27
Maintenance	.539	41.3	22.27
Learners	.392	39.1	15.33
Machinery oilers	.517	40.2	20.78
Raw stock blenders	.563	38.3	21.55
Spool strippers	.536	38.4	20.56
Starch makers	.596	40.0	23.84
Sweepers	.443	39.6	17.55
Truckers, hand	.532	39.3	20.92
Waste pickers	.506	39.4	19.95
Watchmen	.476	41.8	19.90
Miscellaneous unskilled workers	.559	38.6	21.59
Females	.466	37.6	17.53
Creelers, beaming	.413	39.0	16.10
Doffers, frame spinning	.525	37.6	19.73
Helpers, processing	.511	39.0	19.92
Learners	.378	36.9	13.95
Miscellaneous unskilled workers	.470	37.4	17.59

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The presence of both men and women in substantial numbers in several important occupations affords an opportunity to make significant comparisons of earnings of males and females. It must be borne in mind, however, that the actual duties performed by male employees in some occupations may include heavy tasks that are not required of females in the same jobs.

Among the skilled employees, only the carpet and rug inspectors and the narrow-loom Axminster weavers contained a sufficient number of both men and women to permit a comparison. In the former group, the earnings of males exceeded those of females by 10.8 cents an hour. In the latter, however, women averaged 3.1 cents per hour more than men.

In the list of semiskilled occupations, the earnings of males exceeded the average for females by 15.2, 9.0, and 9.5 cents, respectively, in the occupations of clerks, sewing-machine operators, and winders. On the other hand, the averages for male and female beamer tenders were almost identical, while women averaged 6.8 cents more than men as reelers and 5.2 cents more as twister tenders.

Among the unskilled workers, it may be noted, male beaming creelers averaged 50.5 cents, as compared with 41.3 cents for females in the same occupation.

As previously mentioned, the earnings data do not include extra payments for overtime work.[5] Although some extra overtime payments were made in virtually all of the establishments covered by the survey, the addition of these earnings would have increased the plant average but slightly in each case. In fact, for only one plant would the average have changed by as much as 1 cent. Furthermore, the overtime payments were generally distributed over the entire pay roll in each mill. Hence, the extra earnings are not heavily concentrated in particular occupational groups.

Weekly Hours and Earnings

The actual workweek averaged 38.1 hours for all wage earners in the industry at the time of the survey. (See table 3.) Among the males the average was 38.7 hours for skilled, 39.4 hours for semiskilled, and 38.9 hours for unskilled workers. In comparison, the respective averages for females were 34.0 hours, 36.2 hours, and 37.6 hours.

Weekly earnings of all employees averaged $24.94 in November and December 1939. The average varied from $32.69 for the skilled males to $17.53 for unskilled females. It will be observed that the difference in the weekly earnings of males and females amounted to $9.91 for the skilled workers, as against only $2.71 among the semiskilled and $2.73 for the unskilled employees. The highest occupational figure was reported for the loom fixers, who averaged $41.78. The lowest weekly earnings were received by the male and female learners, who averaged $15.33 and $13.95, respectively.

Paper-Fiber and Grass Carpets and Rugs

The paper-fiber and grass carpet and rug mills are widely distributed geographically, with two plants in Wisconsin, two in Massachusetts, and one each in Pennsylvania and New York.

[5] The Fair Labor Standards Act requires the payment of time and a half for all time worked beyond 42 hours per week. A number of the plants covered by the survey paid time and a half for time worked beyond 8 hours a day or 40 hours a week.

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Two plants had contracts with national labor organizations.

Of the 590 employees scheduled, 450, or about three-fourths, were classed as semiskilled. The remaining workers were about equally divided between the skilled and unskilled categories. Over three-fourths of the workers were males. (See table 4.) As the number of skilled and unskilled workers was too limited to justify detailed analysis, the distribution shown in table 5 combines all skill classes for each sex.

Average Hourly Earnings[6]

About three-fifths of the employees scheduled were paid on a straight piece-rate or production-bonus basis. The production-bonus workers were confined to one plant, which had a plan based on the Bedeaux system.

The hourly earnings of all employees averaged 48.9 cents at the time of the survey. The average for males was 50.3 cents, as compared with 44.3 cents for females. Skilled males earned 64.7 cents an hour, as against 49.6 cents for semiskilled and 39.2 cents for unskilled males.

TABLE 4.—*Average earnings and hours of paper-fiber and grass carpet and rug workers, by sex and skill*

Sex and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	590	$0.489	40.5	$19.81
Males	454	.503	40.6	20.43
Skilled	68	.647	39.3	25.46
Semiskilled	324	.496	40.7	20.19
Unskilled	62	.392	41.3	16.17
Females	136	.443	40.1	17.75

According to table 5, over three-fifths (63.2 percent) of the workers averaged between 40.0 and 57.5 cents an hour.

TABLE 5.—*Percentage distribution of paper-fiber and grass carpet and rug workers according to average hourly earnings, by sex*

Average hourly earnings (in cents)	All workers	Males	Females	Average hourly earnings (in cents)	All workers	Males	Females
30.0 and under 32.5	3.6	3.7	2.9	62.5 and under 67.5	3.9	4.2	2.9
32.5 and under 35.0	4.9	5.3	3.7	67.5 and under 72.5	4.4	5.7	-------
35.0 and under 37.5	4.6	4.6	4.4	72.5 and under 77.5	2.0	2.4	.7
37.5 and under 40.0	5.8	4.4	10.3	77.5 and under 82.5	1.0	1.1	.7
40.0 and under 42.5	11.5	7.7	24.4	82.5 and over	1.7	2.2	-------
42.5 and under 47.5	21.3	18.7	30.2				
47.5 and under 52.5	18.5	19.7	14.7	Total	100.0	100.0	100.0
52.5 and under 57.5	11.9	14.1	4.4				
57.5 and under 62.5	4.9	6.2	.7	Number of workers	590	454	136

Weekly Hours and Earnings

The actual weekly hours of work for all employees averaged 40.5 at the time of the survey. Male workers averaged 40.6 hours, as compared with 40.1 hours for females.

[6] The data shown in this section are based on earnings at regular rates of pay, excluding payments at extra rates for overtime work. Including the extra rates, the average for all employees was 49.2 cents, as against the average of 48.9 cents based on regular rates of pay.

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Weekly earnings of all employees averaged $19.81. Males received $20.43, which was $2.68 more than the average for females. The average for skilled males ($25.46) exceeded that of the semiskilled males by $5.27. In turn, the latter group averaged $4.02 more than the unskilled males. (See table 4.)

Cotton Carpets and Rugs

Of the 17 cotton carpet and rug plants surveyed, 9 were reported to be making exclusively products covered by the definition for this branch, namely, cotton rugs of braided-yarn, chenille, or flat-woven types.

There is very little labor organization in the cotton branch of the carpet and rug industry.

A majority of the workers in this branch of the industry were classed as semiskilled. Of the 789 employees scheduled, 61.0 percent were in this category; 26.1 percent were skilled and 12.9 percent unskilled. Most of the skilled and unskilled employees were males, who constituted 55.0 percent of the labor force, while all but 32 of the females were in semiskilled occupations. (See table 6.)

TABLE 6.—*Average earnings and hours of cotton carpet and rug workers, by sex and skill*

Sex and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	789	$0.426	37.2	$15.84
Males	434	.479	38.2	18.28
Skilled	187	.569	37.3	21.24
Semiskilled	158	.420	39.2	16.45
Unskilled	89	.401	38.3	15.33
Females	355	.357	36.1	12.86

Average Hourly Earnings[7]

Straight piece-rate or production-bonus wage payment plans were in effect in 12 of the plants surveyed. In each of these mills, however, there were some employees, chiefly in the indirect and unskilled groups, who were paid straight-time rates. The number of workers actually receiving straight piece-rates or bonus earnings amounted to 43.6 percent of the total labor force.

The hourly earnings of all employees in this branch of the industry averaged 42.6 cents at the time of the survey. The average for males was 47.9 cents as compared with 35.7 cents for females, a difference of 12.2 cents. A distribution by average hourly earnings for cotton carpet and rug workers is shown in table 7.

[7] The data shown in this section are based on earnings at regular rates of pay, excluding extra payments for overtime work. With the payments at extra rates included, the average for all employees was 42.8 cents as compared with the average of 42.6 cents based on regular rates of pay.

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TABLE 7.—*Percentage distribution of cotton carpet and rug workers according to average hourly earnings, by sex and skill*

Average hourly earnings (in cents)	Total	Males	Females	Average hourly earnings (in cents)	Total	Males	Females
Under 30.0	0.1	0.2	.....	57.5 and under 62.5	2.3	3.7	0.6
Exactly 30.0	20.2	15.7	25.6	62.5 and under 67.5	2.4	4.1	.3
30.1 and under 32.5	5.8	4.8	6.7	67.5 and under 77.5	1.8	3.0	.3
32.5 and under 35.0	15.6	8.3	24.8	77.5 and under 87.5	1.1	2.1	.....
35.0 and under 37.5	11.3	11.8	10.7	87.5 and under 100.0	1.1	2.1	.....
37.5 and under 40.0	10.0	6.7	14.1	100.0 and over	2.9	5.3	.....
40.0 and under 42.5	5.8	6.7	4.5				
42.5 and under 47.5	8.1	9.2	6.8	Total	100.0	100.0	100.0
47.5 and under 52.5	8.5	12.2	3.9				
52.5 and under 57.5	3.0	4.1	1.7	Number of workers	789	434	355

Table 8 shows averages for the occupational groups containing a sufficient number of workers to permit the presentation of separate data. Male weavers, a skilled group, had the highest average shown, although it will be observed that this figure is less than the average (56.9 cents) for all skilled males. This difference is due to the fact that the skilled males other than weavers consisted largely of higher-paid working supervisors.

TABLE 8.—*Average earnings and hours for selected occupations in cotton carpet and rug mills*

Sex, occupation, and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Males:				
Weavers, skilled	138	$0.519	37.6	$19.05
Winders, semiskilled	29	.322	38.4	12.37
Females:				
Braiders, semiskilled	26	.328	34.3	11.25
Burlers and menders, semiskilled	64	.353	36.8	12.99
Sewing-machine operators, semiskilled	157	.373	36.5	13.59
Winders, semiskilled	53	.345	35.5	12.25

Weekly Hours and Earnings

The actual workweek for all employees averaged 37.2 hours at the time of the survey. The average was 38.2 hours for males, as against 36.1 hours for females. Among the males, it will be observed that the semiskilled workers had the longest workweek (39.2 hours), whereas the skilled had the shortest (37.3 hours).

Weekly earnings averaged $15.84 for all workers, as against $18.28 for males and $12.86 for females. Skilled males averaged $21.24, which was $4.79 above the level for the semiskilled males. The average earnings of the latter exceeded those of the unskilled group by only $1.12. (See table 8 for average weekly hours and earnings of selected occupational groups.)

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Cereal-Preparations Industry—Hours and Earnings 1938[1]

Large quantities of cereal preparations are purchased by the Government, and a survey was made in April and May 1938, by the United States Women's Bureau, of wages and hours in the industry, preliminary to proceedings by the Public Contracts Board to fix minimum wages under the Public Contracts Act.

The survey covered 33 establishments whose principal products were breakfast cereals (rolled oats; shredded wheat; puffed wheat and rice; wheat, bran, and corn flakes, etc.), various prepared flours (pancake and waffle flour, buckwheat flour, etc.), and similar food products made from wheat, oats, and other grain products. Two-thirds (67 percent) of the 4,610 employees covered were men. The establishments surveyed represented at least one-third of those in the industry, and the employees covered represented 60 percent of the total employees.

Hours of Work

Over half of the establishments which reported a regular schedule of hours had a scheduled week of 40 hours. In the other establishments, the weekly hours ranged from 36 to 48, where the hours were the same for both men and women.

The number of hours worked varied in the different States, the proportion of employees working less than 40 hours being as great as 76 percent in Nebraska and Missouri and 80 percent in Iowa, and as small as 16.2 percent in California and Oregon and 16.8 percent in New York and New Jersey. In table 1 is shown the percentage of the employees in the various occupational groups who worked specified weekly hours.

TABLE 1.—*Hours worked by employees in cereal-preparations industry, by occupational group*

Occupational group	Number of employees	Percent of employees whose actual weekly hours were—						
		Under 40	40	Over 40 to 44	Over 44 and under 48	48 and under 56	56 and under 60	60 and over
All groups	4,518	47.5	15.1	23.9	3.3	8.8	1.0	0.4
Receiving and cleaning	88	60.2	10.2	5.7	3.4	17.0	3.4	-------
Processing	1,135	29.0	11.9	39.0	3.5	14.4	1.2	.9
Packing and labeling	1,916	52.6	17.7	21.0	3.2	4.8	.4	.2
Shipping and general utility	557	52.4	23.7	14.5	2.3	6.5	.4	.2
Engineers, firemen, and mechanical workers in manufacturing	571	60.2	6.0	19.1	2.1	9.5	2.8	.4
Foremen	66	39.4	16.7	19.7	4.5	16.7	1.5	1.5
Others[1]	185	50.8	10.3	15.1	8.1	13.5	2.2	-------

[1] Includes workers in printing, carton and box, can, and wax-paper departments.

[1] From Monthly Labor Review for June 1939.

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Hourly and Weekly Earnings

Almost one-half (45 percent) of the 4,569 employees in the cereal-preparations industry for whom hours were reported earned 45 and under 65 cents an hour. The highest average hourly earnings (78.9 cents) in any State or State group were in Michigan and the lowest (49.1 cents) in Nebraska and Missouri combined.

There was considerable variation in hourly earnings in the different occupations. Engineers, firemen, and mechanical workers employed in the manufacturing processes had the highest earnings, their average being 84.7 cents an hour. Workers in the processing occupations [2] earned an average of 79.3 cents an hour; shipping and utility workers, 65.1 cents an hour; and receiving and cleaning workers, 59.9 cents an hour. Filling, packing, and labeling workers earned the lowest hourly average—52.3 cents.

The average week's earnings in the industry in the pay-roll period scheduled were $25.65. There was a wide range in average week's earnings as between the various State groups. The lowest average was $16.55 in Nebraska and Missouri, and the highest, $31.15, in Michigan. The average week's earnings in the industry in the different State groups, and also the average hourly earnings, are presented in table 2.

TABLE 2.—*Average week's and hourly earnings in cereal-preparations industry, by State*

State	Week's earnings		Hourly earnings [1]	
	Number of employees	Average	Number of employees	Average
				Cents
Total	4,610	$25.65	4,569	66.2
California and Oregon	204	26.00	204	61.0
Illinois and Indiana	456	24.55	454	59.2
Iowa	1,085	18.65	1,084	54.1
Michigan	1,970	31.15	1,970	78.9
Minnesota	125	20.90	125	53.0
Nebraska and Missouri	207	16.55	207	49.1
New York and New Jersey	563	25.00	525	61.2

[1] Extra pay for overtime not included.

Cigar Industry—Earnings and Hours, March 1936 [3]

The data obtained in this survey generally covered a pay-roll period during the month of March 1936, at the time when production in the industry was in preparation for the Easter demand for cigars. In making this survey the Bureau covered a wide territory, from New England to Florida and west to and including the Mississippi Valley, thus leaving out only a few of the outlying western districts that are of limited importance.

The main part of the survey, which was made on a sample basis, was limited to establishments with 20 or more employees. The sam-

[2] Cookers, bakers, dryers, sterilizers, mixers, rollers or flakers, shredders, puffers or shooters, and graders, according to machine on which workers are employed.

[3] Abstract of article in the Monthly Labor Review for April 1937, prepared by Henry A. Bates and Donald L. Helm, of the Bureau of Labor Statistics.

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ple included 96 plants and 15,772 workers. It is estimated that this sample, in terms of employees, covered approximately 30 percent of those found in plants with 20 or more workers in 1936. In selecting the sample great care was taken to make it fully representative of the part of the industry it covers. Among the factors considered were geographical distribution, size of city, size of establishment, degree of mechanization of plant, type of cigar, unionization, etc.

Average Hourly Earnings

Although the average hourly earnings for all employees in the industry amounted to 37.1 cents, there were 3.4 percent earning under 20.0 cents, 11.4 percent under 25.0 cents, 26.9 percent under 30.0 cents, 51.1 percent under 35.0 cents, and 63.3 percent under 37.5 cents (the limit nearest the industry average). For a distribution according to average hourly earnings, see table 1.

TABLE 1.—*Percentage distribution of employees in cigar industry according to average hourly earnings, March 1936, by sex*

Average hourly earnings (in cents)	Total		Males		Females	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Under 15.0	0.8	0.8	0.5	0.5	0.9	0.9
15.0 and under 17.5	.9	1.7	.6	1.1	1.1	2.0
17.5 and under 20.0	1.7	3.4	.8	1.9	1.9	3.9
20.0 and under 22.5	2.9	6.3	1.9	3.8	3.2	7.1
22.5 and under 25.0	5.1	11.4	2.5	6.3	5.8	12.9
25.0 and under 27.5	7.6	19.0	5.1	11.4	8.4	21.3
27.5 and under 30.0	7.9	26.9	5.0	16.4	8.8	30.1
30.0 and under 32.5	12.1	39.0	10.3	26.7	12.7	42.8
32.5 and under 35.0	12.1	51.1	7.3	34.0	13.6	56.4
35.0 and under 37.5	12.2	63.3	8.9	42.9	13.2	69.6
37.5 and under 40.0	9.1	72.4	7.3	50.2	9.7	79.3
40.0 and under 42.5	6.4	78.8	7.0	57.2	6.2	85.5
42.5 and under 45.0	5.5	84.3	4.5	61.7	5.8	91.3
45.0 and under 47.5	3.8	88.1	5.2	66.9	3.4	94.7
47.5 and under 50.0	2.6	90.7	3.4	70.3	2.3	97.0
50.0 and under 55.0	2.4	93.1	5.6	75.9	1.4	98.4
55.0 and under 60.0	1.6	94.7	4.1	80.0	.9	99.3
60.0 and under 65.0	1.3	96.0	4.0	84.0	.4	99.7
65.0 and under 70.0	.7	96.7	2.9	86.9	(1)	99.7
70.0 and under 80.0	1.2	97.9	4.7	91.6	.1	99.8
80.0 and under 90.0	.9	98.8	3.4	95.0	.1	99.9
90.0 and under 100.0	.5	99.3	2.0	97.0	(1)	100.0
100.0 and under 120.0	.4	99.7	1.8	98.8	----------	----------
120.0 and over	.3	100.0	1.2	100.0	----------	----------
Total	100.0	----------	100.0	----------	100.0	----------

[1] Less than a tenth of 1 percent.

The average hourly earnings amounted to 46.3 cents for males and 33.8 cents for females, a difference of 12.5 cents. The contrast between the earnings of males and females is brought out even more vividly by comparing the two distributions.

For both sexes combined, the average was 37.2 cents in the North and 37.1 cents in the South. (See table 2.) The similarity of the averages was due to the fact that there were low-paid districts in the northern as well as in the southern region, and that the Florida average was comparable with those in some of the higher-paid districts in the North.

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TABLE 2.—*Average hourly earnings of employees in cigar industry, March 1936, by district and sex*

District	Total	Males	Females
United States	$0.371	$0.463	$0.338
North	.372	.477	.343
New England	.509	.560	.444
New York City	.408	.453	.387
Up-State New York	.400	.510	.358
New Jersey	.383	.522	.361
Philadelphia	.419	.583	.380
Small cities, eastern Pennsylvania	.388	.530	.354
Towns, eastern Pennsylvania	.296	.342	.274
Western Pennsylvania and West Virginia	.328	.507	.296
Ohio	.314	.346	.306
Indiana	.328	.424	.309
Michigan	.363	.514	.343
Other Middle Western States	.320	.405	.281
South	.371	.445	.321
Florida	.389	.450	.331
Other Southern States	.325	.411	.308

Table 3 presents the average hourly earnings by occupational classes. An examination of the available data shows that, for the United States as a whole, the averages for males ranged from 29.3 cents for hand-manipulated machine bunchmakers to 83.4 cents for office and plant supervisory employees, and for females from 18.4 cents for learners and apprentices to 45.9 cents for office and plant supervisory employees.

TABLE 3.—*Average hourly earnings of employees in cigar industry, March 1936, by occupational class, region, and sex*

Occupational class	United States		North		South	
	Males	Females	Males	Females	Males	Females
Helpers, stocking	$0.349	$0.298	$0.348	$0.298	$0.356	$0.300
Conditioners, leaf	.480	-------	.472	-------	.498	-------
Conditioners' helpers, leaf	.347	.294	.346	.298	.353	(1)
Strippers, hand	-------	.255	-------	.262	-------	.245
Strippers, machine	-------	.292	-------	.293	-------	.287
Selectors, wrappers	.721	.323	(1)	.292	.734	.408
Cigar makers, hand, whole work	.391	.360	.421	.369	.365	.354
Bunchmakers, hand	.447	.354	.395	.361	.453	.339
Rollers, hand	.333	.321	.333	.322	.333	.320
Bunchmakers, hand-manipulated machine	.293	.343	.291	.343	(1)	(1)
Bunchmakers, shredded-filler machine	.354	.370	.340	.380	.364	.342
Wrapper layers, shredded-filler machine	-------	.366	-------	.375	-------	.336
Filler feeders, long-filler machine	-------	.373	-------	.383	-------	.324
Binder layers, long-filler machine	-------	.372	-------	.382	-------	.326
Wrapper layers, long-filler machine	-------	.374	-------	.384	-------	.325
Finishers, long-filler machine	-------	.381	-------	.385	-------	.317
Examiners, final, cigar and box	.502	.377	.494	.377	(1)	.379
Mechanics	.754	-------	.753	-------	.757	-------
Packers	.536	.377	.448	.370	.615	.422
Banders and cellophaners, hand	-------	.311	-------	.303	-------	.321
Banders and cellophaners, machine	-------	.341	-------	.336	-------	.362
Supervisory employees, office and plant	.834	.459	.809	.458	.926	(1)
Clerical employees, office and plant	.529	.453	.500	.454	.569	.451
Miscellaneous direct skilled workers	(1)	.350	(1)	.351	-------	(1)
Miscellaneous direct semiskilled workers	(1)	(1)	(1)	(1)	(1)	-------
Miscellaneous direct unskilled workers	.363	.300	.353	.288	(1)	(1)
Miscellaneous indirect skilled workers	.655	-------	.677	-------	(1)	-------
Miscellaneous indirect semiskilled workers	.431	(1)	.437	-------	(1)	(1)
Miscellaneous indirect unskilled workers	.346	(1)	.366	(1)	.318	(1)
Miscellaneous service workers	.358	.371	.368	.380	.336	(1)
Learners and apprentices	.360	.184	(1)	.181	.340	(1)

[1] Averages not shown for fewer than 24 employees.

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Weekly Hours

With an average of 34.8 hours per week for all employees in the industry, it was found that 60.5 percent worked under 40 hours, 22.6 percent exactly 40 hours, and the remaining 16.9 percent over 40 hours. It is notable that relatively few employees worked long hours, only 3.8 percent being employed 48 hours and over.

Males were employed longer hours than females, the average for the former amounting to 39.4, as compared with 33.4 for the latter. (See table 4.) The average weekly hours were greater in the South than in the North, this being true for each sex as well as for all employees.

TABLE 4.—*Average weekly hours of employees in cigar industry, March 1936, by district and sex*

District	Total	Males	Females
United States	34.8	39.4	33.4
North	33.8	39.0	32.6
New England	32.1	37.8	27.0
New York City	33.9	39.2	31.9
Up-State New York	30.7	38.9	28.4
New Jersey	35.9	41.9	35.1
Philadelphia	36.1	41.7	34.9
Small cities, eastern Pennsylvania	30.4	39.7	28.8
Towns, eastern Pennsylvania	32.3	35.0	31.1
Western Pennsylvania and West Virginia	35.2	42.3	34.1
Ohio	35.4	38.7	34.4
Indiana	33.7	42.1	32.3
Michigan	35.9	43.0	35.1
Other Middle Western States	38.0	33.2	40.8
South	37.8	39.9	36.5
Florida	38.4	39.6	37.3
Other Southern States	36.4	41.6	35.5

Average Weekly Earnings

The average weekly earnings of all employees in the industry amounted to $12.94, but the extent of the low weekly pay can only be seen from the distribution of individual workers; 17.0 percent earned less than $8, 48.6 percent less than $12, and 79.2 percent less than $16. Among the remaining employees, 12.5 percent earned $16 and under $20, and 3.4 percent $28 and over. The presence of such a relatively large proportion of low-paid workers was the result of low average hourly earnings as well as short weekly hours.

The average earnings per week of male workers amounted to $18.24, which was considerably higher than the average of $11.30 reported for females. The large difference in favor of males was due to the fact that they not only had higher average hourly earnings but also longer hours of work.

The average earnings per week of all employees in the South exceeded those in the North, the former amounting to $14.00 as compared with $12.56 for the latter. (See table 5.) As regards the several districts, the highest averages were found in New England ($16.32), Philadelphia ($15.12), and Florida ($14.96). Low averages appeared in the other Southern States ($11.82), the small cities in eastern Pennsylvania ($11.81), western Pennsylvania and West Virginia ($11.52), Ohio ($11.11), and Indiana ($11.06), with the smallest average ($9.57) in the towns of eastern Pennsylvania.

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TABLE 5.—*Average weekly earnings of employees in cigar industry, March 1936, by district and sex*

District	Total	Males	Females
United States	$12.94	$18.24	$11.30
North	12.56	18.59	11.18
New England	16.32	21.20	11.99
New York City	13.83	17.76	12.35
Up-State New York	12.29	19.88	10.16
New Jersey	13.74	21.90	12.65
Philadelphia	15.12	24.32	13.28
Small cities, eastern Pennsylvania	11.81	21.06	10.20
Towns, eastern Pennsylvania	9.57	11.97	8.53
Western Pennsylvania and West Virginia	11.52	21.46	10.09
Ohio	11.11	13.43	10.60
Indiana	11.06	17.84	10.00
Michigan	13.05	22.10	12.05
Other Middle Western States	12.19	13.45	11.47
South	14.00	17.74	11.74
Florida	14.96	17.83	12.33
Other Southern States	11.82	17.08	10.93

Common Laborers—Entrance Wage Rates, July 1940[1]

The average hourly entrance rate of pay of adult male common laborers in 20 industries in the United States was 50.6 cents in July 1940. This average was obtained from the data gathered by the Bureau of Labor Statistics in its fifteenth annual survey of the hiring rates for common labor. The study covered 202,929 common laborers working at entrance rates in 6,571 establishments. Of these establishments, 4,736 were in the 16 manufacturing industries surveyed, 731 were in 3 public-utility services, and 1,104 were in the building-construction industry.

As in the Bureau s previous surveys of entrance rates, this study was conducted by the mail-questionnaire method.

Entrance Rates for the Country as a Whole

The hourly entrance rates paid to adult male common laborers in the 20 industries covered in this study, while averaging 50.6 cents, ranged from less than 25 cents to more than $1.10. This wide distribution suggests that the entrance wage rate for adult male common laborers (as is true also of the rates for other workers) is affected by such factors as geographical location, size of community, race of worker, hazards of the job, and type of industry. Study of the data in table 1 shows that relatively few common laborers are paid less than 30 cents or more than 67½ cents an hour. More than nine-tenths (92.6 percent) of all the common laborers surveyed in 1940 had rates which fell within this 37½-cent range. About one-seventh of the workers received the statutory minimum of exactly 30 cents an hour, provided by the Fair Labor Standards Act.

[1] Abstract of article in the Monthly Labor Review for January 1941, prepared by Willis C. Quant and Edward K. Frazier, of the Bureau of Labor Statistics.

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TABLE 1.—*Distribution of adult male common laborers, by hourly entrance rates in 20 industries, July 1940*

Hourly entrance rate (in cents)	Number of laborers at entrance rates	Simple percentage	Cumulative percentage	Hourly entrance rate (in cents)	Number of laborers at entrance rates	Simple percentage	Cumulative percentage
All rates	202,929	100.0	.....	47.5 and under 52.5	25,932	12.8	52.1
				52.5 and under 57.5	22,781	11.2	63.3
Under 25.0	617	.3	0.3	57.5 and under 62.5	21,517	10.6	73.9
25.0 and under 30.0	1,167	.6	.9	62.5 and under 67.5	39,776	19.6	93.5
Exactly 30.0	29,757	14.7	15.6	67.5 and under 72.5	4,640	2.3	95.8
Over 30.0 and under 32.5	575	.3	15.9	72.5 and under 77.5	3,114	1.5	97.3
32.5 and under 35.0	1,260	.6	16.5	77.5 and under 82.5	2,664	1.3	98.6
35.0 and under 37.5	5,853	2.9	19.4	82.5 and under 90.0	1,527	.8	99.4
37.5 and under 40.0	2,727	1.3	20.7	90.0 and under 100.0	886	.4	99.8
40.0 and under 42.5	19,562	9.6	30.3	100.0 and under 110.0	235	.1	99.9
42.5 and under 47.5	18,202	9.0	39.3	110.0 and over	137	.1	.....

Variations in Wage Rates

Geographical differences in average hourly entrance rates are shown in table 2, which presents the data by States and by two broad regions, one composed of the Northern and Western States, and the other of the Southern and Southwestern States.

The State averages for the country as a whole ranged from a low of 30.7 cents an hour in North Carolina to a high of 65.1 cents in the District of Columbia. The average of 65.1 cents for the District of Columbia is largely the result of the predominance of building construction in that area.

TABLE 2.—*Average hourly entrance rates of adult male common laborers in 20 industries, July 1940, by State and region*

Region and State	Establishments	Laborers at entrance rates	Average hourly entrance rate	Region and State	Establishments	Laborers at entrance rates	Average hourly entrance rate
United States	6,571	202,929	$0.506	North and West—Con.			
				Oregon	139	4,636	$0.602
North and West	5,215	149,275	.560	Pennsylvania	548	21,735	.556
California	377	9,387	.589	Rhode Island	39	395	.532
Colorado	65	1,173	.557	South Dakota	16	427	.487
Connecticut	123	2,000	.544	Utah	33	756	.486
Delaware	41	711	.485	Vermont	25	389	.438
District of Columbia	63	1,911	.651	Washington	199	6,351	.630
Idaho	24	879	.577	West Virginia	88	4,612	.549
Illinois	366	12,873	.585	Wisconsin	225	5,002	.537
Indiana	247	11,653	.570	Wyoming	11	87	(1)
Iowa	100	3,208	.539	South and Southwest	1,356	53,654	.355
Kansas	105	1,586	.467	Alabama	104	4,818	.392
Maine	78	2,529	.469	Arizona	26	650	.398
Maryland	109	4,183	.490	Arkansas	68	4,440	.322
Massachusetts	244	3,545	.533	Florida	90	5,327	.322
Michigan	316	8,010	.566	Georgia	113	4,213	.317
Minnesota	122	4,201	.557	Kentucky	75	1,421	.437
Missouri	163	3,544	.552	Louisiana	107	7,651	.360
Montana	31	711	.590	Mississippi	31	2,513	.356
Nebraska	42	976	.497	New Mexico	14	326	.360
Nevada	7	164	.600	North Carolina	104	3,309	.307
New Hampshire	46	1,029	.499	Oklahoma	72	1,247	.482
New Jersey	229	5,518	.554	South Carolina	55	2,624	.316
New York	363	9,581	.532	Tennessee	107	3,638	.337
North Dakota	15	171	.423	Texas	237	7,698	.390
Ohio	616	15,342	.575	Virginia	153	3,779	.357

[1] Because of the small coverage, no average is presented.

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The average hourly rate paid in the Northern and Western States as a whole was 56.0 cents and that for the Southern and Southwestern States was but 35.5 cents.

The average entrance rates of 57.4 cents paid to Negroes and the 56.1 cents paid to Mexicans in the Northern and Western States (table 3) were slightly higher than the average rate of 55.9 cents paid to whites other than Mexicans. This was due to considerable concentration of the Negroes and Mexicans in the iron and steel industry, where their average hourly entrance rates amounted to 59.3 and 61.3 cents an hour, respectively. In the South and Southwest whites other than Mexicans received the highest rates.

TABLE 3.—*Percentage distribution of adult male common laborers by hourly entrance rates in 20 industries, July 1940, by race and region*

Hourly entrance rate (in cents)	North and West				South and Southwest			
	All	White other than Mexican	Negro	Mexican	All	White other than Mexican	Negro	Mexican
Under 25.0	(1)	(1)			1.1	0.5	1.3	6.5
25.0 and under 30.0	0.1	0.1	0.1	0.3	2.0	.7	2.6	6.1
Exactly 30.0	1.2	1.2	1.0	.1	52.2	39.9	60.9	26.4
Over 30.0 and under 32.5	.1	.1	.1	.2	.8	.7	.8	1.5
32.5 and under 35.0	.2	.2	.2	.1	1.8	1.3	1.7	9.6
35.0 and under 37.5	1.2	1.2	1.0	1.8	7.7	11.2	5.5	7.9
37.5 and under 40.0	1.1	1.2	.3	2.6	2.1	2.6	1.7	2.1
40.0 and under 42.5	8.5	8.7	7.6	3.4	12.7	14.4	11.3	24.4
42.5 and under 47.5	8.0	7.9	9.2	6.2	11.7	13.0	11.1	7.1
47.5 and under 52.5	15.9	15.9	14.6	19.8	4.2	7.1	2.4	5.4
52.5 and under 57.5	14.8	14.3	19.5	10.2	1.3	2.3	.6	2.5
57.5 and under 62.5	14.3	14.7	10.6	17.5	.3	.8	(1)	
62.5 and under 67.5	26.1	26.9	19.5	31.6	1.1	2.8	.1	.5
67.5 and under 72.5	2.9	2.7	4.5	4.4	.5	1.3		
72.5 and under 77.5	1.9	1.9	1.7	1.2	.5	1.4		
77.5 and under 82.5	1.8	1.1	8.3	.6				
82.5 and under 90.0	1.0	1.0	1.0	(1)				
90.0 and under 100.0	.6	.6	.7					
100.0 and under 110.0	.2	.2	.1					
110.0 and over	.1	.1	(1)					
All rates	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of common laborers at entrance rate	149,275	132,145	15,020	2,110	53,654	19,721	32,631	1,307
Average hourly entrance rate	$0.560	$0.559	$0.574	$0.561	$0.355	$0.386	$0.336	$0.353

[1] Less than a tenth of 1 percent.

Entrance-Rate Differences Between Industries

The industrial data presented in table 4 reveals that, for the country as a whole, common laborers in the petroleum-refining industry had the highest average hourly entrance rate (63.6 cents an hour) of any of the 16 manufacturing industries covered in the survey. The lowest average (36.8 cents an hour) prevailed in the fertilizer industry. The average for the 16 manufacturing industries combined was 49.8 cents an hour. Common laborers in the public-utility group received an average of 47.7 cents an hour, which was lower than the averages for manufacturing or for building construction. The building-construction industry average of 60.1 cents an hour was higher than that for either manufacturing or public utilities.

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TABLE 4.—*Average hourly entrance rates of adult male common laborers, July 1940, by industry and region*

Industry	Average hourly earnings of all wage earners [1]	Common laborers								
		Establishments reporting			Number of laborers at entrance rates			Average hourly entrance rate		
		Total	North and West	South and Southwest	Total	North and West	South and Southwest	Total	North and West	South and Southwest
All 20 industries	[2]	6,571	5,215	1,356	202,929	149,275	53,654	$0.506	$0.560	$0.355
Manufacturing	[2]	4,736	3,859	877	167,204	121,789	45,415	.498	.553	.353
Automobile parts	[2]	87	87		2,270	2,270		.561	.561	
Brick, tile, terra cotta	$0.553	378	318	60	9,888	7,904	1,984	.446	.483	.299
Cement	.715	131	101	30	4,162	2,937	1,225	.528	.568	.432
Chemicals	.808	151	128	23	5,198	3,980	1,218	.563	.619	.378
Fertilizer	.449	318	130	188	5,412	1,708	3,704	.368	.486	.314
Foundry and machine-shop products	.730	1,329	1,175	154	19,325	17,038	2,287	.490	.509	.344
Glass	.742	127	114	13	6,928	6,330	598	.528	.536	.442
Iron and steel	.849	251	235	16	31,501	28,882	2,619	.589	.603	.435
Leather	.646	144	128	16	3,151	2,740	411	.509	.524	.411
Lumber (sawmills)	.496	531	321	210	34,423	14,364	20,059	.400	.539	.301
Meat packing	.689	240	206	34	12,497	11,221	1,276	.564	.582	.409
Paints and varnishes	.721	325	291	34	2,087	1,884	203	.515	.533	.352
Paper and pulp	.649	489	441	48	24,247	16,351	7,896	.478	.514	.403
Petroleum refining	.986	149	100	49	4,935	3,005	1,930	.636	.674	.579
Rubber tires and inner tubes	.971	21	21		396	396		[3]	[3]	
Soap	.712	65	[4]	[4]	784	[4]	[4]	.533	[4]	[4]
Public utilities	[2]	731	559	172	17,318	13,807	3,511	.477	.508	.353
Electric light and power	.891	326	241	85	6,741	5,182	1,559	.466	.492	.378
Electric street-railway and city motorbus operation and maintenance	.725	201	156	45	5,536	4,710	826	.491	.521	.317
Manufactured and natural gas	[2]	204	162	42	5,041	3,915	1,126	.476	.514	.344
Building construction	.947	1,104	797	307	18,407	13,679	4,728	.601	.681	.372

[1] These are United States totals, based on monthly reports on employment and pay rolls collected by the Bureau.
[2] Not available.
[3] Twenty-one establishments in the rubber tire and tube industry, having a total employment of about 18,500 workers of all skills, reported 396 common laborers at entrance rates. These laborers had an average entrance rate of 51.7 cents per hour. It is believed that this average does not reflect the true average rate for the industry generally, as 14 plants employing about 27,000 reported no common laborers at entrance rates. Of these plants, 7 with a total employment of about 21,000 had entrance rates for common laborers well above the 51.7-cent average, the range of such rates being from 55 to 75 cents an hour.
[4] Regional figures are omitted in order not to disclose plant identity.

Trends Reflected by Entrance Rates from 1926 to 1940

Table 5 shows the trends of average hourly entrance rates of common laborers since 1926 for 13 industries combined and for each of three groups, namely manufacturing industries, public utilities, and building construction. The manufacturing group covered by this table includes only 9 industries, because comparable data for a greater number are not available for the earlier years. The manufacturing industries included in this table are brick, tile, and terra cotta, cement, foundry and machine-shop products, iron and steel, leather, lumber, meat packing, paper and pulp, and petroleum refining.

The average hourly entrance rate for the 13 industries rose by seven-tenths of a cent between 1939 and 1940. The 9 manufacturing industries showed an average increase of 1.1 cents over the 1939 rate, while the public utilities average dropped eight-tenths of a cent below

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the 1939 figure. Building construction continued at the same level as in 1939, its average being 60.1 cents for both years.

Although the 50.7 cents for all 13 industries and the 49.8 cents for the manufacturing group for 1940 were the highest averages for any of the years since 1937, the figure for public utilities was lower than the average paid either in 1938 or 1939.

TABLE 5.—*Average hourly entrance rates of adult male common laborers in 13 industries, 1926 to 1940, by industry group*

July	All industries covered	Manufacturing industries covered	Public utilities	Building construction [1]
1926	$0.426	$0.401	$0.420	$0.471
1927	.424	.399	.398	.482
1928	.428	.402	.429	.474
1929	.432	.407	.428	.483
1930	.429	.405	.446	.470
1931	.403	.383	.446	.426
1932	.355	.318	.415	.399
1933	.333	.305	.387	.383
1934	.420	.407	.418	.455
1935	.430	.415	.420	.481
1936	.434	.425	.437	.509
1937 [2]	.493	.488	.463	.551
1938 [3]	.495	.486	.479	.578
1939	.500	.487	.485	.601
1940	.507	.498	.477	.601

[1] For the years 1926 to 1935, inclusive, the figures cover a small amount of construction outside of the building industry.
[2] Averages for the year were computed on the basis of identical establishments for both 1937 and 1938.
[3] Averages for the year were computed on the basis of identical establishments for both 1938 and 1939.

Cordage and Twine Industry—Hourly Earnings, 1940[1]

The first survey by the Bureau of Labor Statistics of hourly earnings in the cordage and twine industry was made in the fall of 1940. The study, which covered pay-roll periods in August and September, 1940, included 43 establishments employing 5,299 wage earners, or approximately one-third of the industry.

Earnings of employees in the cordage and twine industry averaged 46.8 cents an hour at the time of the survey. As shown by table 1, the wage level was substantially higher in the North than in the South. The difference in earnings is partly accounted for by the difference in the products manufactured in the two regions. Most of the production in the Southern States consisted of cotton cordage and twine, whereas the northern establishments were engaged chiefly in the processing of hard fibers and soft fibers other than cotton.

Hourly earnings in the hard fiber mills averaged 55.9 cents as compared with an average of only 39.7 cents in the mills producing cotton cordage (table 2). Average hourly earnings in the mills making cordage and twine of soft fibers other than cotton amounted to 50.6 cents. The hourly earnings data do not include earnings at extra rates for overtime work.[2]

[1] From Monthly Labor Review for October 1941.
[2] Had the extra overtime earnings been included, the industry average would have been increased by only three-tenths of a cent.

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TABLE 1.—*Percentage distribution of employees in cordage and twine industry, by average hourly earnings and region, September 1940*

Average hourly earnings (in cents)	United States	North [1]	South [2]	Average hourly earnings (in cents)	United States	North [1]	South [2]
Under 32.5	0.2	0.2	0.3	67.5 and under 70.0	1.0	1.7	0.2
Exactly 32.5	15.8	3.3	29.7	70.0 and under 72.5	1.5	2.7	.1
32.6 and under 35.0	6.2	.5	12.6	72.5 and under 75.0	.7	1.2	.1
35.0 and under 37.5	9.0	2.5	16.6	75.0 and under 77.5	1.5	2.5	.4
37.5 and under 40.0	7.1	3.4	11.3	77.5 and under 80.0	.5	.8	(3)
40.0 and under 42.5	8.8	6.8	11.0	80.0 and under 82.5	.4	.7	.1
42.5 and under 45.0	6.7	8.7	4.4	82.5 and under 87.5	.5	1.0	(3)
45.0 and under 47.5	5.8	7.1	4.3	87.5 and under 92.5	.4	.7	.1
47.5 and under 50.0	6.0	8.6	3.1	92.5 and under 97.5	.2	.5	-------
50.0 and under 52.5	8.3	13.2	2.8	97.5 and over	.6	1.0	.2
52.5 and under 55.0	4.6	7.5	1.2				
55.0 and under 57.5	4.8	8.6	.4	Total	100.0	100.0	100.0
57.5 and under 60.0	2.2	3.9	.2				
60.0 and under 62.5	2.8	5.0	.4	Number of employees [4]	5,299	2,813	2,486
62.5 and under 65.0	2.4	4.5	.1	Average hourly earnings	$0.468	$0.540	$0.384
65.0 and under 67.5	2.0	3.4	.4				

[1] Includes the States of California, Connecticut, Illinois, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Wisconsin.
[2] Includes the States of Alabama, Georgia, Kentucky, Louisiana, Maryland, North Carolina, South Carolina, Tennessee, Texas, and Virginia.
[3] Less than a tenth of 1 percent.
[4] Excluding clerical employees.

TABLE 2.—*Percentage distribution of employees in cordage and twine industry, by average hourly earnings and type of product, September 1940*

Average hourly earnings (in cents)	All mills	Hard fiber mills	Cotton fiber mills	Other soft fiber mills	Average hourly earnings (in cents)	All mills	Hard fiber mills	Cotton fiber mills	Other soft fiber mills
Under 32.5	0.2	------	0.4	0.2	67.5 and under 70.0	1.0	2.7	0.3	0.7
Exactly 32.5	15.8	0.4	26.9	9.6	70.0 and under 72.5	1.5	3.0	.3	2.2
32.6 and under 35.0	6.2	.1	11.8	1.2	72.5 and under 75.0	.7	1.4	.1	1.0
35.0 and under 37.5	9.0	6.1	12.9	4.4	75.0 and under 77.5	1.5	2.2	.5	3.1
37.5 and under 40.0	7.1	1.4	10.9	5.6	77.5 and under 80.0	.5	1.4	(1)	.2
40.0 and under 42.5	8.8	5.6	10.9	7.8	80.0 and under 82.5	.4	.9	.1	.5
42.5 and under 45.0	6.7	5.4	7.3	6.9	82.5 and under 87.5	.5	1.2	.1	.7
45.0 and under 47.5	5.8	6.6	4.3	7.9	87.5 and under 92.5	.4	.9	.1	.5
47.5 and under 50.0	6.0	6.0	4.4	9.2	92.5 and under 97.5	.2	.6	------	.4
50.0 and under 52.5	8.3	15.1	3.6	10.5	97.5 and over	.6	1.6	.2	.5
52.5 and under 55.0	4.6	6.3	1.9	8.2					
55.0 and under 57.5	4.8	10.1	1.3	6.0	Total	100.0	100.0	100.0	100.0
57.5 and under 60.0	2.2	4.4	.3	3.6					
60.0 and under 62.5	2.8	5.2	.8	4.4	Total number of employees [2]	5,299	1,387	2,621	1,291
62.5 and under 65.0	2.4	6.4	.2	2.6	Average hourly earnings	$0.468	$0.559	$0.397	$0.506
65.0 and under 67.5	2.0	5.0	.4	2.1					

[1] Less than a tenth of 1 percent.
[2] Excluding clerical employees.

Cotton Picking—Wage Rates, 1940 [1]

Wage rates for the picking of seed cotton averaged 62 cents per 100 pounds in 1940, for the country as a whole. This was an increase of 4 cents over the 1939 figure but a decrease of 7 cents from that for 1936 and 1937. The 1940 rates ranged from 51 cents in Alabama to 95 cents in California. Average rates for each of the cotton-growing States, and for the United States as a whole, in 1929 and in each year from 1936 to 1940, are shown in the following table giving data from Crops and Markets for November 1940, issued by the United States Department of Agriculture.

[1] From Monthly Labor Review, February 1941.

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Average wage rates for picking 100 pounds of seed cotton, 1929 and 1936–40

State	1929	1936	1937	1938	1939	1940
United States	$1.06	$0.69	$0.69	$0.57	$0.58	$0.62
Virginia	1.15	.70	.75	.65	.60	.70
North Carolina	1.01	.65	.70	.60	.60	.67
South Carolina	.81	.55	.60	.50	.50	.54
Georgia	.90	.55	.60	.50	.50	.53
Florida	1.07	.60	.65	.60	.60	.67
Illinois	1.15	.90	.70	.70	.70	.70
Missouri	1.12	.95	.80	.75	.75	.77
Kansas	1.30	.75	.65	.65	.65	.65
Kentucky	1.18	.95	.80	.80	.80	.80
Tennessee	1.34	.80	.70	.60	.60	.65
Alabama	.92	.60	.60	.50	.50	.51
Mississippi	1.08	.75	.80	.55	.60	.57
Louisiana	1.01	.65	.70	.55	.55	.55
Texas	1.11	.65	.65	.55	.55	.58
Oklahoma	1.22	.75	.75	.70	.65	.72
Arkansas	1.06	.75	.70	.60	.60	.65
New Mexico	1.25	.70	.70	.60	.65	.68
Arizona	1.50	1.10	.85	.80	.90	.93
California	1.45	1.00	.95	.75	.85	.95

Cotton, Rayon, and Silk Dyeing and Finishing—Hourly Earnings, 1938[1]

Dyeing and finishing is one of the important phases of textile manufacturing, regardless of the materials used. The processes involved are largely chemical and highly specialized, and for this reason the work is generally considered a separate industry, even though many of the larger textile manufacturers perform the dyeing and finishing along with the other phases of the manufacturing processes.

A distinction is usually made in the industry between "corporate" and "commercial" establishments, the former being engaged in dyeing and finishing their own production of yarn and fabrics, whereas the latter dye and finish yarn or fabrics not of their own manufacture but supplied to them by other textile plants. The Bureau's 1938 survey in the industry excluded commercial plants employing fewer than 20 workers during the pay-roll period scheduled, while the dyeing and finishing departments of corporate establishments were scheduled regardless of the number of employees found. Moreover, the survey excluded the dyeing and finishing of yarn in corporate plants, which is usually included by the Bureau in the separate surveys of the cotton and silk and rayon goods industries.[2]

As defined by the Census of Manufactures, the dyeing and finishing industry showed 533 establishments (whose annual production was valued at $5,000 or more) and 74,982 wage earners (average for the year) in 1937. The Bureau's survey was made on a sample basis, including 206 plants with 28,330 workers.

By far the largest proportion of the total labor force in the dyeing and finishing industry was paid on a straight time basis, the actual figure amounting to 85.6 percent.

[1] From the Monthly Labor Review for January 1940.
[2] This survey also excluded the dyeing and finishing of woolens and worsteds.

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Average Hourly Earnings

For the 28,330 wage earners employed by the dyeing and finishing plants covered in this survey, hourly earnings averaged 54.5 cents in the first half of 1938. Table 1 presents the percentage distribution of individual hourly earnings upon which this average is based. One feature of this table is the extensive range covered by the individual hourly earnings.

TABLE 1.—*Percentage distribution of dyeing and finishing workers, by average hourly earnings, skill, and sex, 1938*

Average hourly earnings (in cents)	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 22.5	0.3	0.3	0.6	------	------	------	0.1	0.1	0.5	1.3	1.2	2.4
22.5 and under 25.0	.4	.5	.2	------	------	------	.1	.1	.1	2.1	2.1	1.4
25.0 and under 27.5	1.0	1.0	1.4	(1)	(1)	------	.5	.4	.9	3.7	3.5	6.9
27.5 and under 30.0	1.2	.6	5.0	------	------	------	1.3	.5	5.4	1.4	1.4	1.0
30.0 and under 32.5	2.8	2.4	5.8	0.2	0.3	------	3.0	2.4	5.9	3.8	3.8	5.2
32.5 and under 35.0	4.3	3.3	11.4	.3	.3	------	4.7	3.2	11.7	5.7	5.4	10.3
35.0 and under 37.5	5.4	4.8	9.5	1.5	1.4	------	5.3	4.4	9.5	8.3	8.2	10.7
37.5 and under 40.0	7.1	6.2	13.1	1.8	1.7	------	8.0	6.7	13.9	7.3	7.4	4.8
40.0 and under 42.5	6.0	4.9	13.6	2.0	1.8	------	6.4	5.0	13.4	7.1	6.6	15.5
42.5 and under 47.5	12.7	12.4	14.9	5.4	5.3	------	12.6	12.1	15.1	17.8	18.1	14.1
47.5 and under 52.5	13.3	12.8	15.8	6.9	6.7	------	13.8	13.5	14.9	15.3	14.9	22.9
52.5 and under 57.5	9.2	10.1	4.0	7.5	7.4	------	10.3	11.6	4.0	6.2	6.4	2.4
57.5 and under 62.5	6.9	7.7	1.7	7.7	7.6	------	7.9	9.1	1.6	2.4	2.4	2.1
62.5 and under 67.5	15.0	16.8	1.2	8.8	8.7	------	16.2	19.4	1.1	13.4	14.2	.3
67.5 and under 72.5	5.2	5.8	1.1	8.3	8.5	------	5.2	6.0	1.3	3.1	3.3	------
72.5 and under 77.5	2.0	2.2	.6	8.6	8.7	------	1.3	1.4	.6	.8	.8	------
77.5 and under 82.5	1.4	1.6	.1	6.7	6.7	------	.9	1.1	.1	.2	.2	------
82.5 and under 87.5	1.1	1.3	(1)	4.6	4.6	------	.8	1.0	(1)	.1	.1	------
87.5 and under 92.5	.9	1.0	------	4.4	4.5	------	.5	.6	------	(1)	(1)	------
92.5 and under 100.0	.4	.4	------	2.3	2.3	------	.1	.2	------	------	------	------
100.0 and under 120.0	1.3	1.5	(1)	5.5	5.6	------	.9	1.1	------	------	------	------
120.0 and under 140.0	.4	.5	------	3.3	3.4	------	.1	.1	------	------	------	------
140.0 and under 160.0	.4	.4	------	3.1	3.1	------	(1)	(1)	------	------	------	------
160.0 and under 180.0	1.0	1.1	------	8.5	8.7	------	------	------	------	------	------	------
180.0 and under 200.0	.2	.3	------	1.9	2.0	------	------	------	------	------	------	------
200.0 and over	.1	.1	------	.7	.7	------	------	------	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	(2)	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	28,330	24,560	3,770	3,214	3,169	45	20,112	16,678	3,434	5,004	4,713	291

[1] Less than a tenth of 1 percent.
[2] Not a sufficient number of workers to justify presentation of a distribution. These figures, however, are included in the totals.

With some exceptions, the representation in the higher-earnings classes in the dyeing and finishing industry is restricted to skilled males. Thus, for the entire country, one-half (50.3 percent) of the workers in this group received 72.5 cents and over an hour. This may be compared with 5.5 percent for semiskilled and only 1.1 percent for unskilled males. For all females, the figure amounted to less than 1 percent, practically all of them being semiskilled workers.

According to table 2, the average hourly earnings in the United States as a whole ranged from 84.7 cents for skilled males to 39.9 cents for unskilled females.

In dyeing and finishing, as in some of the other divisions of the textile industry, there are sharp geographical differences in hourly

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TABLE 2.—*Average hourly earnings of dyeing and finishing workers, 1938, by wage district, sex, and skill*

Wage district and sex	Number of workers				Average hourly earnings			
	All	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
United States	28,330	3,214	20,112	5,004	$0.545	$0.842	$0.518	$0.461
Males	24,560	3,169	16,678	4,713	.565	.847	.540	.465
Females	3,770	45	3,434	291	.412	(1)	.412	.399
Northern wage district [2]	21,754	2,424	15,448	3,882	.586	.922	.554	.500
Males	19,008	2,385	13,005	3,618	.607	.928	.576	.506
Females	2,746	39	2,443	264	.435	(1)	.436	.413
Southern wage district [3]	6,576	790	4,664	1,122	.409	.599	.397	.325
Males	5,552	784	3,673	1,095	.420	.600	.409	.327
Females	1,024	6	991	27	.350	(1)	.352	(1)

[1] Not a sufficient number of workers to justify computation of an average.
[2] Includes Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Ohio, Indiana, and Illinois.
[3] Includes Alabama, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

earnings. According to table 3, the State averages in dyeing and finishing plants ranged from 36.7 cents in Georgia to 67.0 cents in New Jersey. It is significant to note, however, that the highest average, namely 44.8 cents for Virginia and Tennessee combined, among the southern States was distinctly below the lowest average—52.4 cents for Massachusetts—shown by any of the northern States.

TABLE 3.—*Average hourly earnings of dyeing and finishing workers, 1938, by wage district and State*

Wage district and State	Coverage of survey		Average hourly earnings
	Number of plants	Number of workers	
United States	206	28,330	$0.545
Northern wage district	157	21,754	.586
Connecticut	11	1,549	.563
Illinois, Indiana, and Ohio [1]	6	487	.546
Massachusetts [2]	22	4,850	.524
New Jersey	48	6,152	.670
New York	26	2,201	.545
Pennsylvania [3]	23	2,872	.598
Rhode Island	21	3,643	.556
Southern wage district	49	6,576	.409
Alabama and Mississippi [4]	6	623	.391
Georgia	6	612	.367
North Carolina	22	2,021	.394
South Carolina	10	2,247	.420
Virginia and Tennessee [5]	5	1,073	.448

[1] Includes 3 plants in Illinois, 1 in Indiana, and 2 in Ohio.
[2] Includes 1 plant in Maine and 2 in New Hampshire.
[3] Includes 1 plant in Delaware.
[4] Includes 4 plants in Alabama and 2 in Mississippi.
[5] Includes 3 plants in Virginia and 2 in Tennessee.

Practically all of the union establishments [6] covered in the sample were commercial plants. Moreover, they were nearly all located in the northern wage district. Among the commercial establishments, the union plants had average hourly earnings of 66.3 cents, which may be compared with 54.4 cents for the nonunion establishments. The few union corporate plants averaged 59.3 cents, as against 52.9 cents for the nonunion establishments.

[6] An establishment was classified as union if the majority of employees in the plant were in occupations covered by either oral or written agreements with unions.

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Drug, Medicine, and Toilet Preparations Industry—Hourly Earnings, May 1940[1]

The present study of hourly earnings in the drug, medicine, and toilet preparations industry is based on data obtained by mail questionnaire from 1,028 members of the industry, who recorded certain pay-roll information for 45,250 employees. The information pertained to the pay-roll period ending nearest May 15, 1940. Hourly earnings at this time of year are believed to be fairly representative of normal conditions in the industry.

Altogether 615 returns were received for establishments engaged primarily in the manufacture of drugs and medicines. These establishments employed a total of 27,226 workers, including clerical workers. Since roughly comparable census figures for 1937 enumerated only 995 establishments[2] in this branch of the industry and only 30,990 workers (including clerks), it is apparent that a very substantial part of the industry was represented.

Usable returns were received from 201 establishments engaged primarily in the production of toilet preparations. These plants employed 9,093 workers. Roughly comparable census figures for 1937 showed this branch of the industry to include 469 establishments,[3] and 12,167 wage earners and clerks. Consequently, it appears that this branch, too, was substantially represented in the returns, although perhaps not so completely as the drug and medicine branch.

The remaining 212 establishments returning questionnaires were combined-product firms engaged in both branches of the industry, were primarily engaged in distribution or in activities outside the industry, or were central administrative offices.

Although conclusions might have been drawn directly from the pay-roll data secured by questionnaire, it was deemed advisable, before preparing the final tabulations, to make correction for differences in the completeness of representation of the various geographic areas and sizes of establishments. In arriving at properly "weighted" figures, use was made of unpublished census information regarding the size composition of plants in the various States. On the whole, the effect of the weighting process was not great; in the two branches of the industry combined, average hourly earnings derived from the weighted figures, for example, were only 1 cent lower than the average derived from unweighted figures. It is believed, however, that the weighted figures provide an improved and generally dependable indication of earnings in the industry.

Major Branches of the Industry

The average hourly earnings of all workers[4] in the industry amounted to 54.6 cents in May 1940. Regionally, the highest average hourly earnings (57.4 cents) were received by workers in the

[1] Abstract of an article by Sidney C. Sufrin, Bureau of Labor Statistics, in the Monthly Labor Review for April 1941.
[2] Of the 1,013 establishments enumerated by the census, 18 reported no employees.
[3] 9 of the establishments reported by the census employed no workers.
[4] The term "workers" as used throughout this study includes production, clerical, maintenance, and shipping, as well as inside selling employees. By and large the average hourly earnings reported in the survey do not reflect additional earnings for overtime.

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Midwest.[5] The lowest average hourly remuneration (44.2 cents) was earned by workers in the South. This was fully 13 cents less than average earnings in the Midwest and almost 10.5 cents less than the average for all workers in the industry. The average hourly earnings of 55.7 cents paid workers in the Western region were slightly higher (1.1 cents) than the average for the industry, while the average wage of 53.8 cents an hour paid workers in the Northeastern region was less than 1 cent below the average earnings of workers in the industry as a whole (table 1).

TABLE 1.—*Average hourly earnings and percentage distribution of estimated number of workers, May 1940, by branch of industry, region, and sex*

Branch of industry and region	Average hourly earnings			Percent of workers		
	All workers	Males	Females	All workers	Males	Females
Total industry	$0.546	$0.659	$0.463	100.0	42.1	57.9
Northeastern region	.538	.654	.452	100.0	42.6	57.4
Midwestern region	.574	.691	.487	100.0	42.3	57.7
Southern region	.442	.499	.408	100.0	37.4	62.6
Western region	.557	.636	.509	100.0	37.4	62.6
Drug and medicine branch	.566	.670	.474	100.0	46.9	53.1
Northeastern region	.562	.664	.460	100.0	50.0	50.0
Midwestern region	.588	.700	.497	100.0	44.7	55.3
Southern region	.452	.503	.420	100.0	37.8	62.2
Western region	.573	.667	.514	100.0	38.6	61.4
Toilet preparations branch	.497	.622	.442	100.0	30.7	69.3
Northeastern region	.497	.626	.441	100.0	30.1	69.9
Midwestern region	.508	.634	.450	100.0	31.6	68.4
Southern region	.395	.481	.348	100.0	35.4	64.6
Western region	.535	.592	.503	100.0	35.7	64.3

Drug and medicine branch.—The workers in the drug and medicine branch received average earnings of 56.6 cents an hour, which was 2 cents higher than the average for the industry as a whole. Average hourly earnings in this branch in the 4 regions ranged from 1.0 to 2.4 cents an hour higher than those in the entire industry in the same areas. As is the case for the industry as a whole, the highest average hourly wages in the drug and medicine branch (58.8 cents) were paid to workers in the Midwest and the lowest average earnings (45.2 cents) were paid to workers in the South.

Toilet preparations branch.—The average hourly earnings of the workers in the toilet preparations branch were only 49.7 cents an hour, 6.9 cents less than the earnings received by workers in the drug and medicine branch, and 4.9 cents an hour less than the average for the total industry. It should be noted that the proportion of female workers found in the toilet preparations branch was higher than in the drug and medicine branch (69.3 percent as compared with 53.1 percent). Since female workers in the industry tend to earn less

[5] For the purposes of this report, the Midwestern region includes Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin. The Northeastern region includes Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. The Southern region includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The Western region includes California, Colorado, Oregon, Utah, and Washington.

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than male workers, part of the difference in hourly earnings in the two branches can be accounted for on that score.

A difference of fully 14 cents an hour was found to exist between the average hourly wages in the West, the highest paid region (53.5 cents), and the South, the lowest paid region (39.5 cents). In comparing the average hourly wages by regions for the two branches, it was found that the differences ranged from 3.8 cents in the Western region to 8.0 cents an hour in the Midwest. In each region, the average hourly earnings of workers in the drug and medicine branch exceeded the corresponding averages of workers in the toilet preparations branch.

Table 2 presents a simple percentage distribution of the estimated 44,604 workers in the major branches of the industry in May 1940, according to average hourly earnings, by branch of industry and by sex. Individual workers earned from less than 30 cents to over $1.32 an hour. Fully one-half of the workers (50.6 percent) were found within the 20-cent range of 32.5 to 52.5 cents. A negligible number of workers (0.3 percent) earned less than 30 cents, the minimum in effect under the Fair Labor Standards Act. The legal minimum, exactly 30 cents, was earned by 3.8 percent of the workers, while as many as 7.5 percent received exactly 40 cents an hour, the ultimate floor to wages prescribed under the act.

TABLE 2.—*Percentage distribution of estimated number of workers according to average hourly earnings, May 1940, by branch of industry and sex*

Average hourly earnings (in cents)	Total industry			Drug and medicine branch			Toilet preparations branch		
	All workers	Males	Females	All workers	Males	Females	All workers	Males	Females
Under 30.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.3
Exactly 30.0	3.8	1.6	5.3	3.6	1.4	5.6	4.1	2.5	4.8
30.1 and under 32.5	1.4	.6	2.0	1.3	.5	1.9	1.8	1.0	2.1
32.5 and under 35.0	2.3	.9	3.3	1.9	.9	2.9	3.2	.9	4.2
35.0 and under 37.5	7.5	1.9	11.6	4.8	1.7	7.6	13.8	2.7	18.7
37.5 and under 40.0	5.8	1.8	8.7	5.4	1.5	8.8	6.8	2.6	8.7
Exactly 40.0	7.5	2.4	11.2	7.4	2.1	12.2	7.6	3.4	9.5
40.1 and under 42.5	4.0	1.5	5.8	3.3	1.3	5.0	5.6	2.3	7.1
42.5 and under 45.0	6.6	2.8	9.4	6.3	2.6	9.5	7.3	3.6	9.1
45.0 and under 47.5	6.5	4.2	8.2	6.2	4.0	8.2	7.1	4.8	8.1
47.5 and under 52.5	10.4	9.7	11.0	10.0	9.0	11.0	11.4	12.8	10.9
52.5 and under 57.5	7.4	8.8	6.4	8.0	8.6	7.4	6.1	9.3	4.6
57.5 and under 62.5	7.1	9.2	5.5	7.9	9.2	6.6	5.3	9.3	3.5
62.5 and under 67.5	6.9	11.5	3.7	7.6	11.2	4.3	5.4	11.6	2.8
67.5 and under 72.5	5.3	9.3	2.4	6.0	9.6	2.8	3.5	7.9	1.6
72.5 and under 77.5	4.4	8.1	1.7	5.0	8.6	1.8	3.0	6.6	1.4
77.5 and under 82.5	3.3	6.5	.9	3.9	7.0	1.2	1.8	4.6	.5
82.5 and under 87.5	2.5	4.7	.9	3.1	5.4	1.1	1.1	2.3	.5
87.5 and under 92.5	2.0	4.2	.5	2.3	4.5	.4	1.4	3.3	.4
92.5 and under 97.5	1.3	2.6	.4	1.6	3.0	.4	.7	1.4	.2
97.5 and under 102.5	1.1	2.3	.2	1.3	2.5	.2	.7	1.7	.2
102.5 and under 112.5	1.0	2.0	.2	1.1	2.0	.3	.8	2.2	.2
112.5 and under 122.5	.7	1.5	.2	.8	1.5	.2	.5	1.2	.2
122.5 and under 132.5	.5	.9	.1	.5	.9	.2	.4	1.1	.1
132.5 and over	.4	.7	.1	.4	.7	.1	.3	.8	(1)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	44,604	18,780	25,824	31,448	14,737	16,711	13,156	4,043	9,113
Average hourly earnings	$0.546	$0.659	$0.463	$0.566	$0.670	$0.474	$0.497	$0.622	$0.442
Number of plants	1,441			994			447		

[1] Less than a tenth of 1 percent.

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Size of Plant and Average Hourly Earnings

In addition to being scattered over most of the United States, establishments in the drug, medicine, and toilet preparations industry varied in size from plants employing only 1 worker to those employing in excess of 1,500 workers. Table 3, which presents the average hourly earnings of workers in the combined industry and in each branch, according to size of plant, groups the plants into 8 size classes.

TABLE 3.—*Estimated number of workers and average hourly earnings according to size of plant, May 1940, by branch of industry and sex*

Size of plant	Total industry			Drug and medicine branch			Toilet preparations branch		
	All workers	Males	Females	All workers	Males	Females	All workers	Males	Females
	Average hourly earnings								
United States	$0.546	$0.659	$0.463	$0.566	$0.670	$0.474	$0.497	$0.622	$0.442
1 to 5 workers	.492	.549	.451	.507	.561	.465	.463	.522	.426
6 to 20 workers	.508	.607	.449	.525	.630	.460	.461	.538	.421
21 to 50 workers	.499	.583	.440	.513	.593	.446	.466	.550	.430
51 to 100 workers	.497	.603	.433	.509	.603	.438	.470	.601	.423
101 to 250 workers	.541	.661	.462	.556	.662	.467	.515	.660	.454
251 to 500 workers	.525	.659	.447	.553	.673	.456	.505	.644	.441
501 to 1,000 workers	.573	.680	.461	.575	.677	.452	.561	.713	.497
1,001 to 2,500 workers	.661	.764	.557	.661	.764	.557	-------	-------	-------
	Number of workers								
United States	44,604	18,780	25,824	31,448	14,737	16,711	13,156	4,043	9,113
1 to 5 workers	1,565	656	909	1,029	452	577	536	204	332
6 to 20 workers	3,977	1,481	2,496	2,916	1,115	1,801	1,061	366	695
21 to 50 workers	4,510	1,845	2,665	3,130	1,425	1,705	1,380	420	960
51 to 100 workers	5,332	2,016	3,316	3,747	1,597	2,150	1,585	419	1,166
101 to 250 workers	8,536	3,398	5,138	5,404	2,469	2,935	3,132	929	2,203
251 to 500 workers	8,029	2,971	5,058	3,405	1,513	1,892	4,624	1,458	3,166
501 to 1,000 workers	6,256	3,207	3,049	5,418	2,960	2,458	838	247	591
1,001 to 2,500 workers	6,399	3,206	3,193	6,399	3,206	3,193	-------	-------	-------

With the presentation of this added detail there appears to be a tendency for the larger plants, i. e., those employing more than 251 workers, to pay higher wages than the smaller plants, and for the plants with greatest employment to pay the highest average hourly wages. For the entire United States, the difference in hourly wages between the smallest plants and the largest plants amounted to 16.9 cents. The difference in hourly earnings of male employees in these two plant groups was large (21.5 cents). The plants which paid the lowest average hourly wages to women employed between 51 and 100 workers. The difference in average hourly earnings of women in these plants and those in the largest plants group was 12.4 cents. The difference in average hourly earnings between the smallest plants and the largest was 10.6 cents.

Subsidiary Branches of the Industry

Certain of the questionnaire returns could not be grouped with the majority of returns since they did not fall clearly within either

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of the major branches which have been discussed. It was not possible to weight the returns of these establishments. The information that was supplied, however, was segregated and analyzed separately in its unweighted form. The unweighted data were divided into four classifications. The percentage distribution according to average hourly earnings is shown, by sex, in table 4 for each of the four classifications.

TABLE 4.—*Percentage distribution of workers reported in subsidiary branches of drugs, medicines, and toilet preparations industry, May 1940, by average hourly earnings and sex*

Average hourly earnings (in cents)	Combined products manufacturers			Manufacturing drugs, medicines, and toilet preparations as minor products			Manufacturing departments of distributors			Central administrative offices		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Under 30.0	------	------	------	0.4	0.3	0.5	0.1	0.2	------	0.1	0.2	0.1
Exactly 30.0	13.0	0.8	18.4	3.0	1.0	5.6	7.8	3.0	12.4	------	------	------
30.1 and under 32.5	1.0	------	1.4	.9	.2	1.8	6.5	1.9	10.8	.1	.3	------
32.5 and under 35.0	3.7	------	5.3	2.1	.8	3.8	7.1	.9	12.7	.1	.3	.1
35.0 and under 37.5	16.7	4.0	22.2	3.7	.8	7.5	8.6	3.5	13.5	2.5	1.3	3.0
37.5 and under 40.0	9.8	1.6	13.5	4.9	.8	10.3	7.4	1.6	12.7	2.6	1.4	3.0
Exactly 40.0	5.2	4.0	5.7	3.0	2.1	4.0	.8	.9	.6	4.2	.6	5.6
40.1 and under 42.5	3.9	2.4	4.6	2.4	.7	4.6	5.8	1.4	9.9	2.0	.8	2.5
42.5 and under 45.0	3.7	3.2	3.9	4.3	2.5	6.7	6.5	2.8	9.9	3.4	2.5	3.8
45.0 and under 47.5	8.1	7.2	8.5	3.5	2.2	5.3	7.2	4.0	10.2	6.7	4.4	7.5
47.5 and under 52.5	10.1	19.2	6.0	10.2	6.8	15.1	6.3	8.4	4.3	12.0	8.8	13.2
52.5 and under 57.5	5.7	14.4	1.8	10.3	11.8	8.4	9.1	18.1	.9	10.1	6.8	11.4
57.5 and under 62.5	3.9	8.0	2.1	7.8	8.9	6.4	6.8	12.8	1.3	9.1	9.0	9.1
62.5 and under 67.5	2.9	7.2	1.1	6.8	6.9	6.6	6.5	12.8	.6	9.2	7.6	9.8
67.5 and under 72.5	3.2	8.8	.7	8.7	10.8	5.9	4.7	9.5	.2	8.0	7.1	8.3
72.5 and under 77.5	2.7	8.0	.4	5.5	7.6	2.7	1.6	3.3	------	4.5	4.9	4.4
77.5 and under 82.5	1.5	.8	1.8	4.9	7.9	1.0	1.1	2.3	------	4.2	3.8	4.4
82.5 and under 87.5	1.7	3.2	1.1	3.3	4.9	1.0	4.1	8.6	------	4.5	6.0	4.0
87.5 and under 92.5	1.2	3.2	.4	3.0	4.7	.8	.7	1.4	------	2.6	4.1	2.0
92.5 and under 97.5	.5	.8	.4	1.9	3.0	.4	.7	1.4	------	2.7	4.0	2.2
97.5 and under 102.5	1.0	1.6	.7	1.9	3.2	.2	[1] 1.6	[1] 1.2	------	2.1	3.8	1.4
102.5 and under 112.5	[2] 5	[2] 1.6	------	3.5	5.8	.5	------	------	------	2.8	5.9	1.5
112.5 and under 122.5	------	------	------	1.6	2.6	.3	------	------	------	3.2	7.8	1.4
122.5 and under 132.5	------	------	------	1.2	1.8	.3	------	------	------	1.4	4.0	.4
132.5 and over	------	------	------	1.2	1.9	.3	------	------	------	1.9	4.6	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	407	125	282	5,381	3,059	2,322	893	430	463	2,250	630	1,620
Average hourly earnings	$0.464	$0.583	$0.411	$0.627	$0.723	$0.501	$0.488	$0.602	$0.382	$0.664	$0.789	$0.616
Number of plants	10	------	------	103	------	------	73	------	------	26	------	------

[1] 97.5 cents and over.
[2] 102.5 cents and over.

Electrical-Products Manufacture—Earnings and Hours, 1936 and 1937[1]

In 1937, according to the Census of Manufactures, the electrical manufacturing industry was fifth in rank among all manufacturing industries in terms of employment (with an average of 257,660 wage

[1] Abstract of articles in the Monthly Labor Review for June, July, and October 1939, prepared by J. Perlman, O. R. Mann, H. O. Rogers, and D. L. Helm, of the Bureau of Labor Statistics.

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earners) and third in terms of wages. The Bureau of Labor Statistics survey covered 233 establishments and 63,394 wage earners—approximately one-fourth of the total employed in the industry.

Most of the electrical manufacturing industry is located in metropolitan areas of 1,000,000 population and over. Of the 233 plants covered in the survey, 151 establishments and more than one-half (54.5 percent) of all wage earners were found in these large communities. Moreover, a considerable proportion of the industry is located in other large centers, namely from 250,000 to 1,000,000, which accounted for 43 plants and over one-fifth (21.5 percent) of the workers. The remainder of the industry, including 39 establishments and less than one-fourth of the wage earners (24.0 percent), was found in communities of less than 250,000, but very little of the industry was located in small towns.

Large companies occupy a dominant position in the electrical manufacturing industry. In fact, 54 establishments with more than two-thirds (68.6 percent) of the wage earners belonged to companies with 1,000 or more employees. Among the largest concerns in the industry, by far the greatest employment is concentrated in the "Big Three" companies. Of the total sample, 22 establishments with 44.7 percent of the wage earners belonged to those companies.

Diversity of product is one of the principal characteristics of the industry. The plants included in the Bureau's study were manufacturing carbon products, domestic appliances, electric lamps, electrical measuring instruments, industrial controls, fractional- and integral-horsepower motors and generators, fuses, wiring devices and specialty transformers, signaling apparatus, dry and storage batteries, transformers and switchgear, wire and cable, and miscellaneous products. Establishments manufacturing the following groups of products were not covered: Certain electrical domestic appliances (such as clocks, ranges, refrigerators, sewing machines, washing machines, and minor household food appliances), radio parts, tubes, transmitters, receiving sets, and related products, electrical construction material (except carbon products), electrical illumination products (except lamps), electrical transportation equipment, and X-ray equipment and related products. Most of the excluded groups are classified by the Census Bureau under other industries, either because the electrical work in them is minor or because they are of such importance that their manufacture constitutes another industry.

The sample studied was selected taking into consideration such factors as product, corporate affiliation, size of establishment,[2] unionization, geographical distribution, and size of community. All States of any importance in the industry, except California,[3] were included. According to the Census of Manufactures in 1935, these States employed 96.4 percent of the total workers in the industry. Very little of the industry is found in the South.

The study was started in September 1937 and completed early in 1938. In nearly all cases, the wages and hours data cover a pay-roll pe-

[2] No establishment with fewer than 6 wage earners was included in the Bureau's study. Although such plants are numerous in the industry, their employment is relatively insignificant.

[3] According to the Census of Manufactures of 1935, the number of wage earners in this State constituted only 1.5 percent of the total in the industry.

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riod during August 1937. Accordingly they reflect conditions prevailing prior to the effective date of the Fair Labor Standards Act (October 24, 1938). However, since relatively few workers were found earning under 25 cents an hour in this industry, the adoption of that minimum evidently did not disturb the wage structure.

Average Hourly Earnings, 1937

For all 63,394 wage earners for whom data were obtained, hourly earnings averaged 71 cents in August 1937. The variations in earnings in the different divisions of the industry, according to sex and skill, are shown in table 1.

TABLE 1.—*Average hourly earnings in electrical manufacturing, August 1937, by industry division, skill, and sex*

Industry division	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female [1]	Total	Male	Female
All industry divisions	$0.710	$0.767	$0.508	$1.012	$0.728	$0.755	$0.541	$0.565	$0.609	$0.499
Carbon products	.581	.606	.461	.788	.630	.633	(2)	.514	.536	.460
Domestic appliances	.637	.708	.461	.941	.648	.680	.480	.513	.564	.457
Dry batteries	.536	.608	.448	.784	.564	.609	.455	.511	.582	.446
Electric lamps	.600	.781	.535	.934	.566	.704	.541	.555	.656	.527
Electrical measuring instruments	.636	.723	.502	.902	.665	.713	.517	.529	.592	.497
Fractional-horsepower motors	.668	.714	.533	.938	.707	.712	.606	.558	.584	.528
Fuses, wiring devices, and specialty transformers	.495	.621	.411	.858	.574	.610	.459	.426	.494	.406
Industrial controls	.743	.780	.545	1.006	.739	.758	.570	.594	.619	.537
Integral-horsepower motors and generators	.857	.882	.579	1.097	.800	.810	.601	.647	.672	.573
Signaling apparatus	.533	.566	.413	.803	.559	.562	(2)	.433	.451	.408
Storage batteries	.783	.788	.541	.928	.798	.800	(2)	.697	.705	.513
Transformers and switchgear	.862	.883	.597	1.096	.864	.870	.646	.670	.690	.589
Wire and cable	.629	.649	.451	.861	.677	.685	.499	.549	.571	.442
Miscellaneous products	.749	.789	.588	1.057	.755	.774	.572	.603	.610	.592

[1] Includes a small number of skilled workers.
[2] Not a sufficient number of workers to present an average.

In five divisions of the industry, namely industrial controls, integral-horsepower motors and generators, storage batteries, transformers and switchgear, and miscellaneous products, the average hourly earnings were higher than for the industry as a whole.

Table 2 shows the percentage distribution of hourly earnings of individual employees, by sex and skill. The chief fact that emerges from this table is the extensive range of individual hourly earnings.

Relatively few employees were found in the lower-wage classes, only 2.1 percent earning under 35 cents an hour, although as many as one-tenth (9.1 percent) received below 42.5 cents. On the other hand, some of the workers in this industry ranked with the highest-paid employees in the country. Nearly one-fourth (23.1 percent) were paid 87.5 cents and over, and 14.9 percent earned 97.5 cents and over. There were 6.5 percent receiving $1.125 and over, and 1.7 percent were paid $1.325 and over.

Although the workers in electrical manufacturing are predominately males, 23.2 percent of the employees in the industry are females.

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TABLE 2.—*Distribution of workers in electrical manufacturing, according to average hourly earnings, August 1937, by skill and sex*

Average hourly earnings (in cents)	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female[1]	Total	Male	Female
Under 25.0	0.1	[2]	0.5	-------	[2]	[2]	[2]	0.3	[2]	0.7
25.0 and under 27.5	.3	0.1	.8	-------	0.1	[2]	0.2	.6	0.3	1.0
27.5 and under 30.0	.2	.1	.9	[2]	[2]	[2]	.3	.5	.2	1.0
30.0 and under 32.5	.9	.4	2.5	-------	.3	0.2	1.2	1.8	1.0	2.9
32.5 and under 35.0	.6	.2	2.0	-------	.2	.1	1.0	1.3	.6	2.3
35.0 and under 37.5	2.1	.7	6.5	-------	.7	.3	3.1	4.1	1.8	7.4
37.5 and under 40.0	1.5	.6	4.6	[2]	.7	.5	1.8	3.0	1.2	5.4
40.0 and under 42.5	3.4	2.1	7.8	0.1	1.9	1.3	5.6	6.2	4.6	8.4
42.5 and under 47.5	6.7	4.7	13.6	.4	4.4	3.4	10.8	11.4	9.2	14.5
47.5 and under 52.5	8.9	6.6	16.5	.4	7.2	5.1	20.6	13.8	12.8	15.3
52.5 and under 57.5	9.7	7.0	17.7	.8	8.2	6.1	22.3	14.2	12.5	16.4
57.5 and under 62.5	9.0	8.1	12.0	1.5	9.1	8.3	14.0	12.0	12.3	11.4
62.5 and under 67.5	8.7	9.4	6.5	2.6	9.8	10.1	8.3	10.2	13.3	6.0
67.5 and under 72.5	7.2	8.2	4.1	3.3	9.9	10.6	5.9	6.4	8.4	3.6
72.5 and under 77.5	6.6	8.0	2.0	5.1	8.6	9.6	2.4	5.5	8.0	1.9
77.5 and under 82.5	5.7	7.1	1.1	6.3	8.3	9.3	1.4	3.2	4.9	1.0
82.5 and under 87.5	5.3	6.7	.5	7.2	8.0	9.2	.8	2.0	3.2	.4
87.5 and under 92.5	4.4	5.7	.2	8.4	6.1	7.0	.2	1.2	2.0	.2
92.5 and under 97.5	3.8	4.9	.1	8.5	4.9	5.7	[2]	.9	1.4	.1
97.5 and under 102.5	3.5	4.5	.1	9.5	4.0	4.5	.1	.6	.9	.1
102.5 and under 112.5	4.9	6.3	[2]	16.6	4.4	5.0	-------	.5	.9	[2]
112.5 and under 122.5	3.1	4.1	[2]	12.8	2.0	2.4	-------	.2	.3	[2]
122.5 and under 132.5	1.7	2.3	[2]	7.8	.8	.9	-------	.1	.1	[2]
132.5 and under 142.5	.9	1.1	-------	4.1	.3	.3	-------	[2]	.1	-------
142.5 and under 152.5	.5	.6	[2]	2.6	.1	.1	[2]	[2]	[2]	-------
152.5 and under 162.5	.2	.3	-------	1.2	[2]	[2]	-------	[2]	[2]	-------
162.5 and over	.1	.2	-------	.8	[2]	[2]	-------	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Includes a small number of skilled workers. [2] Less than a tenth of 1 percent.

The industry's labor force is predominantly composed of semiskilled and unskilled employees. Of the total number scheduled, 38.5 percent were classed as semiskilled and 43.7 percent as unskilled, and only 17.8 percent as skilled.

Plant averages ranged from less than 30 cents to over $1 and the distribution was quite irregular (table 3). However, 168 establishments, or seven-tenths of the total number, had average hourly earnings within the fairly wide spread from 45 to 75 cents. There were 33 plants with averages under 45 cents, and 32 averaged 75 cents and over.

TABLE 3.—*Distribution of electrical manufacturing plants, by average hourly earnings in August 1937*

Average hourly earnings (in cents)	Number of plants	Average hourly earnings (in cents)	Number of plants
Under 30.0	2	70.0 and under 72.5	9
30.0 and under 32.5	2	72.5 and under 75.0	10
32.5 and under 35.0	2	75.0 and under 77.5	6
35.0 and under 37.5	4	77.5 and under 80.0	4
37.5 and under 40.0	8	80.0 and under 82.5	5
40.0 and under 42.5	7	82.5 and under 85.0	2
42.5 and under 45.0	8	85.0 and under 87.5	4
45.0 and under 47.5	13	87.5 and under 90.0	2
47.5 and under 50.0	15	90.0 and under 92.5	2
50.0 and under 52.5	15	92.5 and under 95.0	2
52.5 and under 55.0	18	95.0 and under 97.5	1
55.0 and under 57.5	15	97.5 and under 100.0	-------
57.5 and under 60.0	25	100. and over	4
60.0 and under 62.5	12		
62.5 and under 65.0	7	Total	233
65.0 and under 67.5	13		
67.5 and under 70.0	16		

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Occupational Differences

Table 4 presents the average hourly earnings in selected occupational classes, which appeared in three or more divisions of the electrical manufacturing industry.

TABLE 4.—*Average hourly earnings, weekly hours, and weekly earnings in selected occupations in electrical manufacturing, August 1937, by skill and sex*

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers:								
Assemblers, skilled	372	$1.149	42.3	$48.63				
Blacksmiths	39	.935	41.3	38.58				
Boring-mill operators, skilled	167	1.229	41.0	50.33				
Bricklayers	45	.963	41.7	40.15				
Carpenters, skilled	202	.926	42.0	38.88				
Coremakers	70	1.031	38.3	39.52				
Drill-press operators, skilled	177	.908	41.3	37.45				
Electricians, maintenance	412	.971	43.6	42.35				
Engineers, powerhouse	84	.957	44.7	42.76				
Foremen, working	2,101	1.038	43.1	44.68				
Grinding-machine operators, skilled	185	1.019	40.7	41.44				
Hardeners	38	1.057	39.8	42.09				
Inspectors, skilled	161	1.099	41.2	45.24				
Lathe operators, engine, skilled	292	1.066	41.5	44.25				
Lathe operators, turret, skilled	184	1.002	41.1	41.19				
Lay-out men, skilled	117	1.115	43.7	48.69				
Machinists	798	.942	42.0	39.62				
Mechanics, machine-repair	334	.956	41.7	39.88				
Milling-machine operators, skilled	207	1.110	40.2	44.60				
Millwrights and other maintenance workers	373	.857	43.9	37.59				
Model makers	92	.972	40.4	39.27				
Molders, foundry	193	1.007	37.5	37.82				
Pattern makers	143	1.156	39.8	46.07				
Pipefitters and plumbers	203	1.009	42.8	43.19				
Screw-machine operators, automatic, skilled	162	.998	39.4	39.28				
Set-up men, machine, skilled	211	.961	41.6	39.97				
Sheet-metal workers, skilled	195	.987	40.7	40.20				
Shippers, head	91	.825	43.7	36.11				
Testers, skilled	92	1.084	44.6	48.37				
Tinsmiths and sheet-metal workers	81	.957	42.4	40.56				
Tool and die makers	1,487	1.051	41.5	43.67				
Welders and brazers	615	1.018	40.0	40.72				
Welders, maintenance	56	.955	42.4	40.45				
Winders, skilled	37	1.119	40.9	45.76				
Semiskilled workers:								
Apprentices	613	.545	40.9	22.28				
Assemblers, semiskilled	3,333	.819	41.5	34.01	476	$0.529	38.2	$20.19
Balancers	56	.684	42.9	29.34	16	(1)	(1)	(1)
Boring-mill operators, semiskilled	63	.821	42.4	34.80				
Boxmakers	92	.780	41.5	32.40				
Buffers and polishers	235	.782	40.3	31.52	19	(1)	(1)	(1)
Carpenters, semiskilled	182	.738	41.7	30.77				
Checkers	234	.788	40.8	32.21	70	.487	39.4	19.22
Clerks, factory	293	.683	41.8	28.51	162	.504	39.9	20.13
Crane operators	292	.882	43.7	38.50				
Cutters, insulation	83	.856	40.0	34.22				
Die casters	45	.817	40.4	32.99				
Die setters	189	.818	40.1	32.79				
Drill-press operators, semiskilled	795	.740	40.6	30.03	41	.527	39.8	20.97
Firemen	117	.700	44.3	31.05				
Grinding-machine operators, semiskilled	253	.819	40.3	33.02	17	(1)	(1)	(1)
Inspectors, semiskilled	1,121	.751	41.0	30.80	144	.536	39.5	21.15
Lathe operators, engine, semiskilled	349	.745	41.7	31.08	11	(1)	(1)	(1)
Lathe operators, turret, semiskilled	278	.780	42.5	33.10				
Lay-out men, semiskilled	64	.853	40.2	34.34	1	(1)	(1)	(1)
Milling-machine operators, semiskilled	373	.775	40.9	31.65	16	(1)	(1)	(1)
Miscellaneous furnace and ovenmen, semiskilled	357	.834	40.8	34.07	16	(1)	(1)	(1)

[1] Not a sufficient number of workers to present an average.

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TABLE 4.—*Average hourly earnings, weekly hours, and weekly earnings in selected occupations in electrical manufacturing, August 1937, by skill and sex*—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.								
Mixers, compound	171	$0.699	40.6	$28.36				
Molders, plastic	294	.845	39.7	33.53	18	(1)	(1)	(1)
Oilers and motor tenders	135	.726	41.4	30.06				
Painters, brush	79	.761	44.1	33.51	5	(1)	(1)	(1)
Painters, maintenance	120	.834	41.4	34.51				
Painters, spray	339	.775	41.8	32.37	17	(1)	(1)	(1)
Platers	232	.809	39.4	31.89				
Punch-press operators, semiskilled	1,346	.730	39.8	29.00	154	$0.530	37.4	$19.80
Repairmen, product	320	.687	39.7	27.30	50	.507	38.1	19.29
Salvage workers, semiskilled	41	.731	39.7	29.05	10	(1)	(1)	(1)
Saw operators	88	.837	41.2	34.43				
Screw-machine operators, automatic semiskilled	182	.772	39.6	30.55				
Screw-machine operators, hand, semiskilled	347	.805	39.5	31.80	1	(1)	(1)	(1)
Set-up men, machines, semiskilled	64	.843	40.7	34.29				
Shearmen	164	.820	40.0	32.79				
Sheet-metal workers, semiskilled	76	.725	40.5	29.40				
Shipping and receiving clerks	403	.635	42.9	27.25	24	(1)	(1)	(1)
Stock clerks	824	.651	42.3	27.53	34	(1)	(1)	(1)
Storekeepers	252	.787	42.4	33.35	2	(1)	(1)	(1)
Testers, semiskilled	648	.747	42.1	31.45	227	.548	39.0	21.35
Timekeepers	69	.586	42.9	25.11	48	.521	40.2	20.95
Tool-crib attendants	138	.719	40.8	29.32	1	(1)	(1)	(1)
Truck drivers	174	.739	42.8	31.62				
Truck operators, electric and gas	299	.748	40.4	30.23				
Utility men	81	.645	42.1	27.16	1	(1)	(1)	(1)
Watchmen	489	.611	45.7	27.94				
Welders, spot	227	.802	39.2	31.46	193	.554	39.0	21.58
Winders, semiskilled	464	.850	42.6	36.22	159	.577	38.2	22.06
Unskilled workers:								
Assemblers, unskilled	3,106	.583	40.8	23.76	5,707	.486	37.9	18.41
Burrers and rough grinders	503	.660	40.2	26.51	24	(1)	(1)	(1)
Cleaners, parts	207	.717	39.9	28.60	38	(1)	(1)	(1)
Cleaners, machine and equipment	74	.649	39.5	25.66	5	(1)	(1)	(1)
Common laborers	1,066	.589	40.7	23.97	11	(1)	(1)	(1)
Drill-press operators, unskilled	534	.572	40.6	23.23	249	.499	37.2	18.57
Elevator operators	140	.618	41.7	25.77	2	(1)	(1)	(1)
Foundry laborers	152	.711	36.8	26.17				
Freight loaders and unloaders	118	.772	42.4	32.72				
Helpers, foundry and machine	535	.698	41.2	28.75				
Helpers, maintenance	537	.650	42.1	27.39				
Helpers, production line	262	.640	40.3	25.79	20	(1)	(1)	(1)
Inspectors, unskilled	377	.597	40.2	24.01	482	.495	38.6	19.11
Janitors	741	.600	41.4	24.83	111	.529	35.6	18.84
Lathe operators, engine, unskilled	87	.620	39.9	24.77	104	.516	38.3	19.76
Learners	867	.505	39.3	19.84	374	.369	37.6	13.88
Material handlers	861	.632	40.0	25.24	29	(1)	(1)	(1)
Miscellaneous furnace and ovenmen, unskilled	103	.579	44.9	25.99	1	(1)	(1)	(1)
Packers and wrappers	716	.670	42.3	28.35	368	.460	38.6	17.76
Painters, dip	117	.683	41.4	28.28	30	(1)	(1)	(1)
Platers' helpers	228	.624	40.9	25.51	2	(1)	(1)	(1)
Punch-press operators, unskilled	347	.570	39.1	22.30	434	.515	38.0	19.54
Rackers and unrackers	61	.522	38.9	20.30	21	(1)	(1)	(1)
Riveters	52	.602	39.3	23.64	99	.448	39.0	17.48
Salvage workers, unskilled	135	.652	40.2	26.24	13	(1)	(1)	(1)
Sandblasters	69	.879	41.2	36.17				
Screw-machine operators, hand, unskilled	44	.567	40.8	23.16	2	(1)	(1)	(1)
Solderers	126	.654	40.5	26.51	380	.504	38.6	19.46
Stampers, markers, labelers	76	.766	39.2	30.03	50	.439	38.5	16.92
Stock- and shipping-room laborers	564	.599	42.1	25.21	4	(1)	(1)	(1)
Tapers	30	(1)	(1)	(1)	244	.562	38.2	21.48
Testers, unskilled	416	.633	40.8	25.79	437	.530	39.5	20.96
Truckers, hand	406	.561	41.7	23.41				
Winders, unskilled	369	.646	41.7	26.94	1,297	.570	38.5	21.93

[1] Not a sufficient number of workers to present an average.

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Among skilled males, the highest paid occupational class was that of boring-mill operators, who averaged $1.229 an hour. By contrast, the lowest paid skilled occupational classes were millwrights and other maintenance workers and shippers, whose averages amounted respectively to 85.7 and 82.5 cents. As regards semiskilled males, the average hourly earnings of 50 occupational classes covered a spread from 88.2 cents for crane operators to 54.5 cents for apprentices. Among unskilled males, the highest occupational average was 87.9 cents for sandblasters. The averages of the other 39 occupational classes ranged from 77.2 cents for freight loaders and unloaders to 50.5 cents for learners.

Average Weekly Hours and Earnings, 1937

The 8-hour day and 40-hour week generally prevailed in the electrical manufacturing industry in August 1937. Of the 233 plants covered, 128 worked their employees 40 hours per week, with all but 1 of these also having an 8-hour day.

Only 10 establishments had scheduled hours of less than 40 per week. In 3 of these, the full-time hours were under 36¼, the lowest being 30 hours. There were 5 plants with scheduled hours of 36¼. The regular hours were between 36¼ and 40 in 2 establishments.

In 5 plants, the scheduled hours were over 40 and under 44 per week. As many as 28 establishments had 44 as their full-time hours, and all but 1 of these worked 8 hours per day and 4 hours on Saturday. The regular hours were 45 in 14 plants, over 45 and under 48 in 4, 48 in 12, over 48 and under 50 in 6, 50 in 6, and over 50 in 2 establishments. In the remaining 18 plants, the scheduled hours varied by sex or department, with a substantial number of employees working 40 hours.

Actual Weekly Hours

At the time of the survey, the actual weekly hours of all wage earners in the electrical manufacturing industry averaged 40.5. In table 5, average actual hours per week are given by industry division, skill, and sex.

TABLE 5.—*Average actual weekly hours in electrical manufacturing, August 1937, by industry division, skill, and sex*

Industry division	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female[1]	Total	Male	Female
All divisions	40.5	41.2	38.3	41.7	40.9	41.2	38.9	39.7	40.8	38.1
Carbon products	45.2	46.3	40.4	50.2	46.5	46.6	(2)	43.7	45.2	40.4
Domestic appliances	39.3	39.6	38.5	40.0	40.5	40.6	39.8	38.3	38.3	38.3
Dry batteries	42.1	43.2	40.7	49.2	42.9	43.5	41.4	41.4	42.3	40.6
Electric lamps	39.6	41.2	39.0	41.1	39.4	41.7	39.1	39.4	40.7	39.0
Electrical measuring instruments	39.9	40.4	39.3	40.7	40.1	40.3	39.3	39.6	40.3	39.3
Fractional-horsepower motors	40.8	41.7	38.5	43.0	41.2	41.3	39.3	39.9	41.4	38.4
Fuses, wiring devices, and specialty transformers	39.2	41.8	37.6	43.7	40.4	40.9	38.7	38.3	41.6	37.5
Industrial controls	40.3	41.1	36.3	41.3	40.8	41.3	36.5	39.2	40.6	36.3
Integral-horsepower motors and generators	41.5	41.8	38.0	41.3	41.9	42.1	38.4	40.9	42.1	37.9
Signaling apparatus	39.0	40.9	33.6	43.4	41.7	41.8	(2)	36.1	38.4	33.5
Storage batteries	40.6	40.6	39.3	41.5	40.7	40.7	(2)	40.2	40.2	39.5
Transformers and switchgear	41.0	41.3	37.7	42.0	41.2	41.3	38.8	39.9	40.5	37.5
Wire and cable	40.2	40.6	36.9	41.8	40.3	40.5	38.0	39.8	40.5	36.8
Miscellaneous products	40.7	41.0	39.6	41.3	40.9	41.0	39.8	40.3	40.9	39.6

[1] Includes a small number of skilled workers.
[2] Not a sufficient number of workers to present an average.

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A total distribution of all employees according to actual weekly hours discloses the fact that one-half (50.2 percent) worked exactly 40 hours during the week scheduled.

Generally speaking, the average actual weekly hours varied inversely with the degree of skill, although the differences were not very pronounced in most instances. For the industry as a whole, the averages were 41.7 for skilled, 40.9 for semiskilled, and 39.7 for unskilled workers. On a sex-skill basis, the figures for males amounted to 41.7 for skilled, 41.2 for semiskilled, and 40.8 for unskilled employees. The females averaged 38.9 for semiskilled and 38.1 hours for unskilled.

Average Weekly Earnings

The average weekly earnings of all wage earners in the electrical manufacturing industry amounted to $28.78 in August 1937 (table 6). On a sex-skill basis, the average weekly earnings for males was $42.21 for skilled, $31.14 for semiskilled, and $24.83 for unskilled workers. The females averaged $21.05 for semiskilled and $19.01 for unskilled employees.

In terms of weekly earnings, the highest-paid industry divisions were those manufacturing integral-horsepower motors and generators and transformers, and switchgear, whose averages for all workers amounted, respectively, to $35.54 and $35.31. Next came the manufacture of storage batteries, of miscellaneous products, and of industrial controls, with averages of approximately $30 to $32.

TABLE 6.—*Average weekly earnings in electrical manufacturing, August 1937, by industry division, skill, and sex*

Industry division	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female [1]	Total	Male	Female
All divisions	$28.78	$31.59	$19.46	$42.21	$29.80	$31.14	$21.05	$22.43	$24.83	$19.01
Carbon products	26.27	28.09	18.64	39.53	29.32	29.51	(2)	22.45	24.25	18.57
Domestic appliances	25.00	28.02	17.74	37.68	26.23	27.61	19.10	19.66	21.62	17.48
Dry batteries	22.56	26.24	18.24	38.57	24.18	26.53	18.87	21.16	24.62	18.13
Electric lamps	23.76	32.15	20.91	38.39	22.32	29.33	21.12	21.83	26.72	20.58
Electrical measuring instruments	25.42	29.22	19.74	36.70	26.65	28.76	20.29	20.96	24.84	19.54
Fractional-horsepower motors	27.28	29.78	20.49	40.35	29.12	29.40	23.86	22.28	24.21	20.27
Fuses, wiring devices, and specialty transformers	19.39	25.94	15.44	37.51	23.18	24.96	17.77	16.32	20.58	15.24
Industrial controls	29.95	32.05	19.80	41.54	30.16	31.31	20.80	23.25	25.16	19.45
Integral-horsepower motors and generators	35.54	36.91	22.01	45.33	33.57	34.11	23.07	26.49	28.28	21.71
Signaling apparatus	20.81	23.15	13.89	34.82	23.29	23.50	(2)	15.60	17.34	13.67
Storage batteries	31.78	32.01	21.24	38.56	32.45	32.55	(2)	27.98	28.35	20.24
Transformers and switchgear	35.31	36.44	22.53	46.07	35.61	35.93	25.04	26.72	27.92	22.09
Wire and cable	25.28	26.36	16.67	36.03	27.33	27.70	18.90	21.85	23.11	16.27
Miscellaneous products	30.53	32.38	23.29	43.68	30.84	31.74	22.80	24.33	24.93	23.41

[1] Includes a small number of skilled workers.
[2] Not a sufficient number of workers to present an average.

For males, the average earnings were $31.59 a week. According to the distribution, over one-half (54.9 percent) earned between $20 and $35. For females, the average weekly earnings amounted to $19.46. As shown by the distribution, over two-thirds (67.0 percent) earned between $15 and $25, and more than nine-tenths (92.4 percent) received between $10 and $30. (See table 7.)

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TABLE 7.—*Percentage distribution of workers in electrical manufacturing by skill and sex, according to weekly earnings, August 1937*

Weekly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female [1]	Total	Male	Female
Under $5	0.5	0.3	1.0	0.1	0.2	0.2	0.4	0.8	0.6	1.2
$5 and under $10	1.6	1.0	3.8	.5	.9	.7	1.8	2.7	1.6	4.4
$10 and under $15	5.3	2.5	14.8	.5	2.3	1.6	6.7	9.9	4.9	17.1
$15 and under $20	13.8	8.5	31.4	1.0	9.1	6.1	28.7	23.2	16.8	32.1
$20 and under $25	21.4	17.0	35.6	2.5	19.0	15.1	43.9	31.2	29.7	33.2
$25 and under $30	18.1	20.4	10.6	6.8	22.4	23.8	14.9	18.8	25.5	9.4
$30 and under $35	13.9	17.5	2.3	14.6	20.2	22.9	2.9	8.2	12.5	2.1
$35 and under $40	9.9	12.7	.4	19.5	13.1	15.1	.5	3.1	5.0	.4
$40 and under $45	6.4	8.3	.1	19.0	6.6	7.5	.2	1.2	1.9	.1
$45 and under $50	3.9	5.1	[2]	13.8	3.1	3.6	----	.5	.8	[2]
$50 and under $55	2.3	2.9	----	8.7	1.6	1.8	----	.3	.4	----
$55 and under $60	1.3	1.7	----	5.4	.7	.8	----	.1	.2	----
$60 and under $65	.8	1.0	----	3.4	.4	.4	----	[2]	.1	----
$65 and under $70	.4	.5	----	1.8	.2	.2	----	[2]	[2]	----
$70 and under $75	.2	.3	----	1.1	.1	.1	----	[2]	[2]	----
$75 and over	.2	.3	----	1.3	.1	.1	----	[2]	[2]	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Includes a small number of skilled workers.
[2] Less than a tenth of 1 percent.

Annual Earnings, 1936

Annual earnings of workers engaged in electrical manufacturing who worked throughout the calendar year 1936 averaged $1,480. They constituted a fairly substantial majority of the total working force. Those who had employment for 9 months or more averaged $1,400, and for those working at least 6 months the average was $1,340. With all short-service employees included, the average annual wage was $1,182.

These averages, it should be emphasized, apply only to wage earners who were on the pay roll of plants surveyed in August 1937 and were employed by the same establishment for one or more pay-roll periods in 1936.[4] Obviously, this method of collecting annual earnings has certain shortcomings. It makes no allowance for a certain amount of the earnings of a substantial number of workers who shift from one plant to another or even from one industry to another. However, employees who worked in the same plant every pay-roll period throughout the year could hardly have worked at other employments. For this group, therefore, the annual earnings shown may safely be taken as the equivalent to the total wages for the year.[5] The same is largely true of those who worked 9 months or more in the same plant, as in most instances the opportunities for such persons to obtain work in other establishments are very small. By contrast, no such reliance may be placed on the data when the group is enlarged to include those whose work period was 6 months or less.

Variations by Sex and Skill

The average annual earnings of males greatly exceeded those of females. As shown in table 8, the respective figures for the industry

[4] Data regarding annual earnings were available for only 29,701 workers in 108 plants.
[5] The annual earnings of these employees, however, tend to overstate somewhat the average opportunity to earn afforded by the industry, because the figures are weighted to some extent by the earnings of certain maintenance employees who are customarily employed much more steadily than other classes of employees.

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as a whole were $1,580 and $954 for employees whose work extended over 12 months, $1,516 and $916 for those who worked 9 months or more, $1,451 and $879 for employees whose work extended over 6 months or more, and $1,284 and $768 for those who worked any part of the year.

TABLE 8.—*Average annual earnings of workers in electrical manufacturing, 1936, by sex and skill*

Employees whose work extended over—	All workers			Skilled workers	Semiskilled workers			Unskilled workers		
	Total	Male	Female	Male	Total	Male	Female [1]	Total	Male	Female
12 months	$1,480	$1,580	$954	$1,881	$1,427	$1,484	$989	$1,147	$1,284	$938
9 months or more	1,400	1,516	916	1,828	1,352	1,428	943	1,088	1,223	901
6 months or more	1,340	1,451	879	1,789	1,302	1,370	922	1,027	1,146	857
Any part of the year	1,182	1,284	768	1,694	1,165	1,218	856	852	935	728

[1] Includes a small number of skilled workers.

Embroideries Industry—Earnings and Hours, 1940[1]

The hourly earnings of embroidery-shop workers in the principal producing centers averaged 60.2 cents in March 1940. This was revealed by a field survey completed by the Bureau of Labor Statistics at the request of the Wage and Hour Division. The survey was limited to establishments located in New York City, northern New Jersey, Philadelphia, and Chicago. Plants located in these four centers account for a large majority of the United States production of embroideries, trimmings, and related products.

The "embroideries industry" has been defined by the Administrator of the Wage and Hour Act as follows:

> The production of all kinds of hand- and machine-made embroideries and ornamental stitchings, including, but not by way of limitation, tucking, shirring, smocking, hemstitching, hand rolling, fagoting, Bonnaz embroidery, appliqué, crochet beading, hand drawing, machine drawing, rhinestone trimming, sequin trimming, spangle trimming, eyelets, passementerie, pleating, the application of rhinestones and nailheads, Schiffli embroidery and laces, burnt-out laces and velvets, Swiss hand-loom machine embroidery, thread splitting, embroidery-thread cutting, scallop cutting, lace cutting, lace making-up, making-up of embroidered yard goods, straight cutting of embroidery and cutting out of embroidery, embroidery trimmings, bindings, pipings, and emblems: *Provided, however*, That (1) the foregoing, when produced or performed by a manufacturer of a garment, fabric, or other article for use on such garment, fabric, or other article and (2) the manufacture of covered buttons and buckles shall not be included.

The above definition was used by the Bureau of Labor Statistics in outlining the scope of its survey. Examination of the structure of the industry indicated that the establishments making the products

[1] Abstract of an article by H. E. Riley, Bureau of Labor Statistics, in the Monthly Labor Review for December 1940.

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or performing the operations included in the definition fall into the four following general product groups:

(*a*) Schiffli machine products, combining automatic and pantograph Schiffli operations, as well as thread cutting and scallop cutting.

(*b*) Swiss hand-loom products. (The operations performed by the establishments making these products are quite different from those in other embroideries plants.)

(*c*) Pleating, stitching, and related operations, including the Bonnaz embroideries, hand embroideries, and stitching operations, all of which are frequently carried on in a single establishment.

(*d*) Bindings and trimmings, including bias bindings, pipings, upholstery trimmings, and related products. (The manufacture of upholstery trimmings is chiefly confined to a few relatively large establishments, many of whose operations, although varied in nature, compare closely with those carried on in plants making bias bindings and pipings.)

Method of Study

In view of the fact that the large majority of the embroideries establishments are situated in four restricted areas, namely, Chicago, Philadelphia, New York City, and northern New Jersey,[2] the gathering of detailed data by personal visit was limited to these districts. For the remaining part of the industry lying outside of these regions, a mail questionnaire was used.

The coverage of the field survey included approximately half of the wage earners in Chicago, Philadelphia, and northern New Jersey, and a third of the employees in New York City establishments. The sample in each center was carefully selected, in order to give adequate representation with respect to such factors as size of establishment, unionization, and type of product. The data obtained in each industry center have been weighted upward in order to give a final set of figures representing the estimated total employment in the four centers. This was done by multiplying the New Jersey, Philadelphia, and Chicago figures by 2 and the New York data by 3.

The averages and distributions used in this article are based on earnings at regular rates of pay, exclusive of extra overtime earnings. While office workers were covered in the survey they are not included in any of the figures presented here.

Most of the establishments in the embroideries industry are relatively small in size. Only 45 of the 352 establishments covered by the field survey reported employment of home workers during 1939. This total included 19 plants in New York, 17 in New Jersey, 5 in Chicago, and 4 in Philadelphia. At the time of the survey, only 33 of the establishments scheduled were employing home workers. The home workers reported were chiefly engaged in performing hand operations, including hand embroidery, scallop cutting, mending, etc.

Union organization is quite extensive in New York City, Philadelphia, and Chicago, but it is relatively unimportant in the northern New Jersey area. Of the 148 establishments scheduled in New York, all but 16 had contracts with labor organizations. In the New Jersey

[2] Including the cities of Guttenberg, West New York, Weehawken, Union City, North Bergen, and adjacent areas.

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cities, however, only 10 of the 142 plants covered were operating under union agreements and these were all engaged in manufacturing Swiss hand-loom products. About one-half of the plants in Philadelphia, employing nearly one-half of the wage earners covered, were unionized. In Chicago, 14 of the 32 establishments surveyed, with about one-fourth of the employees, had contracts with labor organizations. The International Ladies' Garment Workers' Union, an A. F. of L. affiliate, predominates in the pleating and stitching branch, while the only union contracts among the bias-binding establishments surveyed were with the Textile Workers Union of America, a member of the C. I. O.

Average Hourly Earnings in Principal Manufacturing Centers

The general average hourly wage of 60.2 cents given earlier is a combination of widely different averages for various types of workers in the major centers[3] (table 1).

TABLE 1.—*Average hourly earnings of workers in the embroideries industry, March 1940, by industry center, skill, and sex*

Industry center	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
Total	$0.602	$0.696	$0.545	$0.952	$1.062	$0.866	$0.490	$0.567	$0.451	$0.371	$0.374	$0.369
New York City	.702	.762	.655	1.023	1.134	.934	.513	.592	.467	.377	.374	.380
Northern New Jersey	.459	.569	.414	.792	.821	.660	.489	.551	.454	.368	.370	.368
Philadelphia	.533	.522	.538	.703	.730	.693	.470	.520	.451	.348	.356	.338
Chicago	.468	.579	.431	.649	.784	.582	.429	.537	.403	.360	.387	.351
	Number of workers (weighted)											
Total	11,112	4,047	7,065	4,168	1,816	2,352	3,659	1,137	2,522	3,285	1,094	2,191
New York City	6,942	2,961	3,981	3,408	1,530	1,878	1,731	609	1,122	1,803	822	981
Northern New Jersey	2,370	620	1,750	148	122	26	1,238	392	846	984	106	878
Philadelphia	652	198	454	260	62	198	252	58	194	140	78	62
Chicago	1,148	268	880	352	102	250	438	78	360	358	88	270
	Percent of workers											
Total	100.0	36.4	63.6	37.6	16.3	21.3	32.9	10.2	22.7	29.5	9.8	19.7
New York City	100.0	42.7	57.3	49.1	22.0	27.1	25.0	8.8	16.2	25.9	11.8	14.1
Northern New Jersey	100.0	26.2	73.8	6.2	5.1	1.1	52.3	16.5	35.8	41.5	4.5	37.0
Philadelphia	100.0	30.4	69.6	39.8	9.5	30.3	38.7	8.9	29.8	21.5	12.0	9.5
Chicago	100.0	23.3	76.7	30.7	8.9	21.8	38.1	6.8	31.3	31.2	7.7	23.5

The hourly earnings of all wage earners in New York City establishments averaged 70.2 cents at the time of the survey. The distribution shown in table 2 covers a wide range of individual earnings, with over one-eighth (13.7 percent) of the workers averaging under 35 cents, while one-sixth (17.1 percent) received $1.275 an hour and over. The table also reveals that there was a marked difference in earnings as between the pleating and stitching and the trimming establishments.

[3] Most of the employees were paid straight-time rates. Substantial numbers of piece workers were found, however, among the hand cutters, hand embroiderers, and Swiss hand-loom stitchers.

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TABLE 2.—*Percentage distribution of workers in the embroideries industry in New York City, by average hourly earnings, product, skill, and sex, March 1940*

Average hourly earnings (in cents)	All products											
	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 30.0	1.5	1.4	1.5				0.9		1.3	4.8	5.1	4.6
Exactly 30.0	5.4	6.0	5.0				4.5	3.0	5.3	16.4	19.4	14.1
30.1 and under 32.5	2.3	1.1	3.2				2.8		4.3	6.2	4.0	8.0
32.5 and under 35.0	4.5	5.1	4.1	0.1		0.2	2.3	2.0	2.4	15.1	16.8	13.8
35.0 and under 37.5	6.4	5.8	6.9				8.8	7.4	9.6	16.1	15.3	16.7
37.5 and under 40.0	3.2	1.9	4.1	.2		.3	4.7	2.0	6.1	7.3	5.5	8.9
40.0 and under 42.5	6.1	3.9	7.7	.4	0.4	.5	12.2	7.4	15.0	11.0	7.7	13.8
42.5 and under 47.5	6.1	5.5	6.6	.8	.6	1.0	13.9	9.9	16.4	8.7	11.3	6.4
47.5 and under 52.5	5.5	4.9	6.0	1.2	.4	1.9	10.9	8.9	12.0	8.5	10.2	7.0
52.5 and under 57.5	3.7	3.2	4.0	1.3	1.0	1.6	9.5	10.3	9.1	2.5	2.2	2.8
57.5 and under 62.5	1.8	2.0	1.6	1.1	1.4	1.0	4.2	5.4	3.5	.7	.7	.6
62.5 and under 67.5	2.5	2.1	2.7	2.1	1.8	2.4	4.2	4.4	4.0	1.5	1.1	1.8
67.5 and under 72.5	2.2	2.2	2.1	2.1	1.8	2.4	3.6	5.4	2.7	.8	.7	.9
72.5 and under 77.5	2.1	2.2	2.0	3.2	2.7	3.5	2.1	3.9	1.1	.2		.3
77.5 and under 82.5	2.0	3.6	.8	1.6	2.0	1.3	4.9	12.7	.5			
82.5 and under 87.5	12.6	5.9	17.5	22.2	7.7	33.8	6.6	8.9	5.3	.2		.3
87.5 and under 92.5	4.4	1.8	6.3	8.1	2.0	13.1	1.6	3.9	.3			
92.5 and under 97.5	2.0	1.3	2.6	3.8	2.0	5.3	.7	1.5	.3			
97.5 and under 102.5	4.0	3.3	4.5	7.4	5.3	9.1	1.6	3.0	.8			
102.5 and under 107.5	.7	.8	.7	1.5	1.6	1.4						
107.5 and under 112.5	.1	.1	.2	.3	.2	.3						
112.5 and under 117.5	2.9	6.0	.5	5.8	11.5	1.1						
117.5 and under 122.5	.5	1.0	.1	1.0	2.0	.2						
122.5 and under 127.5	.4	.9	.1	.9	1.8	.2						
127.5 and under 132.5	13.3	20.4	8.0	26.9	39.1	17.0						
132.5 and under 137.5	1.9	3.6	.7	4.0	7.1	1.4						
137.5 and over	1.9	4.0	.5	4.0	7.6	1.0						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	6,942	2,961	3,981	3,408	1,530	1,878	1,731	609	1,122	1,803	822	981
Average hourly earnings	$0.702	$0.762	$0.655	$1.023	$1.134	$0.934	$0.513	$0.592	$0.467	$0.377	$0.374	$0.380

Average hourly earnings (in cents)	Pleating, stitching, etc.											
	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female[1]
Under 30.0	1.7	1.6	1.9				1.6		2.4	6.0	6.7	5.6
Exactly 30.0	5.6	5.7	5.6				7.5	5.3	8.6	17.7	20.7	15.6
30.1 and under 32.5	2.1	.9	3.0				1.9		2.9	7.3	3.9	9.6
32.5 and under 35.0	2.9	4.5	1.8	0.1		0.2	.6	.9	.5	11.1	18.4	6.3
35.0 and under 37.5	5.7	3.9	7.0				9.9	6.2	12.0	16.4	12.3	18.8
37.5 and under 40.0	2.3	1.5	3.0				2.5	.9	3.3	7.8	5.6	9.3
40.0 and under 42.5	4.2	2.4	5.5	.1	0.2		8.1	3.5	10.5	11.1	7.3	13.7
42.5 and under 47.5	4.1	4.1	4.1	.5	.2	.7	10.6	8.8	11.5	8.0	11.2	5.9
47.5 and under 52.5	4.8	3.7	5.6	1.1	.2	1.8	12.0	9.7	13.3	8.3	8.9	7.8
52.5 and under 57.5	2.3	1.3	3.0	1.0	.2	1.7	6.2	4.4	7.2	2.4	2.2	2.6
57.5 and under 62.5	1.2	1.5	1.0	.8	1.1	.7	3.4	5.3	2.4	.4		.7
62.5 and under 67.5	2.5	1.9	3.0	1.6	1.1	2.0	6.2	5.3	6.7	2.0	1.7	2.2
67.5 and under 72.5	1.9	1.5	2.2	1.5	.9	2.0	4.3	4.4	4.3	1.1	1.1	1.1
72.5 and under 77.5	1.7	1.2	2.0	2.2	1.3	2.8	2.2	2.7	1.9	.2		.4
77.5 and under 82.5	2.2	4.4	.6	1.1	1.5	.8	8.7	23.1	1.0			
82.5 and under 87.5	15.2	6.2	21.3	23.5	8.3	35.0	8.7	8.0	9.1	.2		.4
87.5 and under 92.5	5.3	1.9	7.7	8.5	1.7	13.6	2.2	5.3	.5			
92.5 and under 97.5	2.5	1.5	3.1	3.9	1.7	5.5	1.2	2.7	.5			
97.5 and under 102.5	4.9	3.9	5.6	7.7	5.4	9.5	2.2	3.5	1.4			
102.5 and under 107.5	.8	.7	.8	1.3	1.1	1.5						
107.5 and under 112.5	.2	.1	.2	.3	.2	.3						
112.5 and under 117.5	3.5	7.5	.6	6.0	12.4	1.2						
117.5 and under 122.5	.5	1.2	.1	.9	2.0	.2						
122.5 and under 127.5	.4	.8	.1	.7	1.3	.2						
127.5 and under 132.5	16.5	26.1	9.8	28.8	42.9	17.8						
132.5 and under 137.5	2.5	4.8	.8	4.2	7.8	1.5						
137.5 and over	2.5	5.2	.6	4.2	8.5	1.0						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	5,496	2,256	3,240	3,183	1,380	1,803	966	339	627	1,347	537	810
Average hourly earnings	$0.777	$0.852	$0.722	$1.050	$1.183	$0.952	$0.550	$0.624	$0.505	$0.378	$0.370	$0.386

[1] Includes 3 workers engaged in the manufacture of Swiss hand-loom products.

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TABLE 2.—*Percentage distribution of workers in the embroideries industry in New York City, by average hourly earnings, product, skill, and sex, March 1940*—Continued

Average hourly earnings (in cents)	Trimmings, etc.									
	All workers			Skilled workers [2]	Semiskilled workers			Unskilled workers		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
Under 30.0	0.4	0.9						1.3	2.1	
Exactly 30.0	4.6	6.8	2.4		0.8		1.2	13.2	16.8	7.0
30.1 and under 32.5	2.9	1.7	4.0		3.9		6.1	2.6	4.2	
32.5 and under 35.0	10.9	6.8	14.6		4.3	3.3	4.8	27.1	13.7	49.2
35.0 and under 37.5	8.9	11.8	6.1		7.5	8.9	6.7	15.8	21.1	7.0
37.5 and under 40.0	6.2	3.4	8.9	2.7	7.5	3.3	9.7	5.9	5.3	7.0
40.0 and under 42.5	13.6	8.5	18.3	5.3	17.6	12.2	20.6	10.5	8.4	14.0
42.5 and under 47.5	14.0	9.7	17.9	5.3	18.4	11.1	22.5	10.5	11.6	8.8
47.5 and under 52.5	8.3	8.5	8.1	2.7	9.4	7.8	10.3	9.2	12.6	3.5
52.5 and under 57.5	8.9	9.4	8.5	5.3	13.7	17.8	11.5	2.6	2.1	3.5
57.5 and under 62.5	3.9	3.8	4.0	5.3	5.1	5.6	4.8	1.3	2.1	
62.5 and under 67.5	2.3	3.0	1.6	9.3	1.6	3.3	.6			
67.5 and under 72.5	3.1	4.7	1.6	10.7	2.7	6.7	.6			
72.5 and under 77.5	3.7	5.5	2.0	17.3	2.0	5.6				
77.5 and under 82.5	1.2	1.3	1.2	8.0						
82.5 and under 87.5	2.7	4.7	.8	4.0	3.9	10.0	.6			
87.5 and under 92.5	.8	1.7		2.7	.8	2.2				
92.5 and under 97.5	.4	.9		2.7						
97.5 and under 102.5	.8	1.7		2.7	.8	2.2				
102.5 and under 107.5	.6	1.3		4.0						
107.5 and under 112.5										
112.5 and under 117.5	.4	.9		2.7						
117.5 and under 122.5	.2	.4		1.3						
122.5 and under 127.5	.6	1.3		4.0						
127.5 and under 132.5	.6	1.3		4.0						
132.5 and under 137.5										
137.5 and over										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	1,446	705	741	225	765	270	495	456	285	171
Average hourly earnings	$0.485	$0.538	$0.434	$0.747	$0.475	$0.558	$0.430	$0.374	$0.382	$0.360

[2] Data insufficient to show distribution by sex.

Earnings of all wage earners in northern New Jersey averaged 45.9 cents an hour. About one-fourth (26.2 percent) of the workers were males, who averaged 56.9 cents. In comparison, the females received earnings of 41.4 cents an hour (table 3).

TABLE 3.—*Percentage distribution of workers in the embroideries industry in northern New Jersey, by average hourly earnings, product, skill, and sex, March 1940*

Average hourly earnings (in cents)	All products									
	All workers			Skilled workers [1]	Semiskilled workers			Unskilled workers		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
Exactly 30.0	7.9	5.2	8.9		3.6	2.0	4.3	14.6	22.6	13.7
30.1 and under 32.5	1.2		1.6		.3		.5	2.4		2.7
32.5 and under 35.0	1.4		1.8		1.1		1.7	1.8		2.1
35.0 and under 37.5	24.3	12.3	28.7		12.6	6.6	15.4	42.9	47.3	42.3
37.5 and under 40.0	6.8	2.3	8.5		2.7	1.5	3.3	13.0	7.5	13.7
40.0 and under 42.5	10.1	2.9	12.7		8.1	2.6	10.6	14.2	7.5	15.0
42.5 and under 47.5	11.4	6.1	13.3	2.7	15.4	8.2	18.7	7.7	3.8	8.2
47.5 and under 52.5	15.5	13.5	16.2	8.1	26.8	17.9	30.6	2.6	7.5	2.1
52.5 and under 57.5	6.7	11.9	4.8	1.4	12.4	18.4	9.7	.2	1.9	
57.5 and under 62.5	5.3	13.9	2.3	9.5	9.0	19.3	4.3			
62.5 and under 67.5	2.9	9.4	.6	4.1	4.8	13.8	.7	.2		.2
67.5 and under 72.5	1.3	4.5	.1	9.5	1.1	3.6		.2	1.9	
72.5 and under 77.5	1.4	4.8	.1	12.2	1.1	3.1	.2			
77.5 and under 82.5	1.7	6.1	.1	21.5	.6	2.0				
82.5 and under 87.5	.3	1.0	.1	5.4						
87.5 and under 92.5	.5	1.6	.1	8.1						
92.5 and under 97.5	.3	1.0		2.7	.2	.5				
97.5 and over	1.0	3.5	.1	14.8	.2	.5				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	2,370	620	1,750	148	1,238	392	846	984	108	878
Average hourly earnings	$0.459	$0.569	$0.414	$0.792	$0.489	$0.551	$0.454	$0.368	$0.370	$0.368

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TABLE 3.—*Percentage distribution of workers in the embroideries industry in northern New Jersey, by average hourly earnings, product, skill, and sex, March 1940*—Continued

Average hourly earnings (in cents)	Schiffli products								Swiss hand-loom products			Pleating, stitching, etc.; all workers [1]
	All workers			Skilled workers [1]	Semiskilled workers			Unskilled workers [1]	All workers	Semiskilled workers	Unskilled workers	
	Total	Male	Female		Total	Male	Female					
Exactly 30.0	6.3	4.0	7.2	-------	2.1	------	2.9	13.4	18.5	17.8	19.0	9.9
30.1 and under 32.5	.9	------	1.2	-------	.4	------	.5	1.8	3.0	-------	5.1	1.4
32.5 and under 35.0	1.0	------	1.4	-------	.4	------	.5	2.1	.7	1.8	-------	7.0
35.0 and under 37.5	23.7	9.1	28.8	-------	10.1	5.2	12.1	46.8	20.0	21.3	19.0	43.6
37.5 and under 40.0	4.9	2.0	5.9	-------	2.3	.7	2.9	9.4	23.0	5.4	35.3	2.8
40.0 and under 42.5	10.0	3.2	12.4	-------	9.1	3.3	11.5	13.1	11.9	-------	20.3	8.5
42.5 and under 47.5	12.9	6.3	15.2	2.8	16.6	8.5	20.1	9.4	2.2	5.4	-------	8.5
47.5 and under 52.5	17.6	14.2	18.7	6.9	29.4	19.6	33.6	3.1	3.7	7.1	1.3	9.9
52.5 and under 57.5	7.6	13.4	5.5	1.4	13.7	21.5	10.5	.3	1.5	3.6	-------	4.2
57.5 and under 62.5	5.9	15.1	2.8	9.7	9.7	21.5	4.8	-------	3.7	8.9	-------	-------
62.5 and under 67.5	2.6	8.7	.4	4.2	4.0	13.1	.3	.3	5.2	12.5	-------	2.8
67.5 and under 72.5	1.2	4.3	.1	9.7	.8	2.6	------	.3	2.2	5.4	-------	-------
72.5 and under 77.5	1.4	5.1	.1	12.5	1.0	2.6	.3	-------	1.5	3.6	-------	-------
77.5 and under 82.5	1.7	6.3	.1	22.2	.2	.7	------	-------	2.2	5.4	-------	-------
82.5 and under 87.5	.4	1.2	.1	5.6	------	------	------	-------	------	------	-------	-------
87.5 and under 92.5	.6	2.0	.1	8.3	------	------	------	-------	------	------	-------	-------
92.5 and under 97.5	.2	.8	------	2.8	------	------	------	-------	.7	1.8	-------	-------
97.5 and over	1.1	4.3	------	13.9	.2	.7	------	-------	------	------	-------	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	1,958	506	1,452	144	1,052	306	746	762	270	112	158	142
Average hourly earnings	$0.469	$0.583	$0.422	$0.791	$0.492	$0.553	$0.461	$0.371	$0.414	$0.489	$0.361	$0.401

[1] Data insufficient to show distributions for other classifications.

In the Philadelphia plants covered by the survey, the earnings of all workers averaged 53.3 cents an hour. The males averaged 52.2 cents an hour, which was 1.6 cents under the wage level for all females. It will be observed that, taking each skill group separately, the males' earnings exceeded the average for females. In the total labor force, however, the skilled females, who averaged 69.3 cents, constituted the largest skill-sex group, accounting for 30.3 percent of all wage earners. Among the males, on the other hand, the unskilled workers, who averaged only 35.6 cents, made up the largest group, totaling 12.0 percent of the working force and 39.5 percent of all males in the Philadelphia embroidery establishments. In other words, the higher wage level for females as compared with males was due to the fact that a larger proportion of the former than of the latter were in skilled occupations. The hourly earnings of individual employees ranged from less than 30 to over 97.5 cents. (See table 4.)

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TABLE 4.—*Percentage distribution of workers in the embroideries industry in Philadelphia, by average hourly earnings, product, skill, and sex, March 1940*

Average hourly earnings	All products [1]					
	All workers			Skilled workers [2]	Semi-skilled workers [2]	Unskilled workers [2]
	Total	Male	Female			
Under 30.0 cents	0.6		0.9	0.8		1.4
Exactly 30.0 cents	19.1	18.1	19.3	11.5	10.3	48.6
30.1 and under 32.5 cents	2.1	2.0	2.2		4.0	2.9
32.5 and under 35.0 cents	4.3	4.0	4.4		5.6	10.0
35.0 and under 37.5 cents	5.8	6.1	5.7		6.3	15.7
37.5 and under 40.0 cents	5.2	8.1	4.0	3.1	9.5	1.4
40.0 and under 42.5 cents	2.1	5.1	.9	.8	2.4	4.3
42.5 and under 47.5 cents	14.5	10.1	16.3	6.9	23.8	11.4
47.5 and under 52.5 cents	4.9	7.1	4.0	2.3	8.7	2.9
52.5 and under 57.5 cents	6.7	7.1	6.6	5.4	11.9	
57.5 and under 62.5 cents	1.5	3.0	.9	.8	3.2	
62.5 and under 67.5 cents	7.2	5.1	7.9	9.2	8.7	
67.5 and under 72.5 cents	6.1	8.1	5.3	11.5	3.2	1.4
72.5 and under 77.5 cents	2.1	3.0	1.8	4.6	.8	
77.5 and under 82.5 cents	.9	1.0	.9	2.3		
82.5 and under 87.5 cents	5.5	1.0	7.5	13.8		
87.5 and under 92.5 cents	1.2	4.0		2.3	.8	
92.5 and under 97.5 cents	8.4	2.0	11.0	20.9		
97.5 cents and over	1.8	5.1	.4	3.8	.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	652	198	454	260	252	140
Average hourly earnings	$0.533	$0.522	$0.538	$0.703	$0.470	$0.348

[1] Data insufficient to show separate distributions for each product.
[2] Data insufficient to show separate distributions by sex.

The hourly earnings of wage earners in Chicago establishments averaged 46.8 cents at the time of the survey. Males, who made up 23.3 percent of the working force, averaged 57.9 cents, which may be compared with 43.1 cents for females (table 5).

TABLE 5.—*Percentage distribution of workers in the embroideries industry in Chicago, by average hourly earnings, product, skill, and sex, March 1940*

Average hourly earnings	All products							
	All workers			Skilled workers			Semi-skilled workers [1]	Unskilled workers [1]
	Total	Male	Female	Total	Male	Female		
Under 30.0 cents	0.7	1.5	0.5					2.2
Exactly 30.0 cents	5.9	4.5	6.4				0.9	17.9
30.1 and under 32.5 cents	3.5		4.5	2.3		3.2	5.9	1.7
32.5 and under 35.0 cents	14.3	8.2	16.0	4.0		5.6	12.3	26.8
35.0 and under 37.5 cents	12.5	7.5	14.1	6.2		8.8	11.4	20.1
37.5 and under 40.0 cents	5.9	3.0	6.8	4.5	2.0	5.6	6.4	6.7
40.0 and under 42.5 cents	8.9	3.0	10.7	2.8		4.0	16.4	5.6
42.5 and under 47.5 cents	13.9	11.2	14.8	2.8		4.0	23.2	13.4
47.5 and under 52.5 cents	5.7	5.2	5.9	6.2		8.8	7.8	2.8
52.5 and under 57.5 cents	7.0	10.4	5.9	10.3	7.8	11.2	8.2	2.2
57.5 and under 62.5 cents	2.4	3.0	2.3	6.8	3.9	8.0	.5	.6
62.5 and under 67.5 cents	4.9	10.4	3.2	10.3	11.8	9.6	4.6	
67.5 and under 72.5 cents	3.5	6.0	2.7	10.3	11.8	9.6	.9	
72.5 and under 77.5 cents	3.0	8.2	1.4	9.7	21.5	4.8		
77.5 and under 82.5 cents	1.6	5.2	.5	4.5	11.8	1.6	.5	
82.5 and under 87.5 cents	.7	3.0		1.7	5.9		.5	
87.5 and under 92.5 cents	1.7	6.0	.5	5.1	13.7	1.6	.5	
92.5 and under 97.5 cents	.2		.2	.6		.8		
97.5 cents and over	3.7	3.7	3.6	11.9	9.8	12.8		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	1,148	268	880	352	102	250	438	358
Average hourly earnings	$0.468	$0.579	$0.431	$0.649	$0.784	$0.582	$0.429	$0.360

[1] Data insufficient to show distribution by sex.

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TABLE 5.—*Percentage distribution of workers in the embroideries industry in Chicago, by average hourly earnings, product, skill, and sex, March 1940*—Con.

Average hourly earnings	Schiffli products					Pleating, stitching, etc.[2]					
	All workers			Semi-skilled workers [1]	Unskilled workers [1]	All workers			Skilled workers [1]	Semi-skilled workers [1]	Unskilled workers [1]
	Total	Male	Female			Total	Male	Female			
Under 30.0 cents	------	------	------	------	------	1.0	2.4	0.6	------	------	3.8
Exactly 30.0 cents	5.6	5.8	5.5	------	13.5	6.1	3.7	6.7	------	1.5	21.0
30.1 and under 32.5 cents	2.2	------	31.0	3.5	1.4	4.1	------	5.1	2.6	7.5	1.9
32.5 and under 35.0 cents	14.0	5.8	17.4	11.8	20.2	14.3	9.8	15.8	4.5	12.7	31.4
35.0 and under 37.5 cents	17.9	5.8	22.9	9.4	32.3	10.1	8.5	10.5	7.1	12.7	11.4
37.5 and under 40.0 cents	7.8	3.8	9.4	3.5	13.5	5.1	2.4	5.8	4.5	8.2	1.9
40.0 and under 42.5 cents	9.5	5.8	11.0	14.1	6.8	8.6	1.2	10.5	3.2	18.0	4.8
42.5 and under 47.5 cents	18.4	7.7	22.9	32.9	5.4	11.9	13.5	11.6	2.6	17.2	19.0
47.5 and under 52.5 cents	5.0	7.7	39.0	5.9	4.1	6.1	3.7	6.7	6.4	9.0	1.9
52.5 and under 57.5 cents	6.7	15.4	31.0	10.6	1.4	7.1	7.3	7.0	10.3	6.7	2.9
57.5 and under 62.5 cents	.6	1.9	------	------	1.4	3.3	3.7	3.2	7.7	.7	------
62.5 and under 67.5 cents	3.9	11.5	.8	5.9	------	5.3	9.8	4.2	10.3	3.7	------
67.5 and under 72.5 cents	.6	1.9	------	1.2	------	4.8	8.5	3.8	11.5	.7	------
72.5 and under 77.5 cents	2.2	7.7	------	------	------	3.3	8.5	1.9	8.3	------	------
77.5 and under 82.5 cents	.6	1.9	------	1.2	------	2.0	7.3	.6	5.1	------	------
82.5 and under 87.5 cents	1.1	3.8	------	------	------	.5	2.4	------	.6	.7	------
87.5 and under 92.5 cents	1.7	5.8	------	------	------	1.8	6.1	.6	3.8	.7	------
92.5 and under 97.5 cents	------	------	------	------	------	.3	------	.3	.6	------	------
97.5 cents and over	2.2	7.7	------	------	------	4.3	1.2	5.1	10.9	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	[3] 358	104	254	170	148	790	164	626	312	268	210
Average hourly earnings	$0.451	$0.599	$0.388	$0.444	$0.364	$0.477	$0.565	$0.451	$0.624	$0.419	$0.357

[1] Data insufficient to show distribution by sex.
[2] Includes employees in 2 plants engaged in the manufacture of trimmings, etc.
[3] Includes 40 skilled workers for whom no distribution is shown.

The actual workweek averaged 33.7 hours in the principal embroidery centers at the time of the survey. The workweek averaged 30.3 hours in New York City, as compared with 33.9 in Philadelphia, 36.6 in Chicago, and 41.9 in northern New Jersey. The workweek ranged from 47.8 hours for males in northern New Jersey Schiffli plants to 27.7 hours for females in the New York City pleating and stitching establishments. In every product group and center, the males averaged more hours per week than did the females.

Average weekly earnings ranged from $21.32 in New York City to $17.12 in Chicago.

Earnings of Home Workers

The establishments covered by the survey reported a total employment of 337 home workers in March 1940. Complete earnings and hours data were available for 146 of these employees.[4] This group included 42 hand cutters, 71 hand embroiderers, and 33 finishers, sewers, and menders. The total included 84 employees in the New York metropolitan area and 62 in Philadelphia. Virtually all of the home workers reported in the New York metropolitan area were employed by the New Jersey Schiffli establishments. In Philadelphia all home workers were employed by hand-embroidery plants. The following distribution of home workers' hourly earnings is based on weighted data.

	Percent
Under 30.0 cents	2.6
Exactly 30.0 cents	17.2
30.1 and under 32.5 cents	33.4

[4] This is the actual number reported before application of weighting factors.

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	Percent
32.5 and under 35.0 cents	5.8
35.0 and under 37.5 cents	16.8
37.5 and under 40.0 cents	1.9
40.0 and under 42.5 cents	8.1
42.5 and under 47.5 cents	3.2
47.5 and under 52.5 cents	4.2
52.5 and under 57.5 cents	2.9
57.5 cents and over	3.9
Total	100.0
Number of workers	309
Average hourly earnings	$0.367

Results of Mail Questionnaire

The mail questionnaire was sent to 489 plants situated outside of the four principal embroidery-manufacturing areas. Replies were received from 217 of these establishments. A majority of the returns, however, reported that the plants were out of business, were making a product not covered by the definition, employed no wage earners, or for other reasons were unable to supply usable information. After the elimination of the unusable schedules, a total of 64 remained to be tabulated. This included 5 schedules covering Schiffli-embroidery establishments, 46 schedules for pleating and stitching plants, and 12 returns from establishments making trimmings and related products. A majority of the usable replies came from the States of California, Massachusetts, and Missouri. A distribution of the hourly earnings in the 64 establishments is shown in table 6.

TABLE 6.—*Percentage distribution of workers reported in mail-questionnaire survey of the embroideries industry, by average hourly earnings and product, 1940*

Average hourly earnings (in cents)	All products	Schiffli products [1]	Pleating, stitching, etc.	Trimmings, etc.
Under 30.0	2.1	----------	4.2	0.6
Exactly 30.0	8.6	21.4	3.6	6.6
30.1 and under 31.0	.5	----------	1.1	----------
31.0 and under 32.0	1.1	.4	1.5	1.1
32.0 and under 33.0	9.1	2.0	1.1	24.9
33.0 and under 34.0	3.4	2.5	3.6	3.7
34.0 and under 35.0	1.4	1.2	1.5	1.4
35.0 and under 36.0	13.5	23.1	8.6	13.7
36.0 and under 37.0	2.3	1.6	3.4	1.4
37.0 and under 38.0	4.6	7.0	4.0	3.7
38.0 and under 39.0	2.9	.8	2.7	4.6
39.0 and under 40.0	1.9	----------	1.9	3.1
40.0 and under 42.5	9.3	7.0	11.6	7.7
42.5 and under 47.5	11.0	8.2	12.5	10.9
47.5 and under 52.5	6.9	7.8	6.7	6.6
52.5 and under 57.5	4.0	1.6	6.7	2.0
57.5 and under 62.5	3.3	2.0	5.3	1.4
62.5 and under 67.5	3.2	3.3	4.4	1.4
67.5 and under 72.5	1.5	1.6	2.1	.6
72.5 and under 77.5	2.3	1.6	3.4	1.4
77.5 and under 82.5	1.9	.4	3.2	1.1
82.5 and under 87.5	.8	----------	1.7	.3
87.5 and under 92.5	1.2	1.2	1.5	.9
92.5 and under 100.0	.1	----------	----------	.3
100.0 and under 110.0	1.6	2.5	2.3	----------
110.0 and under 120.0	.8	1.2	.8	.6
120.0 and over	.7	1.6	.6	----------
Total	100.0	100.0	100.0	100.0
Number of plants	64	6	46	12
Number of workers	1,069	244	475	350
Average hourly earnings	$0.460	$0.454	$0.490	$0.417

[1] Includes 1 small plant manufacturing Swiss hand-loom products.

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Enameled-Utensil Industry—Earnings and Hours, August 1940[1]

During August 1940, earnings of factory workers in the enameled-utensil industry averaged 52.2 cents an hour. Slightly more than three-fourths of all factory workers received from 35 to 62.5 cents an hour.

The basic data were collected by field representatives of the Bureau of Labor Statistics who visited every member of the industry known to the Bureau.[2] The field representatives obtained information from pay rolls and other records, with respect to occupation, sex, race, total hours worked, and total earnings of individual workers during a representative pay-roll period, typically in August 1940. Data for factory workers, clerks, working supervisory and office employees were included in the survey; information concerning higher supervisory officials and salesmen, however, was excluded.

Nature of the Industry

The 17 plants covered in the field survey and in the report produced utensils used in the preparation, cooking, and storage of foods for household, institutional, and commercial use; butcher trays and display platters; hospital and sick-room supplies, such as bed pans, irrigators, and sterilizing trays; sanitary ware, such as washbasins, chambers, combinets, and sundry enameled-steel items.

The cooking and household ware section of the enameled-utensil industry, according to the Census of Manufactures, was composed of 26 establishments in 1937.[3] Sixteen of these made household enameled ware as a major and 10 as a minor product. The firms whose value output was mainly concentrated on household enameled ware produced, in 1937, a product worth $16,195,416. The 10 plants which manufactured enameled ware as a subsidiary product, produced an output valued at only $2,559,458. It is apparent, therefore, that these latter establishments were not of very great relative importance to the total industry.

The total wage bill for factory and clerical employees ($5,734,779) was about 35 percent of the value of all products produced.

With respect to geographical location, the industry is strongly concentrated in the East North Central States and in the adjoining State of Missouri, New York, Pennsylvania, and West Virginia. No establishments falling within the limits of the industrial definition were found in New England, in the South, or in the Pacific coast regions.

The location of the plants of the industry showed no marked pattern with respect to size of metropolitan area. The factories scheduled were in communities ranging in population from about 6,000 to over 1,000,000.

Nearly one-half (8) of the plants in the industry employed between 250 and 500 workers; 4 others were in the class of 100 and under 250; while 2 plants employed between 500 and 1,000 workers. At one ex-

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[1] Abstract of an article by Sidney C. Sufrin, of the Bureau of Labor Statistics, in the Monthly Labor Review for March 1941.

[2] 31 plants were visited by field representatives, but only those plants or departments whose products were primarily enameled cooking and hospital utensils were scheduled; these numbered 17.

[3] Only one plant was reported whose major product was enameled hospital ware.

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treme was a plant employing over 1,000 workers and on the other were 2 plants which employed fewer than 50 workers.

The overwhelming proportion of the 17 plants covered in the enameled-utensil industry were single-establishment firms, only 2 being affiliated with other establishments.

Average Hourly Earnings[4]

About half of all the employees[5] in the 17 plants studied were paid on a time-rate basis, most of them being paid at an hourly rate. The plant clerical workers, working foremen, powerhouse and maintenance workers constituted the majority of the workers whose earnings were computed on a weekly or monthly basis.

The distribution of workers according to average hourly earnings, presented in table 1, shows a range from 30.0 cents to more than $1 an hour. Despite these wide differences, a substantial majority (75.8 percent) of the employees tended to receive hourly wages in the range 35.0 to 62.5 cents.

TABLE 1.—*Percentage distribution of workers[1] in enameled-utensil industry, by average hourly earnings, sex, and skill, August 1940*

Average hourly earnings (in cents)	All workers			Skilled workers total (male)	Semiskilled workers			Unskilled workers		
	Total	Male	Female		Total[2]	Male	Female[2]	Total	Male	Female
Exactly 30.0	1.1	0.4	2.3	-------	0.5	0.2	1.0	2.4	1.1	4.3
30.1 and under 32.5	.8	.1	1.9	-------	.4	-------	.9	1.7	.3	3.7
32.5 and under 35.0	3.7	.2	9.8	-------	3.5	.1	8.5	5.3	.6	11.9
35.0 and under 37.5	6.1	.9	15.1	-------	4.3	.2	10.3	11.1	2.5	23.4
37.5 and under 40.0	7.0	2.4	14.8	0.5	6.3	.8	14.4	10.1	6.3	15.4
40.0 and under 42.5	8.1	6.5	10.8	1.4	7.2	4.6	11.0	11.8	12.7	10.5
42.5 and under 45.0	9.6	6.9	13.9	1.0	8.6	4.8	14.0	13.5	13.6	13.5
45.0 and under 47.5	8.7	8.1	9.7	1.9	8.1	8.0	8.3	11.6	11.4	12.0
47.5 and under 50.0	6.6	7.9	4.5	2.6	6.3	6.4	6.3	8.3	13.2	1.4
50.0 and under 52.5	7.4	9.0	4.7	4.9	9.5	11.1	7.0	4.7	7.5	.6
52.5 and under 55.0	5.4	6.8	3.1	4.9	6.6	8.0	4.4	3.6	5.6	.9
55.0 and under 57.5	5.5	7.1	2.7	6.6	6.7	8.7	3.9	2.9	4.5	.6
57.5 and under 60.0	4.3	5.7	1.9	5.8	5.6	7.4	2.8	1.6	2.5	.4
60.0 and under 62.5	7.1	10.3	1.7	9.1	6.5	9.3	2.4	7.6	12.6	.5
62.5 and under 65.0	3.0	4.0	1.3	5.2	3.9	5.3	1.9	.8	1.1	.4
65.0 and under 67.5	3.8	5.6	.8	7.3	4.7	7.3	1.0	1.1	1.5	.4
67.5 and under 72.5	3.7	5.4	.8	8.4	4.6	6.9	1.3	.8	1.3	.1
72.5 and under 77.5	2.7	4.2	.2	11.4	2.4	3.8	.4	.6	1.1	-------
77.5 and under 82.5	1.7	2.6	(3)	7.5	1.5	2.5	.1	.2	.3	-------
82.5 and under 87.5	1.4	2.2	-------	8.2	1.0	1.6	-------	.1	.1	-------
87.5 and under 92.5	.9	1.5	(3)	4.7	.8	1.3	.1	.1	.1	-------
92.5 and under 100.0	1.0	1.6	-------	5.8	.8	1.4	-------	-------	-------	-------
100.0 and over	.4	.6	-------	2.8	.2	.3	-------	.1	.1	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	5,800	3,667	2,133	573	3,327	1,978	1,349	1,900	1,116	784
Average hourly earnings	$0.522	$0.573	$0.429	$0.695	$0.529	$0.582	$0.448	$0.452	$0.490	$0.395

[1] Does not include office workers.
[2] Includes 18 females who were reported as skilled.
[3] Less than a tenth of 1 percent.

Excluding office workers, no employee covered was paid less than 30 cents an hour. Only 5.6 percent of the factory workers received less than 35 cents per hour, while those earning less than 40 cents constituted about one-fifth of the total number. On the other hand, about one-fifth of the factory working force were found earning 62.5 cents

[4] The data on earnings presented in this article are based on work at regular rates, thus excluding the earnings from extra rates paid for overtime work.
[5] All data presented, unless otherwise specified, exclude office workers. Hourly earnings of office workers are discussed on p. 106.

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and over. Workers earning in excess of 82.5 cents an hour on the average, constituted but 3.7 percent of the total factory force. A negligible percentage of the factory workers earned $1 and over per hour.

Table 2 presents the distribution of workers by earnings classes for the entire country, and for the two major regions in which the industry is located. The eastern region, with 5 plants, includes the States of New York, Pennsylvania, and West Virginia. The midwestern region, with 12 plants, includes the States of Illinois, Indiana, Missouri, Ohio, and Wisconsin.

TABLE 2.—*Percentage distribution of workers [1] in enameled-utensil industry, by average hourly earnings and geographical region, August 1940*

Average hourly earnings (in cents)	Total	East [2]	Midwest [3]	Average hourly earnings (in cents)	Total	East [2]	Midwest [3]
Exactly 30.0	1.1	2.3	0.2	65.0 and under 67.5	3.8	2.2	4.9
30.1 and under 32.5	.8	1.4	.3	67.5 and under 72.5	3.7	2.3	4.8
32.5 and under 35.0	3.7	8.7	.2	72.5 and under 77.5	2.7	1.2	3.8
35.0 and under 37.5	6.1	10.3	3.1	77.5 and under 82.5	1.7	.7	2.4
37.5 and under 40.0	7.0	9.9	4.9	82.5 and under 87.5	1.4	.9	1.7
40.0 and under 42.5	8.1	11.5	5.7	87.5 and under 92.5	.9	.3	1.4
42.5 and under 45.0	9.6	7.6	10.8	92.5 and under 100.0	1.0	.3	1.6
45.0 and under 47.5	8.7	8.8	8.6	100.0 and over	.4	.4	.4
47.5 and under 50.0	6.6	6.8	6.5				
50.0 and under 52.5	7.4	7.3	7.5	Total	100.0	100.0	100.0
52.5 and under 55.0	5.4	4.0	6.5				
55.0 and under 57.5	5.5	3.4	6.9	Number of workers	5,800	2,410	3,390
57.5 and under 60.0	4.3	3.3	5.0	Number of plants	17	5	12
60.0 and under 62.5	7.1	3.9	9.4	Average hourly earnings	$0.522	$0.472	$0.557
62.5 and under 65.0	3.0	2.5	3.4				

[1] Does not include office workers.
[2] Includes the States of New York, Pennsylvania, and West Virginia.
[3] Includes the States of Illinois, Indiana, Missouri, Ohio, and Wisconsin.

Workers in each sex and skill group in the unionized plants [6] tended to earn more per hour than in the corresponding class in the nonunionized factories. The differences in these average hourly wages ranged from 5.2 cents for unskilled males to 0.9 cents per hour for unskilled females. (Table 3.)

TABLE 3.—*Average hourly earnings of workers [1] in enameled-utensil industry, August 1940, by sex, skill, and unionization*

Sex and skill	Average hourly earnings			Number of workers		
	All plants	Unionized plants	Nonunion plants	All plants	Unionized plants	Nonunion plants
All workers	$0.522	$0.526	$0.514	5,800	3,773	2,027
Skilled	.695	.707	.678	573	340	233
Semiskilled [2]	.529	.536	.517	3,327	2,076	1,251
Unskilled	.452	.460	.433	1,900	1,357	543
Males	.573	.585	.554	3,667	2,274	1,393
Skilled	.695	.707	.678	573	340	233
Semiskilled	.582	.597	.561	1,978	1,172	806
Unskilled	.490	.507	.455	1,166	762	354
Females	.429	.433	.419	2,133	1,499	634
Semiskilled [2]	.448	.456	.432	1,349	904	445
Unskilled	.395	.397	.388	784	595	189

[1] Does not include office workers.
[2] Includes 18 females who were reported as skilled (15 in union plants and 3 in nonunion plants).

[6] A union establishment as defined in this article is one in which the majority of the employees in the plant are covered by either a written or an oral agreement between the plant and a trade-union.

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Average Hourly Earnings of Office Workers

In addition to the data on hourly earnings already presented for factory workers, information was secured for 323 office workers. The 95 male office workers received, on the average, 66 cents per hour; the 228 females 44.9 cents per hour.

Just under a third of all these office workers earned less than 40 cents per hour (table 4). Among the males, 8.6 percent received less than that hourly wage. The proportion of female office workers receiving less than 40 cents per hour was as high as 40.9 percent. More than a quarter of all the female office workers reported received 35 and under 40 cents per hour. Slightly less than 15 percent earned under 35 cents.

Nearly 37 percent of the male office workers received 65 cents or more per hour. Only 5.6 percent of the female office workers received such average hourly earnings.

TABLE 4.—*Percentage distribution of office workers in enameled-utensil industry, by average hourly earnings and sex, August 1940*

Average hourly earnings	All workers	Males	Females	Average hourly earnings	All workers	Males	Females
Under 30.0 cents	0.9	-------	1.3	62.5 and under 65.0 cents	1.5	1.1	1.8
Exactly 30.0 cents	2.5	1.1	3.1	65.0 and under 67.5 cents	.6	1.1	.4
30.1 and under 32.5 cents	4.0	2.1	4.8	67.5 and under 72.5 cents	4.0	6.3	3.1
32.5 and under 35.0 cents	3.4	1.1	4.4	72.5 and under 77.5 cents	2.8	7.3	.9
35.0 and under 37.5 cents	13.1	3.2	17.2	77.5 and under 82.5 cents	.6	2.1	-------
37.5 and under 40.0 cents	7.5	1.1	10.1	82.5 and under 87.5 cents	.9	3.2	-------
40.0 and under 42.5 cents	6.5	3.2	7.9	87.5 and under 92.5 cents	.9	2.1	.4
42.5 and under 45.0 cents	9.6	6.3	11.0	92.5 and under 100.0 cents	.6	1.1	.4
45.0 and under 47.5 cents	7.5	9.4	6.6	100.0 and over	4.3	13.6	.4
47.5 and under 50.0 cents	5.6	4.2	6.1				
50.0 and under 52.5 cents	6.2	11.5	3.9	Total	100.0	100.0	100.0
52.5 and under 55.0 cents	6.2	5.2	6.6				
55.0 and under 57.5 cents	4.6	6.3	3.9	Number of workers	323	95	228
57.5 and under 60.0 cents	4.3	4.2	4.4	Average hourly earnings	$0.511	$0.660	$0.449
60.0 and under 62.5 cents	1.9	3.2	1.3				

Weekly Hours and Earnings

The average time actually worked by factory employees in the enameled-utensil industry during August 1940 was 37.3 hours per week. Male workers averaged 38 hours as compared with 36 hours for female employees. Skilled male workers averaged 39.6 hours; semiskilled, 38 hours; and unskilled, 37.1 hours per week. The corresponding figures for female workers were 39.6, 36.5, and 35.1 hours.

The average weekly earnings of all workers covered in the enameled-utensil industry amounted to $19.44 in August 1940. This was exclusive of earnings due to extra rates for overtime work.[7] Weekly earnings varied conspicuously among the different skill and sex groups. Male workers averaged $21.77, as compared with $15.44 for females. Skilled males, however, averaged $27.54 per week, as compared to $22.12 for semiskilled, and $18.19 for unskilled. The average weekly earnings of semiskilled females was $16.28, which is only $1 above the average

[7] If the earnings from extra rates for overtime work were included, it would increase the average weekly earnings of all workers in the industry by only 12 cents.

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earnings of all females, but almost $2 below the weekly average pay of unskilled males. Unskilled female workers earned an average of only $13.87 per week, or about three-fourths of the average of unskilled males.

Skilled die makers had the highest average weekly earnings in the industry ($34.41) and learners were the lowest paid male workers, averaging $14.49 per week. The highest paid female workers were the skilled group, earning an average of $21.78 per week, followed by the solderers and welders, who averaged $18.05 a week. Female learners earning, on the average, $10.97 per week, were in the lowest paid occupational classification.

Explosives Industry—Earnings and Hours, October 1937 [1]

The explosives industry, as defined by the Census of Manufactures, includes establishments engaged primarily in the manufacture of dynamite, gelatin dynamite, "permissible" explosives (i. e., those approved by the U. S. Bureau of Mines for use in mines where dust and gas explosions are likely to occur), nitroglycerin, black blasting, pellet, and fuse powder, smokeless powder, and miscellaneous explosives.

Although explosives are used widely, the industry is relatively small. In 1935, according to the Census of Manufactures, there were 74 establishments, each of which had an output for the year valued at $5,000 or more. This study was restricted to establishments reporting 5 or more workers, thus including 51 plants in 21 States. At the time of the survey in October 1937, they employed a total of 3,814 wage earners engaged on work falling within the scope of the survey.[2]

The explosives industry here covered may be divided into two branches—high explosives (including dynamite, nitroglycerin, nitrostarch, dinite, and TNT), and black powder. There are several types of dynamite (gelatin, powder or granulated, and permissible) as well as of black powder (pellet, fuse, blasting, etc.). The raw materials used in the manufacture of high explosives are nitric acid, sulphuric acid, glycerin, toluene, and various "dopes" (nitro-cotton, ammonium nitrate, sodium nitrate, wood pulp, starch, etc.), whereas those used in the manufacture of black powder are charcoal, sulphur, and saltpeter or nitrate of soda. The making of high explosives involves largely chemical processes, whereas that of black powder involves mechanical processes almost entirely. High explosives are used for heavy blasting in construction, mining, quarrying, stumping, and oil-well shooting; black powder is used in the manufacture of fireworks and ammunition, and for light blasting in coal mining.

A given plant usually specializes in the making of either one or the other kind of products. However, there were three establishments making both high-explosive and black-powder products, and these were classified in accordance with the predominant product.

[1] Abstract of article in the Monthly Labor Review for August 1938, prepared by J. Perlman, P. L. Jones, and O. R. Witmer, of the Bureau of Labor Statistics.

[2] At the time of the survey these plants employed a total of 4,524 wage earners.

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Characteristics of Industry

As explosives are difficult to transport and store with safety, production is found for the most part near the centers of demand. Mainly for this reason, establishments manufacturing explosives are widely scattered over the country. Both branches of the industry are extremely hazardous, especially in the initial processes during which the various sensitive explosive ingredients are mixed together.

Although the individual establishments in the explosives industry are relatively small, there is substantial integration from the standpoint of ownership. The 51 plants included in the survey were controlled by 19 companies.

Partly because of storage hazards and partly because of the seasonal character of the demand for explosives, output and employment in the industry are subject to some seasonal fluctuation. Employment in high explosives is usually at a low point during the winter and mid-summer, and the busiest season is generally in the fall and spring months. The black powder manufacturers are busiest during the late fall and winter months. The information obtained in this survey covered, in nearly all plants, a pay-roll period in October 1937.

The favorable position occupied by the industry with respect to average earnings per hour is due considerably to the relatively high proportion of skilled workers employed. Of the 3,814 wage earners covered by the survey, more than one-half (2,055, or 53.9 percent) were in occupations classified by the industry as skilled, and over one-fourth (1,071, or 28.1 percent) were semiskilled. Workers in the unskilled occupations accounted for less than one-fifth (688, or 18.0 percent) of the total labor force. Another factor responsible for the high average hourly earnings is the small number of female wage earners [8] in the industry.

Broadly speaking, there is very little organization among the workers in the explosives industry. Of the 51 establishments with 3,814 employees, only 4 plants with 156 wage earners had collective agreements with trade-unions.

Average Hourly Earnings

Nearly all (98.5 percent) of the wage earners employed in the manufacture of explosives are paid on a straight time-rate basis. This practice was followed exclusively by 43 of the 51 establishments covered in the survey. In the remaining 8 plants, some employees were paid on a straight piece-rate basis, and in one of these some received a group bonus, which was based on production in excess of a specified amount.

Overtime was paid for at the rate of time and one-half to all workers in 30 of the 51 establishments covered (i. e., in 25 plants belonging to the "Big Three" and in 5 belonging to the "Other companies").

[8] No separate tabulations by sex or race were warranted. Only 19 women were found, all in the paper-shell rolling department, where they worked as hand or machine shell rollers and pickers. Also, only 13 Negroes were reported, all of whom were employed by a few plants in the Southern States. There were also 67 Mexicans in several establishments.

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For the explosives industry as a whole, hourly earnings in October 1937 averaged 77.1 cents. Table 1 gives a percentage distribution by average hourly earnings of employees in the industry.

TABLE 1.—*Distribution of explosives workers, by average hourly earnings in October 1937*

Average hourly earnings	Number of employees	Simple percentage	Cumulative percentage	Average hourly earnings	Number of employees	Simple percentage	Cumulative percentage
Under 37.5 cents	30	0.8	0.8	82.5 and under 87.5 cents	463	12.1	74.0
37.5 and under 42.5 cents	34	.9	1.7	87.5 and under 92.5 cents	266	7.0	81.0
42.5 and under 47.5 cents	48	1.2	2.9	92.5 and under 97.5 cents	237	6.2	87.2
47.5 and under 52.5 cents	101	2.7	5.6	97.5 and under 102.5 cents	169	4.4	91.6
52.5 and under 57.5 cents	223	5.8	11.4	102.5 and under 107.5 cents	109	2.9	94.5
57.5 and under 62.5 cents	336	8.8	20.2	107.5 and under 112.5 cents	114	3.0	97.5
62.5 and under 67.5 cents	426	11.2	31.4	112.5 and under 125.0 cents	71	1.8	99.3
67.5 and under 72.5 cents	413	10.8	42.2	125.0 cents and over	25	.7	100.0
72.5 and under 77.5 cents	378	9.9	52.1				
77.5 and under 82.5 cents	371	9.8	61.9	Total	3,814	100.0	

The average hourly earnings of skilled employees, of course, are the highest, amounting to 85.2 cents an hour. Semiskilled workers averaged 71.1 and unskilled, 62.0 cents. The range between the average earnings of the skilled and the semiskilled workers is thus 14.1 cents and between the semiskilled and the unskilled 9.1 cents—altogether, a spread of 23.2 cents.

There are a considerable number of occupations in the explosives industry. Because of the small number of employees involved in the total industry, however, most of the occupations were too small to justify the computation of separate averages. Hence it was necessary to group the individual occupations into related occupational classes, for which averages are presented in table 2.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of explosives workers, October 1937, by skill and occupational class*

Skill and occupational class	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
All employees	3,814	$0.771	41.3	$31.84
Skilled employees	2,055	.852	41.5	35.36
Acid operators	197	.828	42.8	35.46
Black-powder line operators	87	.684	43.0	29.39
Black-powder maker operators	263	.764	41.2	31.53
Cope-house operators	107	.766	41.0	31.44
Dynamite loaders	241	.880	41.0	36.07
Dynamite mixers	90	.813	42.0	34.11
Foremen, working	145	1.013	42.6	43.12
Mechanics, maintenance	412	.928	40.9	37.96
Nitroglycerin operators	89	.918	42.1	38.65
Packers, high explosives and black powder	128	.745	40.1	29.89
Miscellaneous skilled, direct	131	.824	41.1	33.84
Miscellaneous skilled, indirect	165	.879	42.1	36.99
Semiskilled employees	1,071	.711	41.6	29.57
Black-powder helpers	88	.727	40.0	29.12
High-explosive helpers	407	.716	40.5	29.02
Miscellaneous semiskilled, direct	214	.673	41.8	28.09
Miscellaneous semiskilled, indirect	362	.723	43.1	31.17
Unskilled employees	688	.620	40.1	24.87

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The Bureau's survey indicates that there are no well-defined geographical differences in earnings in the explosives industry. It is true that the plant with the lowest average hourly earnings was in the South, and the plant with the highest average was in the North. There were, however, 3 southern plants with average earnings of more than 70 cents, while earnings in 11 of the northern and 2 of the far western plants averaged less than 70 cents.

There were striking variations in the average hourly earnings between employees of the "Big Three" producers and those of "Other companies" in the explosives industry. On the average, the earnings of workers employed by the three leading companies in October 1937 were 25.4 percent higher than those of workers employed by the smaller companies. Against an average of 81.9 cents for employees of the "Big Three," the hourly earnings in the establishments of the "Other companies" averaged 65.3 cents.

Weekly Hours and Earnings

The full-time weekly hours in the explosives industry in October 1937 were remarkably uniform, a 40-hour week being in effect in all except nine of the plants covered by the survey. Only two of the plants had a workweek of less than 40 hours; of these, one operated on a 35-hour schedule, and the other worked 37½ hours. Among the establishments that worked more than 40 hours a week, two operated 44 hours and five operated 48 hours.

Both of the plants that reported a full-time week of less than 40 hours were "Big Three" establishments. The "Other companies," by contrast, accounted for all of the plants that had a working schedule of more than 40 hours a week. Of the 44 establishments that had a 40-hour week, however, 16 were plants of the "Other companies."

The actual working time of all employees in the explosives industry averaged 41.3 hours a week in October 1937.

According to table 3, the actual working time of 58.3 percent of all employees in the industry was exactly 40 hours a week. The average weekly hours amounted to 40.2 for the "Big Three" plants and 44.1 for plants belonging to the "Other companies."

TABLE 3.—*Distribution of explosives workers, by weekly hours, in October 1937*

Weekly hours	Number of employees	Simple percentage	Cumulative percentage
Under 16 hours	22	0.6	0.6
16 and under 24 hours	20	.5	1.1
24 and under 32 hours	77	2.0	3.1
32 and under 36 hours	278	7.3	10.4
36 and under 40 hours	105	2.8	13.2
40 hours	2,224	58.3	71.5
Over 40 and under 44 hours	262	6.8	78.3
44 and under 48 hours	230	6.1	84.4
48 hours	308	8.0	92.4
Over 48 and under 56 hours	125	3.3	95.7
56 hours and over	163	4.3	100.0
Total	3,814	100.0	

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For all employees in the explosives industry, weekly earnings in October 1937 averaged $31.84.

Nearly a third of the workers (31.3 percent) were paid $35 or over a week, and 16.0 percent earned $40 or more. Only 6.1 percent received less than $20 weekly. The classification $30 and under $35 accounted for a larger proportion of the total working force than any other.

The average weekly earnings amounted to $32.97 for employees of the "Big Three" companies, as compared with $28.79 for employees in the "Other companies," or a difference of $4.18.

Average weekly earnings, however, varied sharply between skills, ranging from $35.36 for skilled employees to $24.87 for unskilled employees. Semiskilled workers averaged $29.57 a week. A distribution by weekly earnings and by skill is presented in table 4.

TABLE 4.—*Percentage distribution of explosives workers, by weekly earnings and by skill, October 1937*

Weekly earnings	Skilled	Semi-skilled	Un-skilled	Weekly earnings	Skilled	Semi-skilled	Un-skill
Under $5		0.2	1.5	$50 and under $55	2.8	0.3	
$5 and under $10	0.6	1.0	2.0	$55 and under $60	.8	.5	
$10 and under $15	.5	.4	2.0	$60 and under $65	.5	.1	
$15 and under $20	1.6	4.4	10.9	$65 and under $70	.3		
$20 and under $25	5.7	15.8	35.8	$70 and under $75	.1		
$25 and under $30	15.5	29.4	31.5				
$30 and under $35	27.4	34.4	10.8	Total	100.0	100.0	100.0
$35 and under $40	22.6	9.2	2.7				
$40 and under $45	15.5	2.9	2.4	Average earnings, all employees	$35.36	$29.57	$24.87
$45 and under $50	6.1	1.4	.4				

Fabricated Textile Products, Miscellaneous—Hourly Earnings, 1940[1]

Late in 1940 the Bureau of Labor Statistics made a study of hours and earnings in establishments manufacturing miscellaneous fabricated textile products.[2] The study included information for 125 mills employing 10,526 workers (roughly one-fifth of the total number of wage earners in the industry) and covered a pay-roll period in August or September 1940.

The accompanying table which presents a percentage distribution of employees by average hourly earnings, major product, and region, reveals that the earnings of all employees in the industry averaged 41.2 cents an hour.[3]

[1] From the Monthly Labor Review for October 1941.

[2] The study, made at the request of the Wage and Hour Division, covered fabricated items commonly manufactured in textile mills, but which had been excluded from previous wage and hour studies of the textile industry. These products include bags, bedspreads, curtains, sheets and pillowcases, bandages and surgical gauze, table cloths, lunch cloths and napkins, towels, washcloths and dishcloths, blankets, diapers, and bath mats and related articles.

[3] The wage data presented in this article include only the earnings at regular rates of pay. Had the extra overtime earnings been included the industry average would have been increased by only four-tenths of a cent.

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Percentage distribution of employees in miscellaneous fabricated textile products industry by average hourly earnings, type of product, and region,[1] September 1940

Average hourly earnings	All products			Bags			Bedspreads		
	United States	North	South	United States	North	South	United States	North	South
Under 32.5 cents	2.9	3.5	2.4	3.2	4.7	0.2	4.5	0.4	5.0
Exactly 32.5 cents	31.0	15.5	44.1	12.4	.9	36.6	64.2	17.7	68.8
32.6 and under 35.0 cents	7.4	4.8	9.7	5.3	3.5	9.2	9.8	3.8	10.3
35.0 and under 37.5 cents	11.9	13.8	10.1	9.4	6.8	15.1	9.5	21.4	8.3
37.5 and under 40.0 cents	7.4	8.3	6.7	5.5	4.2	8.4	5.8	30.8	3.3
40.0 and under 42.5 cents	7.4	9.0	6.0	11.2	13.5	6.2	2.3	4.9	2.1
42.5 and under 45.0 cents	5.6	6.4	4.9	7.5	8.7	4.8	1.1	3.0	.9
45.0 and under 47.5 cents	4.9	6.0	3.9	6.2	7.4	3.4	.4	1.1	.3
47.5 and under 50.0 cents	4.1	5.2	3.2	4.8	5.8	2.7	.6	2.6	.4
50.0 and under 52.5 cents	4.2	5.7	3.0	5.8	7.3	2.5	.4	1.9	.3
52.5 and under 55.0 cents	2.6	3.5	1.9	4.0	5.2	1.6	.2	2.6	----
55.0 and under 57.5 cents	2.2	3.0	1.4	3.5	4.6	1.2	.3	2.3	.1
57.5 and under 60.0 cents	1.2	2.1	.6	2.2	2.9	.6	.3	2.6	(3)
60.0 and under 62.5 cents	1.2	1.9	.6	3.1	4.1	.9	.1	----	.1
62.5 and under 65.0 cents	.9	1.6	.2	1.8	2.3	.6	.1	1.1	(3)
65.0 and under 67.5 cents	1.0	1.8	.3	2.1	2.8	.6	.1	1.1	(3)
67.5 and under 70.0 cents	.6	1.1	.2	1.4	1.7	.9	.1	1.1	(3)
70.0 and under 72.5 cents	.6	1.1	.2	1.4	1.7	.9	.1	.8	.1
72.5 and under 77.5 cents	.7	1.4	.2	2.2	2.8	.8	.1	.8	----
77.5 and under 82.5 cents	.6	1.2	.2	2.0	2.6	.9	----	----	----
82.5 and under 87.5 cents	.5	1.0	.1	1.8	2.0	1.2	----	----	----
87.5 and under 92.5 cents	.3	.6	.1	.8	1.0	.3	----	----	----
92.5 and under 97.5 cents	.1	.3	----	.4	.6	----	----	----	----
97.5 and under 102.5 cents	.3	.5	(3)	.8	1.2	.2	----	----	----
102.5 cents and over	.4	.7	(3)	1.2	1.7	.2	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees [4]	10,526	4,821	5,705	2,013	1,372	641	2,904	266	2,638
Average hourly earnings	$0.412	$0.452	$0.376	$0.483	$0.519	$0.402	$0.342	$0.410	$0.336

Average hourly earnings	Sheets and pillowcases			Curtains [2]	Other products		
	United States	North	South		United States	North	South
Under 32.5 cents	0.8	1.5	0.2	1.8	2.7	9.1	0.2
Exactly 32.5 cents	3.7	----	7.0	33.0	19.1	7.8	23.5
32.6 and under 35.0 cents	6.9	3.8	9.8	6.3	7.7	4.6	8.9
35.0 and under 37.5 cents	19.3	22.0	16.9	17.0	8.7	8.0	8.9
37.5 and under 40.0 cents	11.9	11.2	12.5	6.9	9.0	8.9	9.1
40.0 and under 42.5 cents	8.1	8.2	8.0	6.4	10.4	8.9	11.0
42.5 and under 45.0 cents	8.0	7.9	8.1	5.0	8.6	6.2	9.5
45.0 and under 47.5 cents	7.1	8.4	5.9	4.9	8.1	6.4	8.7
47.5 and under 50.0 cents	7.9	9.1	6.9	3.5	6.4	6.7	6.3
50.0 and under 52.5 cents	8.7	8.2	9.1	4.7	4.9	4.4	5.0
52.5 and under 55.0 cents	6.0	6.5	5.5	1.5	3.6	3.3	3.7
55.0 and under 57.5 cents	3.6	3.6	3.6	1.8	2.9	3.4	2.7
57.5 and under 60.0 cents	1.9	1.5	2.2	1.4	1.2	2.4	.7
60.0 and under 62.5 cents	1.7	1.7	1.7	.7	1.1	1.8	.8
62.5 and under 65.0 cents	.4	.5	.3	.8	1.2	3.7	.3
65.0 and under 67.5 cents	1.5	2.1	.9	.6	1.1	3.3	.2
67.5 and under 70.0 cents	.6	1.0	.2	.6	.4	1.2	.1
70.0 and under 72.5 cents	.6	.9	.3	.5	.5	1.8	.1
72.5 and under 77.5 cents	.6	.7	.5	.8	.4	1.3	.1
77.5 and under 82.5 cents	.2	.3	.2	.3	.7	2.1	.1
82.5 and under 87.5 cents	.1	.2	----	.4	.4	1.6	----
87.5 and under 92.5 cents	.2	.5	----	.3	.3	1.0	.1
92.5 and under 97.5 cents	----	----	----	.2	.2	.6	----
97.5 and under 102.5 cents	.1	----	.2	.2	.2	.9	----
102.5 cents and over	.1	.2	----	.4	.2	.6	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees [4]	1,225	585	640	1,938	2,446	676	1,770
Average hourly earnings	$0.443	$0.456	$0.432	$0.401	$0.428	$0.475	$0.410

[1] The North includes California, Connecticut, Delaware, Illinois, Kansas, Maine, Massachusetts, Minnesota, Missouri, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, and Wisconsin. The South includes Alabama, Georgia, Kentucky, Louisiana, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

[2] All plants sampled, with one exception, were in the North.

[3] Less than a tenth of 1 percent.

[4] Excludes clerical employees.

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Farm Workers—Wage Rates and Earnings[1]

Farm Wage Rates

Information regarding the earnings of hired farm workers is far from adequate, but the wage rates paid to hired workers when actually at work have long been reported on a sample basis to the Department of Agriculture. The weighted average rate per month was $23.77 in 1909 and $59.88 in 1920, the rise being mainly the complement of a general rise in prices. The average rate fell sharply after 1920 but rose again to $44.52 in 1929. In 1933 the rate was $21.10, less than half of the 1929 average. Although the rate in 1940 was $31.28—much higher than in 1933—farm wages lagged seriously behind many other forms of income.[2] (See table 1.)

TABLE 1.—*Farm wage rates in the United States, 1909 to 1941* [1]

Year	Farm wage rates				Weighted average rate per month	
	Per month—		Per day—		Amount	Index numbers (average, 1924-29=100)
	With board	Without board	With board	Without board		
1909	$22.21	$28.10	$1.09	$1.30	$23.77	54.0
1914	22.62	29.74	1.17	1.43	25.13	57.1
1919	43.29	56.63	2.54	3.03	51.13	116.2
1923	37.24	48.25	1.89	2.25	41.87	95.2
1924	37.92	49.32	1.94	2.29	42.91	97.5
1925	38.77	49.90	1.97	2.29	43.51	98.9
1926	39.87	50.83	1.98	2.31	44.36	100.8
1927	40.11	50.85	1.98	2.28	44.36	100.8
1928	40.11	50.72	1.98	2.27	44.28	100.7
1929	40.61	51.22	1.96	2.25	44.52	101.2
1930	37.59	48.10	1.76	2.08	41.25	93.8
1931	28.77	38.38	1.32	1.62	32.11	73.0
1932	20.85	28.88	.94	1.20	23.66	53.8
1933	18.07	25.67	.85	1.11	21.10	48.0
1934	20.24	28.19	.98	1.26	23.61	53.7
1935	22.42	30.24	1.07	1.33	25.53	58.0
1936	24.53	32.28	1.15	1.42	27.51	62.5
1937	28.00	36.32	1.33	1.61	31.25	71.0
1938	27.73	35.97	1.31	1.58	30.84	70.1
1939	27.39	35.82	1.30	1.56	30.56	69.5
1940	28.05	36.68	1.36	1.59	31.28	71.1
April 1, 1940	27.45	36.41	1.26	1.55	30.60	69.6
July 1, 1940	29.01	37.18	1.37	1.62	31.94	72.6
October 1, 1940	28.77	36.84	1.39	1.61	31.82	72.3
1941:						
January 1, 1941	26.88	36.61	1.29	1.59	30.73	69.9
April 1, 1941	31.56	40.44	1.41	1.70	34.29	77.9
July 1, 1941	36.45	44.95	1.80	1.98	39.55	89.9

[1] U. S. Department of Agriculture. Crops and Markets, January and July 1941.

Farm wage rates are reported four times each year, for January, April, July, and October. The reports are tabulated by main geographic divisions. It is therefore possible to note both regional and seasonal variations in the rates. For this purpose, it is desirable to choose a period when rates were comparatively stable. The period chosen is from April 1, 1938, to April 1, 1939 (table 2). Neither farm wage rates nor hourly earnings in manufacturing industries

[1] From the Monthly Labor Review for July 1939 and September 1941.
[2] These weighted averages, as revised by the U. S. Department of Agriculture (Crops and Markets, January 1939 and July 1941), are significant mainly for indicating the general trend of wage rates.

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underwent any significant change during this period. Some increase in farm wages was apparent between April 1, 1939, and April 1, 1940, but it was not until the period of intensified national defense activity that rates advanced significantly. For the purpose of indicating the rise in rates after April 1, 1939, figures are also given in table 2 for April 1, 1940, and April 1, 1941.

TABLE 2.—*Farm wage rates by geographic division, April 1, 1938, to April 1, 1941* [1]

Geographic division and date	Rate per month—		Rate per day—	
	With board	Without board	With board	Without board
United States:				
April 1, 1938	$27.60	$33.82	$1.25	$1.55
July 1, 1938	28.95	37.28	1.38	1.63
October 1, 1938	28.25	36.09	1.36	1.59
January 1, 1939	24.86	34.92	1.20	1.53
April 1, 1939	27.08	35.42	1.23	1.53
April 1, 1940	27.45	36.41	1.26	1.55
April 1, 1941	31.56	40.44	1.41	1.70
New England:				
April 1, 1938	31.83	55.66	1.73	2.55
July 1, 1938	33.40	57.23	1.84	2.62
October 1, 1938	31.83	55.13	1.84	2.58
January 1, 1939	31.08	54.71	1.72	2.56
April 1, 1939	31.92	56.23	1.73	2.72
April 1, 1940	32.58	56.48	1.73	2.58
April 1, 1941	37.63	63.05	1.93	2.85
Middle Atlantic:				
April 1, 1938	29.18	46.01	1.69	2.32
July 1, 1938	30.05	46.56	1.79	2.37
October 1, 1938	29.42	45.83	1.78	2.39
January 1, 1939	27.05	44.15	1.61	2.20
April 1, 1939	28.48	45.39	1.64	2.26
April 1, 1940	29.05	46.22	1.68	2.29
April 1, 1941	33.72	52.31	1.88	2.53
East North Central:				
April 1, 1938	29.11	41.03	1.53	2.02
July 1, 1938	29.91	41.91	1.66	2.16
October 1, 1938	29.74	41.68	1.65	2.16
January 1, 1939	25.40	37.95	1.43	1.94
April 1, 1939	28.80	40.91	1.50	2.03
April 1, 1940	28.73	41.27	1.52	2.02
April 1, 1941	34.20	47.01	1.75	2.27
West North Central:				
April 1, 1938	28.35	38.93	1.39	1.92
July 1, 1938	29.47	39.82	1.56	2.09
October 1, 1938	28.83	39.20	1.59	2.12
January 1, 1939	21.98	33.33	1.25	1.74
April 1, 1939	28.21	38.41	1.38	1.87
April 1, 1940	27.98	38.59	1.39	1.87
April 1, 1941	32.29	43.39	1.55	2.09
South Atlantic:				
April 1, 1938	$16.50	$24.43	$0.86	$1.15
July 1, 1938	17.06	25.11	.89	1.19
October 1, 1938	16.41	24.40	.87	1.16
January 1, 1939	16.54	24.93	.86	1.18
April 1, 1939	16.10	24.32	.84	1.14
April 1, 1940	16.92	25.45	.88	1.18
April 1, 1941	19.03	27.97	.99	1.28
East South Central:				
April 1, 1938	15.78	22.73	.78	1.00
July 1, 1938	15.98	23.05	.80	1.03
October 1, 1938	15.68	22.66	.77	1.03
January 1, 1939	15.54	22.47	.77	1.03
April 1, 1939	15.97	22.95	.78	1.02
April 1, 1940	16.14	23.39	.80	1.04
April 1, 1941	17.92	25.15	.86	1.11
West South Central:				
April 1, 1938	18.70	27.29	.93	1.22
July 1, 1938	19.39	28.37	.99	1.28
October 1, 1938	19.19	27.86	.97	1.24
January 1, 1939	18.08	26.83	.92	1.19
April 1, 1939	18.54	26.94	.92	1.18
April 1, 1940	18.70	27.37	.92	1.18
April 1, 1941	21.41	30.10	1.02	1.30
Mountain:				
April 1, 1938	34.95	51.00	1.63	2.19
July 1, 1938	37.37	53.53	1.74	2.31
October 1, 1938	36.84	52.29	1.81	2.33
January 1, 1939	30.96	46.22	1.53	2.09
April 1, 1939	35.03	51.00	1.61	2.22
April 1, 1940	35.04	51.30	1.63	2.18
April 1, 1941	38.34	55.07	1.75	2.38
Pacific:				
April 1, 1938	44.39	66.68	1.95	2.81
July 1, 1938	44.19	65.96	2.10	2.78
October 1, 1938	41.83	62.05	2.02	2.71
January 1, 1939	41.35	62.49	1.92	2.62
April 1, 1939	40.89	62.31	1.96	2.66
April 1, 1940	41.57	64.91	1.96	2.68
April 1, 1941	48.30	71.32	2.20	2.94

[1] The period from April 1, 1938, to April 1, 1939, is chosen for the purpose of illustrating regional and seasonal variations. During this period, there were few increases or decreases in rates except those of a seasonal character. After April 1, 1939, and particularly after April 1, 1940, significant increases occurred, mainly as a result of improved employment conditions and competition for labor by industry. These increases are shown by figures for April 1, 1940, and April 1, 1941.

Rates are lower in January than in any other month reported except when there is a general downward tendency, as in the period from 1930 to 1932. The rates vary extensively in different sections of the country. The region with the highest rates on January 1, 1939, was the Pacific division, and the region with the lowest rates was the East South Central division. (See table 2.) The rates in 1938 were almost four times as high in California as in South Carolina. In the intervening areas there was a gradual rise in rates from South Carolina to California. The differences have been explained [3] as

[3] Rural Sociology, March 1939 (pp. 36–42): Profile of Wage Rates in the Southwest, by Prof. E. D. Tetreau.

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resulting from increases westward in the ability of farmers to pay higher wages; declining competition westward of unpaid family labor; the greater influence in the West of competitive wage rates in nonagricultural industries; and differences in the efficiency of workers.

Farm wage rates in recent years have lagged behind industrial wages. The rise in farm rates after April 1, 1939, was approximately the same as the rise in industrial wages. The increases reflect improved conditions of employment and the stimulus of competition for workers by industrial employers, especially in the defense industries.

Average Earnings

Average farm wage rates should not be confused with average earnings, which were vitally affected by the amount of employment available. Average earnings of farm wage earners roughly comparable to the averages in nonagricultural employments may be computed from revised estimates of number of hired farm workers and of total farm wages, including board and other perquisites.[4] These estimates indicate that hired farm workers earned, on the average, in 1909, $256;[5] in 1914, $276; and in 1919, $544. This rise was mainly a result of higher prices. After 1920 there was a sharp decline, the average falling below $400 in 1921 and 1922 and then rising above $400, the figure for 1929 being $430. The average for 1933 was only $212, and in 1938, $300. The average amount of employment in 1938 was a little more than 7 months. A farm laborer who worked at the average wage rate adjusted to include board and other perquisites and who had employment throughout the year earned approximately $500.

Farm Wages as Shown by Special Surveys

The deficiency of income among hired farm workers is indicated broadly by the figures, given above, of the general averages of farm wages and the regional variations in farm wage rates. Special surveys, although fragmentary, furnish significant verification of the estimated general averages and provide illustrations of the levels of income that determine the purchasing power and living conditions of wage earners on farms.

A study of farm laborers in 11 counties in 1936 indicates that the highest average annual cash income per family in any of these counties was $572. In 4 of the counties the average was less than $200, and in one it fell as low as $127. Within each county there was a wide range above and below the average.[6] These figures include all forms of cash income. The proportions of hired workers in the several

[4] Revised employment estimates by the Bureau of Agricultural Economics and the National Research Project of the Works Progress Administration were summarized in the Monthly Labor Review, June 1939 (p. 1241): Farm Employment, 1909 to 1938. Revised figures of total wages, including board and other perquisites, are given in U. S. Department of Agriculture, The Cost of Hired Farm Labor, 1909–38 (preliminary), Washington, 1939.

[5] This and the following figures of average earnings include estimates of board and other perquisites, the estimates being made from the point of view, not of their value to the worker, but of their cost to the employer. Farmers are probably liberal in their estimates of cost, but the net result may be a slight underestimate of board and other perquisites from the point of view of their value to the worker. Figures of average earnings, whether for a year or for shorter periods, have the limitations of the basic data on employment and total wages, notably the inclusion of temporary, peak-season workers. However, in farm-wage statistics, the farm-wage rates and the data of special surveys afford checks which indicate a degree of adequacy warranting significant conclusions.

[6] Summarized from surveys of agricultural conditions in 11 counties, made by Tom Vasey and Josiah C. Folsom of the U. S. Department of Agriculture. Some of the information here used is from the summary by Prof. Paul C. Taylor in the second volume of Senate Hearings on Unemployment and Relief, pursuant to S. Res. 36, 75th Cong.

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counties receiving pay for nonagricultural employment ranged from 8.2 percent in Placer County, Calif., to 37.3 percent in Fentress County, Tenn. The proportions of income from nonagricultural employment ranged from 4.9 percent in Karnes County, Tex., to 33.5 percent in Fentress County, Tenn. In two of the counties the income of dependents ranged from 0.2 to 13.8 percent of the total income. In all counties relief payments formed some part of the total income, the highest being 12.0 percent. Most of the workers included in these surveys were noncasual, nonmigratory farm workers with comparatively regular employment.

Another study of workers with comparatively steady jobs is a survey of farm labor conditions in Gloucester, Hunterdon, and Monmouth Counties in New Jersey.[7] The survey excludes large numbers of casual workers who find employment in that region after the middle of May. Money wages from farm labor in 1935 averaged $431 for the 3 counties, the county averages ranging from $375 to $487. The average income from all sources was $443, or only $12 more than the average wage from farm labor alone. These figures represent the earnings of a selected group of 1,185 workers who received cash wages in 1935. Reports were obtained from 1,591 laborers, including some who were not actually at work at the time of the survey, and the average wage of this larger group in 1935 was $348. The earnings of white workers (more than four-fifths of the total number) averaged about 20 percent more than the earnings of Negroes. There were 52 members of laborers' families who reported some agricultural employment during the year, and 47 who reported some nonagricultural employment.

These figures of earnings do not include perquisites. In the 3 New Jersey counties, those who received board and also other perquisites counted the total value as approximately equal to their cash wages, but 34 percent of the workers received neither board nor other perquisites. A few hired workers, mostly older persons or persons with limited strength or ability, worked without money wages.

Earnings of Migratory Farm Workers

Information about the wages of migratory farm workers is fragmentary and the surveys that have been made have been predominantly in areas of comparatively high wages.

These studies suggest that adult men among the seasonal migrants in agriculture may average about $300 per year and that migrant families average perhaps $400 per year. Assuming an average of two workers and four to five persons per migrant family—approximately the family composition which has been observed in California—it may be estimated that the earnings of migrant agricultural families are equivalent to a wage of only about $200 per worker, and that they provide maintenance of less than $100 per year for each member of the average migrant family.[8]

One of the studies of earnings of migratory workers was a survey in the Yakima Valley covering the year ending July 25, 1936. In this fertile, irrigated region, noted for apples and other fruits and general

[7] U. S. Bureau of Agricultural Economics. Farm Labor Conditions in Gloucester, Hunterdon, and Monmouth Counties, New Jersey, April–May 1936. By Josiah C. Folsom. Washington, 1939.

[8] Monthly Labor Review, July 1937 (pp. 3–16): A Survey of Labor Migration Between States, by N. A. Tolles. (Reprinted as Serial No. R. 592.)

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farm crops, about one-fourth of the workers earned $100 or less during the 52 weeks; almost one-half earned less than $200; and one-fourth earned more than $400. The family earnings of the entire group included in the study averaged $342; the earnings of families not on relief averaged $466; and the earnings of families who had depended to any extent on relief averaged $269.[9]

A survey of family earnings of hand laborers in several of the sugar-beet areas in 1935 indicated that half of the families received less than $340 for sugar-beet work during the year; 30 percent received less than $200; and 78 percent received less than $600. There was an average of 6.4 persons per family. In addition to the earnings mentioned, most of the families obtained some income from other sources, the median ranging in the different sugar-beet areas from $31 to $93. At some time during the year 63 percent of the families obtained either work relief or direct relief, the proportion of families receiving such aid ranging in the several sugar-beet areas from 37 to 97 percent. The cash income per family member, excluding relief, was $75 or less for half of the families.[10]

The California State Relief Administration obtained information regarding the family incomes of 775 farm workers from 1930 to 1935. These families had applied for aid during the off-season months of December and January, when employment opportunities are at a minimum. The information obtained indicated that the average family earnings ranged from $381 in 1930 to $289 in 1935. In 1930 half of the families earned less than $343, and in 1935 half earned less than $261. Only 18 of the families reported steady employment in 1935 for 1 or more members of the family, and 14 of the 18 families reported steady work for only 1 member of the family. Only 13 families reported total family earnings in 1935 above $800.[11]

Federal Employment—Occupations and Salaries, 1938 [12]

The diversity of the services which the Federal Government renders requires the widest possible variety of occupational training and experience on the part of its employees. Naval stations and Army arsenals must have toolmakers, machinists, ordnance engineers, instrument makers, tool and gauge designers, and draftsmen. The Department of the Interior employs teachers for Indians and Eskimos; geologists, photographers, and map experts for the Geological Survey; as well as highly specialized mining, reclamation, and hydraulic engineers. Federal experimental farms require the services of farm hands and stablemen, entomologists, and husbandmen. The list could be extended almost indefinitely, for the Civil Service Commission has in its files some 25,000 different titles of positions in both the departmental and field services which have been officially reported to it by the various Government departments and agencies.

[9] Monthly Labor Review, August 1937 (pp. 301–311): Seasonal Agricultural Labor in the Yakima Valley, by Paul H. Landis. (Reprinted as Serial No. R. 610.)

[10] Monthly Labor Review, February 1938 (pp. 322–340): Wages, Employment Conditions, and Welfare of Sugar-Beet Laborers, by Elizabeth S. Johnson. (Reprinted as Serial No. R. 703.)

[11] California State Relief Administration, Division of Special Surveys and Studies. Migratory Labor in California (pp. 109, 119–129). San Francisco, 1936. Part-time employment as a factor in low income is indicated in various studies, notably U. S. Farm Security Administration, A Study of 6,655 Migrant Households in California, 1938, San Francisco, 1939.

[12] Abstract of article by Malcolm L. Smith, Civil Service Commission, and Kathryn R. Wright, Bureau of Labor Statistics, in the Monthly Labor Review for January 1941.

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Civilian employees in the Federal service numbering 808,715 at the end of 1938 were included in this study. The Postal Service used more of these employees than any other single department or agency. Nearly a third of the 808,000 employees had positions as postmasters and assistant postmasters or as postal clerks and carriers.

Men held 82 percent of all the jobs at the end of 1938. Nearly 56 percent of the positions held by women were of a clerical nature.

The average age for all employees was 40.8 years, but woman employees were 4.6 years younger than men, the average ages being 36.9 years for women and 41.5 for men.

Annual earnings of Government employees varied more with occupation than with age. The averages for the major occupational groups, exclusive of postmasters and assistants, ranged from $1,192 for unskilled trade and manual workers to $3,137 for persons in technical, scientific, and professional occupations. For the most part salaries increased with the age of the employee, but the range was comparatively narrow. Employees under 25 years of age had average earnings of $1,360 and those of 50 but under 60 years earned $2,053. The average salary of civilian employees in the Federal Government regardless of occupation or age, was $1,871 at the end of 1938.

Details regarding age, sex, and salary of Federal employees by principal occupational groups are shown in the accompanying table.

Age, sex, and salary of Federal employees, December 31, 1938, in 117 occupational groups

Occupational group	Estimated number of employees	Percent of employees		Average age [1]		Salary			Percent with salaries $2,000 and over
		Men	Women	Men	Women	First quartile	Average [1]	Third quartile	
All occupational groups [2]	808,715	82.0	18.0	41.5	36.9	$1,387	$1,871	$2,175	43.0
Technical, scientific, and professional [2]	74,705	91.7	8.3	40.6	40.8	2,396	3,137	3,893	93.7
Accountants and auditors	7,000	89.3	10.7	43.8	47.4	2,137	2,941	3,643	93.1
Agricultural extension agents [2]	6,950	67.6	32.4	(3)	(3)	(3)	(3)	(3)	(3)
Agronomists, horticulturists, botanists, and bacteriologists	3,450	96.2	3.8	34.5	(3)	2,096	2,766	3,505	92.8
Architects	2,200	98.9	1.1	40.6	(3)	2,710	3,086	3,653	98.0
Attorneys and judges	5,300	94.8	5.2	38.4	35.7	3,080	3,993	5,313	97.5
Chemists and metallurgists [2]	1,455	96.6	3.4	41.0	(3)	2,175	3,061	3,717	94.5
Economists, agricultural	1,950	95.4	4.6	41.2	(3)	2,194	3,145	4,116	93.1
Economists, business and other	3,100	95.5	4.5	41.9	(3)	2,752	3,437	4,373	99.2
Editorial and informational occupations (professional)	600	88.3	11.7	40.6	(3)	2,777	3,510	4,388	91.7
Engineers (professional) [2]	19,820	100.0	-----	41.0	-----	2,616	3,169	3,691	96.9
Entomologists and husbandmen	1,150	95.7	4.3	39.0	(3)	2,122	2,827	3,468	94.8
Forestry and range science occupations	3,900	99.2	.8	33.6	(3)	1,840	2,176	2,899	89.0
Geologists and physical scientists, n. e. c. [2]	1,214	97.9	2.1	38.1	(3)	2,179	3,019	3,825	99.2
Home economists	270	7.4	92.6	(3)	38.8	1,933	2,129	3,125	63.0
Librarians [2]	605	40.0	60.0	37.2	43.7	2,064	2,663	3,139	86.7
Medical and dental scientists [2]	5,220	96.9	3.1	47.1	(3)	3,414	4,118	4,924	100.0
Social and welfare workers [2]	755	37.7	62.3	39.3	38.1	1,509	2,010	2,265	68.0
Social scientists, n. e. c. [2]	2,025	90.1	9.9	41.6	(3)	2,416	3,412	4,895	85.0
Statisticians and mathematicians [2]	855	90.1	9.9	38.9	(3)	2,631	3,250	4,213	94.0
Veterinary scientists [2]	2,805	99.6	.4	44.7	(3)	1,436	2,129	2,797	90.5
Zoologists and naturalists	650	92.3	7.7	36.9	(3)	2,177	3,156	3,757	97.7
Other [2 4]	3,430	79.9	20.1	42.3	37.0	1,974	2,758	3,836	78.1
Semitechnical, semiscientific, and semiprofessional [2]	51,990	77.8	22.2	37.2	35.9	1,614	1,944	2,631	44.2
Agricultural and biological occupations [2]	3,910	84.1	15.9	34.5	34.4	1,034	1,423	1,987	24.3
Commodity inspectors and graders	400	100.0	-----	43.3	-----	1,664	2,150	3,425	62.5

See footnotes at end of table.

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Age, sex, and salary of Federal employees, December 31, 1938, in 117 occupational groups—Continued

Occupational group	Estimated number of employees	Percent of employees		Average age [1]		Salary			Percent with salaries $2,000 and over
		Men	Women	Men	Women	First quartile	Average	Third quartile	
Semitechnical, etc.—Continued.									
Communications and photography technicians	1,900	99.7	0.3	35.9	(3)	$1,641	$1,846	$1,996	24.2
Draftsmen	5,200	96.9	3.1	34.6	(3)	1,683	1,959	2,196	56.4
Engineering, architectural, and physical-science occupations	10,900	96.3	3.7	33.7	35.0	1,425	1,790	2,034	28.9
Fact-finding and compliance investigators	3,700	97.3	2.7	43.0	(3)	2,686	2,992	3,452	98.2
Home-management advisers	1,530	3.6	96.4	(3)	32.0	1,320	1,441	1,615	2.6
Legal examiners, adjudicators, and investigators	6,500	97.7	2.3	42.7	(3)	2,837	3,316	3,877	99.2
Medical and dental technicians	650	69.2	30.8	40.5	(3)	1,511	1,743	2,117	35.4
Nurses (graduate)	5,850	3.4	96.6	(3)	37.7	1,712	1,874	1,969	17.9
Rural-rehabilitation supervisors	4,100	97.6	2.4	37.0	(3)	1,509	1,831	2,076	30.4
Social-science occupations	1,100	55.9	44.1	35.0	36.7	1,371	1,780	2,180	38.6
Teachers and instructors [5]	3,400	52.9	47.1	41.1	36.2	970	1,714	2,158	39.9
Therapeutic occupations	600	49.2	50.8	42.2	44.2	1,812	1,945	2,125	40.0
Other [2 4]	2,250	87.8	12.2	27.9	23.6	1,051	1,183	2,003	25.1
Postmasters and assistants	47,000	66.8	33.2	48.9	45.2	422	1,021	2,234	28.5
Postal clerks and carriers	209,000	96.9	3.1	42.1	43.7	1,995	2,090	2,181	74.8
Managerial and administrative [2]	36,245	85.2	14.8	43.6	34.3	1,835	2,248	3,181	62.5
Appraisers	2,300	98.9	1.1	46.3	(3)	2,673	2,988	3,469	97.0
Inspectional occupations, n. e. c.[2]	6,105	95.9	4.1	44.7	42.8	1,850	2,109	2,565	67.8
Marine officials and inspectors	1,600	100.0	.....	43.4	.....	1,870	2,428	3,141	68.8
Tax collectors and deputies	7,200	50.6	49.4	39.7	30.7	1,360	1,616	2,160	33.8
Other [2 4]	19,040	92.0	8.0	43.0	36.8	1,894	2,616	3,612	67.0
Clerical [2]	148,000	45.2	54.8	32.8	33.7	1,338	1,572	1,841	14.3
Accounting, fiscal, and pay-roll clerks	6,500	76.5	23.5	(3)	37.9	1,513	1,771	2,206	35.5
Communications operators	1,700	23.5	76.5	40.7	37.0	1,251	1,393	1,604	7.1
Editorial, informational, and personnel clerks	2,000	71.0	29.0	37.4	36.9	1,577	1,958	2,815	46.8
File, mail, and record clerks	5,250	56.7	43.3	29.5	35.1	1,270	1,416	1,653	8.5
Messengers	4,900	95.9	4.1	25.1	(3)	1,018	1,176	1,357	.1
Office-appliance operators, n. e. c.	5,550	50.0	50.0	29.2	31.6	1,287	1,412	1,585	1.5
Purchase and supply clerks	3,500	80.0	20.0	40.4	45.4	1,478	1,766	2,160	31.0
Statistical, coding, and research clerks [2]	5,800	75.9	24.1	30.1	35.4	1,225	1,526	1,756	8.3
Stenographers, typists, and secretaries	53,200	15.0	85.0	29.0	30.7	1,275	1,462	1,700	5.1
Verifying and reviewing clerks, n. e. c.	1,600	89.1	10.9	39.1	(3)	1,228	1,513	1,746	12.5
Other [4]	58,000	56.9	43.1	34.0	40.2	1,382	1,668	1,953	21.8
Service [2]	56,720	84.3	15.7	41.7	40.9	1,117	1,305	1,571	13.6
Attendants, hospitals and other institutions	19,100	78.0	22.0	40.5	37.5	1,051	1,164	1,333	.3
Building services—janitors and charmen	12,100	73.6	26.4	43.0	45.1	1,077	1,200	1,363	.8
Cooks	2,850	84.2	15.8	42.2	46.3	1,235	1,439	1,716	11.2
Elevator operators	2,000	88.8	11.2	41.7	36.6	1,212	1,310	1,409	.....
Kitchen workers	1,550	91.9	8.1	30.9	(3)	675	807	946	.....
Personal-service occupations, n. e. c.	1,550	74.2	25.8	35.9	37.2	707	935	1,318	16.8
Protective services [2 4]	17,570	98.2	1.8	42.5	46.1	1,342	1,844	2,316	39.7
Trade and manual [2]	185,055	94.4	5.6	42.1	41.7	1,256	1,579	1,924	20.3
Skilled [2]	93,150	[6]99.4	[6].6	42.9	(6)	1,546	1,862	2,141	34.9
Construction occupations—total	18,585	.....	.....	45.1	.....	1,325	1,751	2,054	30.2
Bricklayers and stonemasons	650	.....	.....	46.8	.....	1,088	1,597	2,163	53.1
Carpenters and other woodworkers	8,700	.....	.....	47.2	.....	1,206	1,705	2,003	27.4
Cement finishers and plasterers	500	.....	.....	45.6	.....	1,246	1,685	2,124	36.0
Drillers	1,000	.....	.....	42.9	.....	1,411	1,596	1,731	3.5
Machinery operators, n. e. c.	1,100	.....	.....	38.1	.....	1,269	1,640	1,897	16.4
Painters	2,435	.....	.....	45.6	.....	1,543	1,841	2,055	30.2
Plumbers and steam fitters	3,700	.....	.....	43.5	.....	1,424	1,880	2,189	40.0
Insulation and other construction workers	500	.....	.....	44.2	.....	1,849	2,032	2,261	54.0
Metalworking occupations—total	30,380	.....	.....	42.0	.....	1,570	1,874	2,088	32.3
Blacksmiths and occupations in mechanical and heat treatment of metals	1,330	.....	.....	44.8	.....	1,290	1,571	1,910	19.5
Boilermakers	1,600	.....	.....	42.3	.....	1,274	1,810	2,082	31.6
Machinists	17,300	.....	.....	42.4	.....	1,643	1,885	2,057	29.7

See footnotes at end of table.

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Age, sex, and salary of Federal employees, December 31, 1938, in 117 occupational groups—Continued

Occupational group	Estimated number of employees	Percent of employees		Average age [1]		Salary			Percent with salaries $2,000 and over
		Men	Women	Men	Women	First quartile	Average	Third quartile	
Trade and manual—Continued.									
Skilled—Continued.									
Metalworking occupations—Con.									
Molders and foundry workers	1,045	-----	-----	44.0	-----	$1,184	$1,852	$2,175	44.5
Sheet-metal workers	3,590	-----	-----	38.5	-----	1,328	1,863	2,209	41.2
Structural-iron workers	350	-----	-----	45.3	-----	1,702	2,015	2,250	51.4
Toolmakers, die sinkers, and other machine-shop occupations	1,390	-----	-----	42.4	-----	1,556	1,887	2,122	34.5
Welders	2,350	-----	-----	38.4	-----	1,832	1,975	2,177	45.5
Other [4]	1,425	-----	-----	44.4	-----	1,565	1,704	1,887	15.1
Printing occupations—total [5]	3,150	-----	-----	44.8	-----	1,813	2,663	2,950	70.5
Compositors and typesetters	900	-----	-----	42.0	-----	2,648	2,835	3,022	81.7
Photoengravers [2]	550	-----	-----	48.6	-----	(3)	(3)	(3)	68.2
Pressmen and plate printers	850	-----	-----	44.6	-----	1,794	2,686	2,963	70.6
Lithographers and other printing occupations	850	-----	-----	44.4	-----	1,604	2,405	2,603	58.8
Communications linemen and related occupations	500	-----	-----	40.5	-----	1,451	1,863	2,390	37.0
Crane, derrick, hoist, and shovel operators	1,200	-----	-----	41.9	-----	1,575	1,830	2,180	36.7
Foremen, construction	2,500	-----	-----	44.4	-----	1,791	2,048	2,332	56.8
Foremen, n. e. c.	8,500	-----	-----	44.2	-----	1,559	1,768	2,043	33.8
Electricians	5,400	-----	-----	41.0	-----	1,601	1,938	2,231	43.5
Instrument makers	500	-----	-----	42.3	-----	1,855	2,068	2,267	60.0
Locomotive engineers, brakemen, and other transportation occupations	545	-----	-----	45.1	-----	1,650	1,982	2,857	48.6
Mechanics, airplane	1,850	-----	-----	41.6	-----	1,622	1,941	2,178	43.2
Mechanics, motor vehicle	1,800	-----	-----	41.2	-----	1,576	1,757	2,054	30.6
Mechanics and repairmen, n. e. c.	3,615	-----	-----	43.7	-----	1,349	1,732	2,060	28.2
Pattern and model makers	4,500	-----	-----	41.0	-----	1,335	1,813	2,183	36.0
Stationary enginemen	4,050	-----	-----	44.1	-----	1,682	1,946	2,335	44.4
Tailors and clothing workers [2]	475	-----	-----	46.3	-----	1,416	1,771	2,004	25.3
Other [4]	5,600	-----	-----	44.2	-----	1,364	1,616	1,963	23.2
Semiskilled [2]	47,905	85.1	14.9	40.9	40.5	1,267	1,451	1,696	10.1
Chainmen and rodmen	2,600	100.0	-----	28.9	-----	1,160	1,319	1,454	.4
Chauffeurs	8,050	100.0	-----	40.0	-----	1,220	1,453	1,770	20.3
Chippers and calkers (shipbuilding)	600	100.0	-----	45.5	-----	1,843	1,943	2,131	35.8
Clothing-machine operators [2]	2,225	11.2	88.8	44.5	37.0	1,086	1,245	1,419	3.3
Construction occupations	700	100.0	-----	42.5	-----	1,133	1,414	1,933	23.6
Firemen (boiler)	6,500	100.0	-----	44.6	-----	1,265	1,369	1,473	.5
Hunters, trappers, and guides	250	100.0	-----	44.4	-----	1,114	1,434	1,988	24.0
Irrigation occupations	400	100.0	-----	42.1	-----	1,366	1,613	1,853	11.3
Laundry workers	550	49.1	50.9	39.6	36.9	566	749	1,036	.9
Machine-shop occupations	3,195	89.2	10.8	41.3	45.7	1,282	1,489	1,777	10.6
Metalworking occupations, n. e. c.	1,560	86.5	13.5	40.7	37.8	1,240	1,433	1,701	7.4
Munitions and other chemical workers	750	84.0	16.0	35.6	(3)	1,209	1,410	1,617	1.3
Nurserymen, gardeners, and grounds keepers	800	100.0	-----	42.9	-----	1,520	2,005	2,106	42.5
Oilers of machinery	1,600	100.0	-----	34.8	-----	1,252	1,375	1,497	-----
Printing and publishing occupations, n. e. c.	5,150	29.6	70.4	34.7	41.1	1,549	1,641	1,733	3.8
Sailors and deckhands	550	100.0	-----	30.7	-----	730	903	1,085	1.8
Teamsters and other transportation occupations, n. e. c.	900	100.0	-----	36.9	-----	1,134	1,539	1,837	5.6
Warehousemen and stores handlers	1,950	100.0	-----	42.3	-----	1,497	2,043	2,158	59.0
Other [4]	9,575	94.0	6.0	41.9	41.1	1,210	1,377	1,588	3.5
Unskilled laborers and operatives	44,000	93.9	6.1	41.4	43.8	1,032	1,192	1,475	.3

[1] Median.

[2] Age and salary computations are exclusive of employees for whom complete information was not available on age and salary. In this category are persons serving without compensation (largely agents and consultants), dollar-a-year employees, and workers paid on a piece-work basis.

[3] Insufficient number of employees for computation of an average.

[4] The "other" categories consist primarily of positions the titles of which were too general for specific classification in any of the detailed occupational groups. Included also are numerically insignificant categories of occupations. In the "managerial and administrative" group the positions are predominantly administrative and supervisory in character without specific reference to occupational fields.

[5] College instructors and professors are counted in the profession which they teach, but instructors and teachers in primary and secondary schools are included here.

[6] Insufficient number of women for analysis of skilled trade and manual occupations by sex.

N. e. c.=not elsewhere classified.

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Fertilizer Industry—Earnings and Hours, 1938[1]

The modern fertilizer industry dates from about the middle of the last century, when the process of treating mineral phosphates with sulphuric acid to form superphosphates was discovered. Although the acidulation of phosphate rock furnishes one of the essential fertilizer ingredients, the industry also comprehends two other processes, namely, the manufacture of sulphuric acid and the mixing, in varying proportions, of superphosphates with other ingredients, such as potash, ammoniates, or nitrates, and fillers to make complete fertilizers.

Depending upon the integration of the three processes involved, there are also three types of fertilizer establishments, namely acid-making, superphosphate, and dry-mixing plants. Acid-making establishments are completely integrated plants, which manufacture their own sulphuric acid and superphosphates and mix the various fertilizer ingredients. Superphosphate or wet-mixing establishments purchase their acid requirements, but they make their own superphosphates and mix them with the other ingredients. On the other hand, dry-mixing plants manufacture none of the conventional fertilizer ingredients, being engaged only in mixing purchased materials.

This study was made on a sample basis, covering 283 establishments and 15,657 wage earners. It is estimated that, at the time of the survey during the spring months of 1938, the number of workers included about two-fifths of the total labor force in the industry.

As freight costs represent a substantial portion of the price paid by the farmer for fertilizers, close proximity to the principal marketing areas has been the main factor in determining the regional distribution of the industry. One of the most distinctive features of the latter, therefore, is its marked concentration in the southeastern coastal States, where the exhaustion of the soil, due primarily to the growing of one crop, such as tobacco or cotton, as well as to soil erosion, has created a great demand for fertilizers. Nevertheless, an important portion of the industry is scattered throughout much of the remainder of the country, especially the Northern States east of the Mississippi River.

Of the 283 establishments in the sample, 35 were acid-making, 42 superphosphate, and 206 dry-mixing plants. In terms of the number of workers, the figures were respectively 4,927 (31.5 percent), 3,083 (19.7 percent), and 7,647 (48.8 percent). It should be pointed out that the survey did not cover any establishments with fewer than 10 workers.

Concentration of ownership is an important factor in the industry. First, it is customary to consider the "Big 7" companies, each having a large number of establishments scattered over the country. In addition, there is a substantial number of intermediate companies, each of which has 2 or more plants in the industry. The remaining group may be termed 1-establishment companies. Of the 283 plants in the sample, 60 belonged to the "Big 7," 72 to the intermediate group, and 151 to the 1-establishment firms; they employed 35.5, 28.9, and 35.6 percent, respectively, of the total employees covered.

[1] Abstract of article in the Monthly Labor Review for March 1939, prepared by J. Perlman, O. R. Witmer, H. O. Rogers, and P. L. Jones, of the Bureau of Labor Statistics.

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Measured in production, however, the "Big 7" companies are vastly more important than is indicated by the relative number of their employees. To a lesser degree this is also true of the intermediate companies. The tendency is for the 1-establishment concerns to be found mostly in the smaller communities, while the larger companies are concentrated more in the metropolitan areas.

Of the 283 establishments in the sample, 6 (with 6 percent of the employees) were operating under trade-union agreements at the time of the survey. All of these plants were located in communities with a population of 100,000 and over.

Another distinguishing feature of the industry is the extreme simplicity of its manufacturing processes, especially in mixing fertilizers. As a result, manpower requirements have been reduced to a minimum, and most of the work is now being done by mechanical devices capable of handling large quantities of bulk materials.

A further peculiarity of the fertilizer industry is the large proportion that unskilled workers and Negroes form in the labor force.[2] It is also important to note that in rural areas and small towns many of the employees are agricultural laborers, who are drawn into the plants to work during the peak season.

Still another outstanding characteristic of the fertilizer industry is its extreme seasonality. Although there is a small amount of seasonal activity in this industry in certain parts of the country before the fall planting, by far the most important season occurs prior to planting in the spring months. This season extends over the months of March, April, and May, traveling progressively from the extreme southern to extreme northern States.

Average Hourly Earnings

Nearly all wage earners (99.8 percent) studied in the fertilizer industry were paid on a straight time-rate basis. Production-bonus systems of wage payment were not reported by any of the plants covered.[3]

Extra rates of pay for overtime were not general in the industry. In 51 establishments, however, overtime was paid for at rates either of time and one-third or time and one-half.[4]

In the spring of 1938, the earnings of the 15,657 workers covered in the 283 fertilizer manufacturing plants averaged 32.6 cents an hour. However, there is a large measure of variability behind this average. Over one-fourth (26.1 percent) of all workers earned less than 25 cents an hour, and considerably more than one-half (55.1 percent) were paid under 30 cents. Nearly seven-tenths (68.7 per-

[2] In the plants studied, there were 17 females, all of whom were engaged on unskilled, light operations, but they were excluded from the tabulations contained in this report.

[3] The figures on earnings in this report do not include the value of perquisites, but very little of these are furnished to employees in the industry. In 12 establishments, some of the workers were given free houses, including free electric light and fuel in several instances. In 4 other plants, houses were rented to employees at reduced rates. Respirators were distributed without cost to such persons as required them in their work by 4 establishments, 2 of which also gave free boots and gloves. Six plants paid all or part of the premiums on group insurance, and 1 establishment furnished free medical services.

[4] Extra earnings due to overtime were taken into consideration in computing average hourly earnings. Most of the overtime was found in the Northern wage region, but the additional earnings due to it would affect the average for that region by less than 1 cent.

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cent) received less than 40 cents. There was a small scattering of employees in the upper-earnings classes, but nine-tenths (89.9 percent) earned under 52.5 cents.

One cause of the wide distribution of hourly earnings in the fertilizer industry is the distinctly different wage levels of the 3 skill groups and also regional differences (table 1). Compared with an average of 57.6 cents for skilled workers, the earnings of the semi-skilled averaged 36.4 cents, and the average of the unskilled was 28.7 cents.

TABLE 1.—*Average hourly earnings in the fertilizer industry during spring months of 1938, by region, race, and skill*

Region and race	Number of workers				Average hourly earnings			
	All workers	Skilled workers	Semi-skilled workers	Unskilled workers	All workers	Skilled workers	Semi-skilled workers	Unskilled workers
United States	15,657	939	3,402	11,316	$0.326	$0.576	$0.364	$0.287
White	3,660	795	1,201	1,664	.461	.613	.449	.390
Negro	11,997	144	2,201	9,652	.281	.398	.319	.268
Northern wage district	4,012	415	1,228	2,369	.508	.702	.521	.460
White	2,294	387	715	1,192	.519	.709	.524	.447
Negro	1,718	28	513	1,177	.491	(1)	.517	.474
Southern wage district	11,645	524	2,174	8,947	.263	.483	.283	.241
White	1,366	408	486	472	.368	.524	.338	.248
Negro	10,279	116	1,688	8,475	.248	.356	.269	.240
Upper southern wage district	2,174	122	472	1,580	.363	.555	.376	.340
White	281	91	93	97	.441	.592	.412	.312
Negro	1,893	31	379	1,483	.351	(1)	.367	.342
Lower Southern wage district	9,471	402	1,702	7,367	.240	.463	.258	.219
White	1,085	317	393	375	.350	.506	.320	.232
Negro	8,386	85	1,309	6,992	.224	.323	.241	.219

[1] Not a sufficient number of workers to present averages.

Differences Between White and Negro Workers

The fertilizer industry is one of the few in which colored workers predominate. Of the 15,657 wage earners included in the survey, 11,997 were Negroes. This means that for the industry, as a whole, about 3 out of 4 workers employed were colored.

Although colored workers predominate in numbers, relatively few were found in the skilled jobs. This accounts in part for their low average wages, as compared with white workers.

As a general rule, whites and Negroes were not found on the same job in the same plant. There were, however, a number of establishments in which white and colored employees worked side by side at one or more occupations. In general, no differences in hourly rates were found to exist between white and colored employees who worked side by side at the same occupation in the same plant.

It would require exhaustive analysis to determine whether or not whites and Negroes engaged in the same work but in different plants received the same hourly earnings.

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Influence of Size of Community, Corporate Affiliation, and Type of Plant

Hourly earnings in the fertilizer industry varied directly with size of community. In the larger communities in the upper southern wage district average earnings resembled the wage levels prevailing in the smaller communities in the northern wage district. However, in the lower southern wage district, average earnings in even the larger communities were much below the level of the smallest communities in the northern wage area, although they roughly approximated the averages shown for the two smallest size groups in the upper southern district.

In the northern wage region, with two exceptions, the average earnings per hour increased with size of community, the total spread being from 36.4 cents in rural territory (with a population of under 2,500) to 59.0 cents in the metropolitan areas of 1,000,000 and over. One of the exceptions related to small towns of 2,500 and less than 5,000, which averaged even more than communities of 25,000 and under 50,000. The other exception affected the metropolitan areas of 100,000 and less than 250,000, which averaged less than those with 50,000 and under 100,000.

A similar story is told by the figures relating to the southern wage territory. In the upper southern wage district, although the average in rural territory exceeded that in small towns with 2,500 and under 5,000 population, both had lower averages than communities of 100,000 and less than 500,000, the only other places for which figures are shown. The spread between rural territory and metropolitan areas of 250,000 and under 500,000 amounted to 11.1 cents, while the widest range between small towns and largest communities was 15.6 cents. In the lower southern wage area, the rural territory also averaged slightly more than small towns. Furthermore, communities of 250,000 and less than 500,000 averaged slightly below those with 100,000 and under 250,000. However, with these exceptions, the hourly earnings increased with size of community. The widest range (between small towns and places of 100,000 and less than 250,000) was 13.2 cents.

As mentioned before, there is a tendency for the larger companies to concentrate in the bigger metropolitan areas, whereas the 1-establishment concerns are found mostly in the smaller communities. In view of this, it is of interest to note to what extent size of company affects hourly earnings.

In general, for each size of company the average earnings per hour increased with size of community. On the whole, there were also differences in favor of the "Big 7" over the intermediate firms as well as in favor of the latter over the 1-establishment companies for each size of community.

Weekly Hours and Earnings

In view of the fact that the survey was taken during the spring months of 1938, the weekly hours and earnings reflect conditions in the fertilizer industry at the peak of the season, being considerably higher than the respective figures that prevail in other parts of the

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year. Average weekly hours and earnings in the spring of 1938 are presented in table 2 by region, race, and skill.

TABLE 2.—*Average weekly hours and weekly earnings in the fertilizer industry during spring months of 1938, by region, race, and skill*

Region and race	Average weekly hours				Average weekly earnings			
	All workers	Skilled workers	Semi-skilled workers	Unskilled workers	All workers	Skilled workers	Semi-skilled workers	Unskilled workers
United States	45.0	51.5	52.0	42.4	$14.67	$29.67	$18.91	$12.15
White	47.9	50.5	50.6	44.8	22.12	30.96	22.72	17.46
Negro	44.1	56.6	52.7	42.0	12.40	22.55	16.83	11.23
Northern wage district	45.2	49.6	48.7	42.6	22.93	34.82	25.37	19.58
White	47.4	49.6	50.6	44.7	24.58	35.18	26.51	19.98
Negro	42.3	(1)	46.0	40.5	20.73	(1)	23.78	19.19
Southern wage district	44.9	52.9	53.8	42.3	11.82	25.59	15.26	10.18
White	48.9	51.4	50.7	44.9	17.99	26.96	17.14	11.12
Negro	44.4	58.4	54.7	42.2	11.00	20.77	14.72	10.13
Upper southern wage district	44.9	50.5	53.3	41.9	16.29	28.01	20.01	14.28
White	48.1	49.3	52.1	43.1	21.19	29.21	21.45	13.42
Negro	44.4	(1)	53.6	41.9	15.56	(1)	19.65	14.33
Lower southern wage district	45.0	53.7	54.0	42.4	10.80	24.86	13.94	9.30
White	49.1	52.0	50.3	45.4	17.16	26.32	16.11	10.53
Negro	44.4	60.0	55.1	42.2	9.97	19.41	13.29	9.24

[1] Not a sufficient number of workers to present averages.

For the country as a whole, the actual average weekly hours for all workers in the industry amounted to 45.0 and average weekly earnings for all workers were $14.67.

Fire Departments—Salaries, Hours, and Other Working Conditions, 1938 [1]

A comprehensive study of firemen's salaries, hours, and working conditions has been made by the Division of Construction and Public Employment of the Bureau of Labor Statistics, in cooperation with the Work Projects Administration. Data as of July 1, 1938, have been collected and tabulated for fire departments in the majority of cities having 25,000 inhabitants and more in 1930. The results of this survey have been published in a series of reports, one for the United States as a whole, and one for each of nine regions giving details by cities. Other subjects included in the reports are: Promotion of lower-grade privates, vacations with pay, items supplied firemen, and volunteer and call systems.

Salaries and Other Working Conditions

The analysis of salaries is based on reports received from 363 cities. Because of the size of the New York City department, together with its unusually high salary scale, figures for this city are shown separately in the accompanying table.

[1] Abstract of articles in the Monthly Labor Review for July 1940 and July 1941, prepared by Gerald M. Whitright and Mahlon B. Buckman of the Bureau of Labor Statistics.

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Salaries in Relation to Occupation

About three-fourths of all fire-department employees were privates, engineers, and drivers. These 3 occupational groups are interrelated; a number of cities reported as privates the men who performed the duties of drivers and engineers. Since privates constituted more than two-thirds of the total of 66,878 fire-department employees in the 363 reporting cities, this occupational group dominated the distribution of employees according to salary rates, shown in the accompanying table.

Although salaries of privates on July 1, 1938, ranged from $720 to $3,000 per year, fewer than one-half of 1 percent received less than $100 per month. Over nine-tenths of all privates outside New York City had salaries of $1,550 to $2,550. The salary most frequently reported was between $2,150 and $2,250.

Municipal fire-department employees in the United States in selected occupations, by salary, July 1, 1938

Salary class	All occupations [1]						Chiefs					
	All cities	New York City	City group [2]				All cities	New York City	City group [2]			
			I	II	III	IV			I	II	III	IV
Cities reporting specified occupation	363	1	12	78	97	175	357	1	12	77	96	171
All salaries	66,878	10,489	17,239	22,094	9,166	7,890	357	1	12	77	96	171
Under $950	133	[3] 4	[4] 78	[5] 9	[6] 13	[7] 29	------	------	------	------	------	------
$950–$1,049	39	8	------	11	4	16	------	------	------	------	------	------
$1,050–$1,149	37	7	4	3	9	14	------	------	------	------	------	------
$1,150–$1,249	217	1	------	84	76	56	------	------	------	------	------	------
$1,250–$1,349	392	1	1	57	146	187	------	------	------	------	------	------
$1,350–$1,449	821	10	11	129	284	387	------	------	------	------	------	------
$1,450–$1,549	1,055	14	26	352	282	381	------	------	------	------	------	------
$1,550–$1,649	2,898	48	82	1,102	772	894	1	------	------	------	------	1
$1,650–$1,749	4,198	44	203	1,531	1,204	1,216	2	------	------	------	------	2
$1,750–$1,849	4,862	17	1,151	1,642	936	1,116	2	------	------	------	------	2
$1,850–$1,949	5,764	20	177	4,028	775	764	4	------	------	------	------	4
$1,950–$2,049	7,378	2,950	265	2,926	590	647	7	------	------	------	1	6
$2,050–$2,149	4,474	19	1,263	1,921	882	389	8	------	------	------	------	8
$2,150–$2,249	8,365	68	3,717	3,039	819	722	10	------	------	------	------	10
$2,250–$2,349	2,946	75	1,067	1,062	541	201	8	------	------	------	------	8
$2,350–$2,449	5,107	134	2,844	1,548	421	160	26	------	------	------	3	23
$2,450–$2,549	4,997	822	2,101	1,083	679	312	17	------	------	------	5	12
$2,550–$2,649	2,166	30	1,590	387	97	62	10	------	------	------	5	5
$2,650–$2,749	1,093	5	640	208	147	93	21	------	------	------	3	18
$2,750–$2,849	683	13	226	225	123	96	12	------	------	1	3	8
$2,850–$2,949	824	29	633	42	101	19	12	------	------	1	4	7
$2,950–$3,049	5,347	4,489	404	315	91	48	38	------	------	2	14	22
$3,050–$3,149	145	20	24	49	28	24	7	------	------	2	3	2
$3,150–$3,249	403	10	240	96	40	17	10	------	------	2	3	5
$3,250–$3,349	75	19	16	17	18	5	15	------	------	2	8	5
$3,350–$3,449	329	107	164	38	17	3	5	------	------	2	1	2
$3,450–$3,549	121	38	34	26	14	9	12	------	------	2	7	3
$3,550–$3,649	86	3	28	35	10	10	26	------	------	10	8	8
$3,650–$3,749	15	2	1	9	1	2	4	------	------	2	1	1
$3,750–$3,849	23	2	4	7	9	1	4	------	------	3	------	1
$3,850–$3,949	937	931	------	4	1	1	3	------	------	2	1	------
$3,950–$4,049	144	1	95	36	10	2	16	------	------	9	5	2
$4,050 and over	804	[8] 548	[9] 150	[10] 73	[11] 26	[12] 7	77	1	12	37	21	6

See footnotes at end of table.

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Municipal fire-department employees in the United States in selected occupations, by salary, July 1, 1938—Continued

Salary class	Captains						Privates					
	All cities	New York City	City group [2]				All cities	New York City	City group [2]			
			I	II	III	IV			I	II	III	IV
Cities reporting specified occupation	336	1	12	78	92	153	356	1	12	78	97	168
All salaries	5,769	354	1,213	2,238	1,037	927	44,633	8,100	12,089	14,061	5,650	4,733
Under $950							20			5		15
$950–$1,049							8					8
$1,050–$1,149	3					3	13				8	5
$1,150–$1,249							146			63	65	18
$1,250–$1,349	8					8	268			51	83	134
$1,350–$1,449	46				12	34	571			97	230	244
$1,450–$1,549	44				21	23	748			307	179	262
$1,550–$1,649	112				41	71	2,217		44	1,021	517	635
$1,650–$1,749	265				113	152	2,803		162	1,139	763	739
$1,750–$1,849	225			69	73	83	3,460		1,054	1,050	644	712
$1,850–$1,949	550			272	135	143	3,844		8	3,045	437	354
$1,950–$2,049	486			277	117	92	5,544	2,910	103	1,761	343	427
$2,050–$2,149	445		96	214	50	85	3,183		1,040	1,308	632	203
$2,150–$2,249	440			354	43	43	6,625		3,390	2,144	576	515
$2,250–$2,349	281			166	45	70	1,598		821	416	314	47
$2,350–$2,449	228			151	44	33	3,929		2,598	1,009	265	57
$2,450–$2,549	546		213	226	87	20	3,704	750	1,667	531	500	256
$2,550–$2,649	193			143	34	16	1,209		1,202	5	2	
$2,650–$2,749	397		266	67	58	6	36					36
$2,750–$2,849	274		75	110	87	2	66					66
$2,850–$2,949	75		51		12	12	69			9	60	
$2,950–$3,049	336		220	90	16	10	4,572	4,440		100	32	
$3,050–$3,149	31			4	15	12						
$3,150–$3,249	309		194	77	31	7						
$3,250–$3,349												
$3,350–$3,449	98		98									
$3,450–$3,549												
$3,550–$3,649	2					2						
$3,650–$3,749												
$3,750–$3,849												
$3,850–$3,949												
$3,950–$4,049	21			18	3							
$4,050 and over	354	354										

[1] Includes 16,119 employees for whom salaries by occupations are not shown separately. For greater detail see Serial No. R. 1301.

[2] The 362 cities other than New York City have been divided into 4 population groups, on the basis of the United States Census of Population for 1930, as follows: Group I includes 12 cities with a population of 500,000 or over; group II, 78 cities of 100,000 and under 500,000; group III, 97 cities of 50,000 and under 100,000; and group IV, 175 cities of 25,000 and under 50,000.

[3] Each receives $840.

[4] Each receives $900.

[5] Includes employees whose salaries range from $552 to $936.

[6] Includes employees whose salaries range from $780 to $912.

[7] Includes employees whose salaries range from $720 to $900.

[8] Includes employees whose salaries range from $4,200 to $12,500.

[9] Includes employees whose salaries range from $4,040 to $10,000.

[10] Includes employees whose salaries range from $4,056 to $8,000.

[11] Includes employees whose salaries range from $4,200 to $6,000.

[12] Includes employees whose salaries range from $4,250 to $4,833.

Variations in salaries of privates resulted not only from differences between cities, but also from the fact that some departments had 5 or more grades of privates. For example, the New York City department classified its privates into 5 grades; the rate of pay for those in the first grade was $3,000, for those in the second grade, $2,500, and for those in the lower grades, $2,000. First-grade privates constituted

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only 55 percent of all privates in New York City, but 89 percent of the privates in the other 355 cities reporting privates.

Salary scales for the 2,633 engineers reported were similar to those for privates; the greatest concentration of salaries (about 13 percent) was in the $100 range beginning at $2,150. The corresponding salary range containing the largest proportion of drivers, however, was $500 lower than that for privates and engineers.

Department heads, of course, were the best paid of the fire-department personnel. The commissioner who was in charge of the New York City department received $12,500 a year, while the next highest salary was $10,000 paid to the chief in Chicago. Over 21 percent of all chiefs had salaries of $4,050 or more in 1938. Salaries of the remainder varied between this amount and $1,560 received by the chief in Enid, Okla., with about one-tenth of the total receiving approximately $3,000 a year.

Fire Protection Related to Concentration of Population

The cost of fire protection per inhabitant depends upon many factors. In any particular city, the primary factors are, of course, the average salary rate and the number of employees per 10,000 of population. The latter depends, in turn, upon a variety of considerations, among which are the nature of local fire hazards, the amount of equipment, and the average hours on duty of the firemen.

As a group, cities of 500,000 or more, except New York City, had fewer fire-department employees per 10,000 of population than any other population group.[2] There was wide variation among individual cities composing this group. For example, the Chicago department had only 9 employees per 10,000 inhabitants in contrast to 20 employees per 10,000 in Boston. New York City had 15 employees per 10,000 inhabitants.

Although average salaries per fire-department employee decreased consistently from the groups of largest to smallest cities, the per capita salary costs did not follow the same pattern. For example, the 12 largest cities, exclusive of New York City, were able to furnish fire protection at a per capita salary cost of $2.97, as contrasted with a cost of $3.05 in cities of 100,000 to 500,000, despite the fact that the average annual salary in the largest cities was more than $300 greater than that in the next size group.

Other Working Conditions

Items of equipment furnished to members of the fire department, policies regarding vacations with pay, and promotion systems affect not only the real income of fire-department employees, but also the quality and cost of the service rendered to the public.

Without exception, fire departments in the 363 cities supplied sleeping quarters for firemen on night duty, and in 241 cities supplied

[2] Ratios are on the basis of the 1930 population figures and are presented to show relative comparisons rather than actual figures. The 1940 census indicates that there were population increases of varying degrees for each group of cities covered by the table. However, preliminary estimates of ratios of employees per 10,000 and salary costs per capita on the basis of 1940 population figures show that although the population increases lower these ratios, they do not change appreciably the relative positions of the groups.

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bedding, linen, and laundry without charge. Only 50 cities furnished uniforms, 17 supplied cloth and trimmings for uniforms, and 5 gave a cash allowance for uniforms. Other items of equipment such as helmets, rubber coats and boots, and badges were frequently furnished.

Practically all fire departments give vacations with pay; less than a half of 1 percent of all employees in the 363 cities received no vacation. Although the vacation periods varied in length from 7 to 33 days, 62 percent of the employees received approximately 2 weeks. Cities in the East North Central and the South Atlantic regions gave the longest vacations. Members of the Chicago and Detroit fire departments, who constituted 31 percent of all employees in the East North Central region, received 20 days. Similarly, the department in Washington, D. C., with 15 percent of the employees in the South Atlantic region, gave 26-day vacations. Most members of the New York City fire department have vacations of 21 days. In only the East South Central region were the vacation periods appreciably shorter than 2 weeks; 42 percent of the total employees in this region received 10 days.

Promotion policies in fire departments are exemplified by the systems of promoting privates. In 263 of the 363 cities it was the general policy to promote privates automatically from one grade to another after a specified period of service, usually a year. Forty-six cities provided for promotion by civil-service examination, and 26 made promotions on the recommendation of superior officers. Of the 28 cities which reported that they did not classify privates in more than one grade, some indicated that they gave salary increases within that grade.

Hours of Work

Hours of work for firemen vary greatly from city to city. Since adequate fire protection has to be provided at all times, a large enough force must always be on duty to take care of ordinary needs and be able to meet emergencies. This has resulted in the development of a considerable number of different systems of operation calling for various periods of duty. In some small communities the hours of duty are practically continuous, and the firemen are obliged to live at or near the fire station, where they are on call at all times. Some small cities and towns have volunteer fire departments, whose members are not paid, but who are subject to call as required. There are occasional examples of combinations of paid and volunteer units within a city.

In general, the actual system of operation used depends to some extent upon customs in an area, but to a greater extent on the size and financial condition of the city. Continuous or nearly continuous duty is not practical in cities of any considerable size. Platoon systems have been introduced to avoid the necessity of continuous duty. In the simplest platoon systems the firemen usually work 1 or a few days continuously, and then have a full 24 hours off duty. Other platoon systems have been developed in which one group works 10 hours during the daytime for several days, and then changes over to 14 hours of night duty. Such systems require a 24-hour period of

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duty for one platoon, and provide a leave period of 24 hours for the other, at each period of change from day to night duty.

There has been a steady but gradual trend toward the elimination of all 24-hour periods of duty. In some large cities, platoon systems have been devised which completely eliminate the 24-hour period of duty, and there is one which provides for an 8-hour day for each fireman, with 1 day off each week. The introduction and establishment of these modern and complicated systems present many problems to city officials. In the first place, the cost increases sharply when hours are reduced, because of the additional personnel needed. For example, the number of firemen needed in a system providing an 8-hour day is about two-thirds greater than for the system in which 2 full days on duty are followed by 1 day off. Secondly, the problem of organization and personnel training is complicated by any change of system which reduces the hours and increases the number of men required. Certain specific requirements as to the number of consecutive hours on duty and days off are often imposed by law, and any change involves months of detailed planning to meet these legal requirements and still provide at all times the requisite number of firemen in each grade and occupational classification. Budgetary considerations are frequently the controlling factor in determining the system of operation, but the general tendency is toward shorter hours and more regular periods of duty.

Only the general subject of the hours of work in various types of platoon systems is presented here.

Single-Platoon System

The single-platoon system ranks next to continuous service with respect to the length of the workweek. Firemen working under one type of single-platoon system are on duty 144 hours per week, as compared with 168 hours for the full week of continuous service. In this type, the fireman is on duty 24 hours a day for 6 days and then has 1 day of leave. If there are 70 firemen on the force, 10 of them take their day of leave on each day of the week in succession. Thus, 60 members of the force are on duty at all times.

In another common variation of the single-platoon system, the members of the force are on duty for 2 days, then off for 1. Under this plan the fireman works 14 full days in a period of 3 weeks, making an average workweek of 4.7 days or 112 hours. The period of 3 weeks is taken as the basis for computing all averages, because not until this period of 21 days is completed does the fireman have a workweek which is identical in all respects with a preceding week.

The shortest workweek under the single-platoon system occurs in a variation in which the pattern is 1 day on and 2 days off, but this type is not common. The average hours worked in this type are 56 per week.

Double-Platoon System

By far the greatest number of firemen work under what is called the double-platoon system, and there are about a half a dozen important types of this system. The simplest is one in which one platoon of fire-

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men is on duty 24 hours without interruption, and then off duty for 24 hours. The second platoon merely alternates with the first in order to maintain continuous fire-protection service. This system is still generally used in many parts of the country because of its simplicity of operation, particularly in smaller departments where limited personnel does not permit more complicated systems. Its primary disadvantage is that the fireman has to be on duty 24 hours a day every other day.

The term "tour" is applied to any period of consecutive hours on duty or off duty. The word "shift," as used in fire departments throughout the country, usually refers to the time when one group or platoon of firemen relieves the platoon which has just completed a tour.

The various types of double-platoon systems differ primarily in the number of days worked before the 24-hour tour is introduced to shift a platoon from one set of hours to the other. Shifts on the third, fourth, fifth, sixth, seventh, or eighth day are common in fire departments throughout the country. If no additional time off is granted, the firemen in these cases work 84 hours a week. When additional time off each week is given, the hours worked are usually 72 per week. This occurs in several States where State laws provide for 1 full day of leave per week for all firemen.

10-Group System (Double-Platoon)

There is a type of double-platoon system which completely eliminates the 24-hour tour. It is called the "10-group" or "elimination" system because it eliminates the necessity for any 24-hour tours of duty for the firemen.

The entire force of firemen is divided into 10 groups, and the groups are so combined for duty that continuous service is maintained with maximum personnel at all times. The pattern of the hours of duty and time off repeats itself every 10 days. During these 10 days each fireman has 8 tours of duty and 2 long tours off. The 8 tours of duty consist of four 9-hour tours, and four 15-hour tours, a total of 96 hours in 10 days, or an average of 9 hours and 36 minutes per day.

Every 10 days each member receives one 48-hour leave and one 24-hour leave. He is also off duty three 9-hour periods and three 15-hour periods, making a total of 144 hours off and 96 hours on. On each day the 10 groups are arranged so that the members of one group are on 24-hour leave, members of another group are about in the middle of their 48-hour leave, members of 4 groups are working a 9-hour tour of duty, and members of 4 groups are working a 15-hour tour. Members of most 10-group elimination double-platoon systems work about 68 hours per week.

Overlapping Group System (Double-Platoon)

The city of San Francisco has developed a unique variation of the double-platoon system in which each member of the force works the same general pattern of hours and these patterns or cycles overlap each other. The fireman is on duty 10 hours during the daytime the first 6 days and then he is off duty 24 hours. This 24 hours off extends through parts of the sixth and seventh days. However, during the

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early part of the sixth day he works a day tour of 10 hours and during the night of the seventh day he is on duty 14 hours, but these two tours of duty are 24 hours apart. The night tour of the seventh day is the beginning of a series of 7 night tours, after which he has 2 full days off. His 15-day cycle is then completed and another is started. It is identical in all respects with the first, except that it begins on a different day of the week. If the first began on Monday, the second would start on a Tuesday. Not until seven periods are completed does the fireman start a cycle again on a Monday.

As in all platoon systems, the primary purpose is to maintain a constant and balanced fire-fighting force on duty at all times, but at the same time allow the firemen reasonable hours of work and adequate time off.

Three-Platoon System

The primary purpose of the three-platoon system is to give the firemen an 8-hour day, with 1 day off each week. Probably the best example of this system is found in New York City. The citizens of New York City passed a law in 1937 which made mandatory the installation of the three-platoon system which is described here briefly. The law applies to firemen of all grades and to officers ranking as high as deputy chief. It provides that no fireman shall be assigned to more than one tour of duty in any 24 consecutive hours and that no tour of duty shall exceed 8 consecutive hours. Also the type of tour is changed each week for every fireman, giving him an 8-hour shift beginning at midnight 1 week, at 4 p. m. the next week, and 8 a. m. the third week.

Under this three-platoon system the fire-fighting personnel is divided into 10 groups in a manner somewhat similar to that explained above in discussing the 10-group double-platoon system. Three groups are on duty each tour, and 2 groups are off on their 32-hour leave. Each day 3 of the groups are on a tour which began at midnight, 3 are on a tour which began at 8 a. m., and 3 at 4 p. m. Each group works 6 tours of one type and then takes a leave of 32 hours. The next week the groups change types of tours. In other words, if group 1 works the tour beginning at midnight for 6 days, the next week the group will shift to the tour beginning at 4 p. m., and in the third week the cycle is completed with 6 tours beginning at 8 a. m. It takes 20 days to complete this cycle. The 32-hour leave which occurs between the tour extending from midnight to 8 a. m. and the tour from 4 p. m. to midnight is responsible for the cycle being 20 days in length rather than 21 days. During the 2 days in which this 32 hours off occurs each member performs 8 hours' duty on each day but the tours are 32 hours apart. In the 20-day period each group performs 18 tours of duty.

Since 20 days is one day short of a 3-week period, it can be seen that if the first cycle began on Monday the second cycle must start on a Sunday. Hence a fireman in any one group would have to work through 7 complete cycles before he would start a cycle on the same day of the week that he started the first cycle. While there still remains some irregularity in a fireman's hours under this system, he has better general working conditions because of the 8-hour day, and the day off each week.

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Fireworks Industry—Earnings and Hours, October 1937[1]

The establishments comprising the fireworks, or "pyrotechnic" industry, may be divided into three distinct groups: (1) The commercial fireworks group, which includes those plants which are engaged solely in the manufacture of various types of fireworks; (2) the display fireworks group, which includes those plants which, in addition to manufacturing fireworks, also undertake the assembly of exhibitions and the actual display of fireworks; (3) the fusee division, which manufactures such products as flares or fusees for use on highways, railroads and ships, railroad torpedoes, and safety fuses and squibs for use in mining.

The term "fireworks" has been defined to include all such articles producing an audible or visible display. Aside from fusees, which have a utilitarian purpose, the principal products of the industry are paper caps, sparklers, colored flares, salutes, Roman candles, skyrockets, pin-wheels, triangles, sky bombs, fountains, and firecrackers of all kinds.

The fireworks industry is small. According to the Census of Manufactures, it had 52 plants, whose product was valued at $5,000 or more in 1935. They employed an average of 1,587 wage earners in that year. The Bureau of Labor Statistics survey included 41 establishments, with a total of 1,384 employees.[2] Of these, 19 plants with 988 workers are in the commercial division, 7 establishments with 86 employees are in the display division, and 15 plants with 310 workers are in the fusee division.

The plants in the fireworks industry are relatively small. The 41 establishments covered in the survey averaged 34 employees each. The establishments are scattered throughout northern and western United States. Although the fireworks plants buy their materials from large companies in the explosives industry, they are independent and unaffiliated organizations. Because of the hazard involved, as well as because of restrictive municipal or State legislation, a great many of the plants are located outside of city limits; hence their wages, hours, and working conditions are influenced largely by local conditions. The industry is highly competitive.

In the fusee division of the industry employment is not particularly subject to seasonal variation. The plants in this division are engaged in the production of articles for the transportation and mining industries so that employment in them depends largely upon general economic conditions in the country. On the other hand, there is a strong seasonal element in employment in the other two divisions of the industry. Thus, the establishments making commercial fireworks depend almost entirely on the demands for the Fourth of July and Christmas.

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[1] Abstract of article in the Monthly Labor Review for April 1938, prepared by J. Perlman, P. L. Jones, and O. R. Witmer, of the Bureau of Labor Statistics.

[2] The survey excluded establishments with fewer than 5 wage earners. This accounts partly for the smaller number of plants and employees covered by the survey as compared with the number in the Census of Manufactures in 1935. Another reason for the lower coverage in number of workers is that the survey was made during a slack season in the display fireworks division.

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The information obtained in this survey relates to a pay-roll period in October 1937, though for a few scattered establishments the data cover either a prior or a later date. This seems to be a representative pay-roll period for the commercial fireworks and fusee divisions. It is not entirely representative for the display fireworks division, although in several instances information for this branch was obtained for a previous pay-roll period.

The employees in this industry are not generally organized. Only one establishment was reported as having a contract with a trade-union.

Average Hourly Earnings

In 16 of the 41 establishments covered, all of the wage earners were paid on a straight time-rate basis. In only 2 plants were all workers paid on a straight piece-rate basis. In 19 establishments, part of the employees were paid time rates, while others were paid piece rates. In the other 4 establishments, some of the workers were paid on a time basis, while others were given a bonus, provided their units of production exceeded a required standard. The average hourly earnings of the 1,384 wage earners covered in the survey amounted to 41.3 cents, males averaging 49.1 cents and females 31.8 cents an hour.

Of the 721 male employees, about one-fifth (141) were classed as skilled, three-fifths (438) as semiskilled and the remaining one-fifth (142) as unskilled. Nearly all the female employees were classed as semiskilled. (See table 1.)

TABLE 1.—*Average hourly earnings, weekly hours, and weekly earnings in fireworks industry, October 1937, by sex, skill, and occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
All male employees	721	$0.491	42.4	$20.82
Skilled males	141	.650	42.0	27.29
Powder mixers	42	.518	41.7	21.62
Foremen, working	55	.802	41.7	33.47
Maintenance and power, skilled	44	.588	42.5	24.99
Semiskilled males	438	.479	41.4	19.86
Loaders, fireworks, machine	51	.522	38.7	20.20
Loaders, fireworks, hand	93	.486	43.6	21.20
Paper fabricators, miscellaneous	53	.408	42.9	17.50
Assemblers and finishers, fireworks	89	.493	39.7	19.56
Fireworks makers, miscellaneous	58	.497	39.7	19.75
Miscellaneous semiskilled	94	.469	42.7	20.02
Unskilled males	142	.379	45.8	17.39
Material carriers and productive helpers	65	.428	41.6	17.81
Laborers	41	.365	42.8	15.62
Watchmen	36	.328	56.8	18.63
All female employees [1]	663	.318	38.3	12.18
Semiskilled females:				
Loaders, fireworks, hand	55	.283	40.8	11.56
Tube rollers, hand	49	.326	40.9	13.32
Paper fabricators, miscellaneous	38	.344	40.1	13.78
Assemblers and finishers, fireworks	360	.305	37.6	11.46
Packers, fireworks	109	.324	38.1	12.37
Miscellaneous semiskilled [2]	52	.408	37.3	15.24

[1] Includes all semiskilled and 14 unskilled employees.
[2] Includes 14 unskilled employees

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There is wide divergence in the average hourly earnings of the three occupations classed as skilled. These averages were 80.2 cents for working foremen, 58.8 cents for skilled mechanics in the maintenance and power departments, and 51.8 cents for powder mixers. The relatively high earnings of working foremen are undoubtedly due to the skill and responsibility required of them in supervising an industry with a predominance of semiskilled and unskilled employees.

Differences in the hourly earnings of males and females for the same skill and occupations must be examined with certain reservations. It frequently happened that although the same occupational designation was used for both males and females, the latter were not performing exactly the same duties as the men.

Taking the States with 3 or more establishments, the average hourly earnings amounted to 53.5 cents for Connecticut, 45.2 cents for Illinois, 43.5 cents for New Jersey, 41.8 cents for Ohio, 35.3 cents for Pennsylvania, and 33.3 cents for Maryland. These State averages combine commercial and display plants and fusee plants in unequal proportion.

An examination of the data indicates the existence of significant variations among the three divisions of the industry (table 2). Thus, considering all employees, the average hourly earnings were 38.3 cents for commercial fireworks, 41.5 cents for display fireworks, and 51.7 cents for the fusee division.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of employees in fireworks industry, October 1937, by division and sex*

Sex	Commercial and display fireworks divisions	Fusee division
Average hourly earnings	$0.386	$0.517
Males	.457	.628
Females	.300	.386
Average weekly hours	41.5	36.8
Males	43.7	37.9
Females	39.1	35.5
Average weekly earnings	$16.02	$18.99
Males	19.96	23.80
Females	11.74	13.72

Weekly Hours and Earnings

Of the 41 plants covered, 19 had scheduled hours of exactly 40 per week at the time of the survey. Only 3 establishments had a workweek of less than 40 hours, their full-time hours being respectively 32½, 35, and 36¼. The remaining plants were distributed as follows: 1 at 41¼, 1 at 42½, 5 at 44, 1 at 45, 7 at 48, 1 at 49½, and 3 at 50 hours per week.

The actual weekly hours of all employees in the fireworks industry averaged 40.4 in October 1937. The averages were 42.4 for males and 38.3 for females. A distribution by sex is given in table 3.

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TABLE 3.—*Distribution of employees in the fireworks industry according to weekly hours, October 1937, by sex*

Weekly hours	Total			Males			Females		
	Number of employees	Simple percentage	Cumulative percentage	Number of employees	Simple percentage	Cumulative percentage	Number of employees	Simple percentage	Cumulative percentage
Under 16 hours	33	2.4	2.4	19	2.6	2.6	14	2.1	2.1
16 and under 24 hours	42	3.0	5.4	20	2.8	5.4	22	3.3	5.4
24 and under 32 hours	57	4.1	9.5	19	2.6	8.0	38	5.8	11.2
32 and under 36 hours	123	8.9	18.4	30	4.2	12.2	93	14.0	25.2
36 and under 40 hours	121	8.8	27.2	63	8.7	20.9	58	8.7	33.9
Exactly 40 hours	439	31.7	58.9	245	34.0	54.9	194	29.3	63.2
Over 40 and under 44 hours	172	12.4	71.3	67	9.3	64.2	105	15.8	79.0
44 and under 48 hours	127	9.2	80.5	47	6.5	70.7	80	12.1	91.1
Exactly 48 hours	207	14.9	95.4	65	9.1	79.8	58	8.7	99.8
Over 48 and under 56 hours				84	11.6	91.4			
56 and under 62 hours	30	2.2	97.6	29	4.0	95.4	1	.2	100.0
62 hours and over	33	2.4	100.0	33	4.6	100.0			
Total	1,384	100.0		721	100.0		663	100.0	
Average weekly hours for all employees	40.4			42.4			38.3		

The average weekly earnings of all employees in the fireworks industry were $16.68 in October 1937. For males, the average earnings were $20.82 per week. According to table 4, one-fourth of them earned $16 and less than $20, and one-fifth $20 and under $24.

TABLE 4.—*Distribution of male and female employees in fireworks industry according to weekly earnings, October 1937*

Weekly earnings	Males			Weekly earnings	Females		
	Number of employees	Simple percentage	Cumulative percentage		Number of employees	Simple percentage	Cumulative percentage
Under $4	14	1.9	1.9	Under $2	2	0.3	0.3
$4 and under $8	24	3.4	5.3	$2 and under $4	18	2.7	3.0
$8 and under $12	29	4.0	9.3	$4 and under $6	37	5.6	8.6
$12 and under $16	100	13.9	23.2	$6 and under $8	37	5.6	14.2
$16 and under $20	180	24.9	48.1	$8 and under $10	88	13.3	27.5
$20 and under $24	148	20.6	68.7	$10 and under $12	108	16.2	43.7
$24 and under $28	109	15.1	83.8	$12 and under $14	142	21.5	65.2
$28 and under $32	54	7.5	91.3	$14 and under $16	136	20.5	85.7
$32 and under $36	25	3.4	94.7	$16 and under $18	54	8.1	93.8
$36 and under $40	13	1.8	96.5	$18 and under $20	19	2.9	96.7
$40 and under $44	17	2.4	98.9	$20 and under $22	12	1.8	98.5
$44 and under $48	4	.5	99.4	$22 and under $24	9	1.3	99.8
$48 and over	4	.6	100.0	$24 and under $26	1	.2	100.0
Total	721	100.0		Total	663	100.0	

Fishing Industry—Earnings and Methods of Wage Payment, 1933[1]

Fishing is one of the pioneer American industries, and it is still a means of livelihood for a substantial segment of the population. In 1930, according to the Bureau of the Census, 73,280 workers were employed in the industry. The census figures, however, tend to under-

[1] From Monthly Labor Review for September 1936.

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state the importance of the fishing industry, as they do not include the Alaskan fishermen; the members of fishing crews who reported their occupations as engineers, cooks, radio operators, seamen, sailors, and deck hands; and many of the persons with whom fishing is an auxiliary occupation. With these workers included, the Bureau of Fisheries estimates that the total working force of the industry has been in the neighborhood of 120,000.

Despite the importance of the industry in the economic framework of the country, comparatively little has been known about the earnings of fishermen. This deficiency is supplied in part by an analysis [2] of the earnings of fishermen published by the National Recovery Administration in 1936. The main body of the data was obtained by means of a questionnaire which, in August 1934, was sent to recorded owners of fishing vessels of 5 net tons and over. The final analysis is based on the reports of 567 vessels. It is believed that this sample is reasonably representative of the industry as a whole.

Extent of Part-Time Employment

Statistics compiled by the Bureau of Fisheries show that approximately a third of the workers engaged in the boat and shore fisheries of the Atlantic and Gulf coasts and the Great Lakes are "casual" fishermen; i. e., those with whom fishing is a secondary occupation.

The part-time fishermen of the eastern United States tend to be found in larger proportions on the Great Lakes, in the Chesapeake Bay area, and on the South Atlantic and Gulf coasts. They are chiefly small farmers or farm laborers. The combination of fishing and farming in these areas is facilitated by the fact that some of the important fisheries of the South and the oyster fishery of the Chesapeake Bay are most active during the winter months.

The principal fisheries in the Northeastern States, when not affording more or less year-round employment, tend to be concentrated in the summer and early fall. Consequently, the New England fishermen are unable to transfer to farming during the slack season as readily as those in the Middle and South Atlantic coast regions. Likewise, there are comparatively few industrial establishments in the area that can offer employment to the fishermen during the off season. To some extent fishing is combined with the resort trades in both New England and on the Middle Atlantic coast, but here again there is an occupational conflict.

No reliable statistics are available on the number of fishermen on the Pacific coast who obtain a major share of their income from other sources. The evidence indicates, however, that the number is not large. The Pacific fisheries are for the most part carried on in deep water and for the large-scale supply of canneries and reduction plants. This type of enterprise is not easily undertaken by the casual worker. Along the Pacific coast, moreover, the agricultural population—the class from which casual fishermen are usually recruited in other parts of the country—is not generally settled in close proximity to the seacoast; but even in this area there are exceptions. Fishing is not as a rule the sole occupation of either the salmon fishermen of the Columbia River or the Alaskan fishermen.

[2] National Recovery Administration. Division of Review. Industry Studies Section. Earnings of Fishermen and of Fishing Craft—Appendix to the Fishery Industry and the Fishery Codes, by John R. Arnold. Washington, 1936.

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Although it is clear that a significant proportion of the total working force is employed only part time, no information is available as to the extent the earnings of fishermen were supplemented by income from other sources.

Methods of Remuneration

A distinguishing feature of the fishing industry is the wide variety in the methods of wage payment. Compensation both by straight wages on a time basis and by piece rates exists. In the marine fisheries, however, by far the most common plan is to pay each member of the crew by a share in the value of the catch. Under this plan the compensation received by individual fishermen is primarily dependent on the quantity of fish caught and the unit price received for them, and secondarily on the items deducted from the gross revenue before arriving at the crew's share.

The arrangement whereby the value of the catch of a fishing craft working on shares is distributed among the persons and interests concerned is known as a "lay." A share fisherman may receive a wage or a bonus on a time or percentage basis in addition to or in lieu of a share in a lay. This arrangement, however, ordinarily applies only to persons with exceptional responsibility, such as the captain, mate, or pilot, or to members of the crew engaged in specialized work, such as the engineer, fireman, radio operator, or cook.

Straight wages on a time basis are usually restricted to the following classes of vessel fisheries:

(1) The crews of most oyster dredges.

(2) The crews of the craft operating pound nets on the coast of New Jersey.

(3) The crews of the menhaden fishing vessels operating out of Reedville, Va. This was the home port of approximately a third of the vessels actively engaged in this branch of the fishing industry in 1933. Some of the menhaden vessels working out of the Middle Atlantic ports north of Virginia operate on a share basis, and a modified share system is used by those operating on the Atlantic coast south of Virginia.

(4) The crews of the paranzella net vessels working out of San Francisco.

(5) On the Great Lakes, and especially on the upper lakes, a straight-time wage appears to be the prevailing system.

(6) The crews of one important trawling fleet working out of Norfolk, Va., are paid on a time basis. The method is also used on some shrimp vessels on the Gulf and in Alaska and occasionally elsewhere.

Piece rates are general among the fishermen employed by the salmon canneries of Alaska. The piece rates may be accompanied, however, by the payment of fixed sums, often referred to as "run money." The only other vessels whose crews are compensated on a straight piece-rate basis are those in the Alaskan cod fishery, working out of Puget Sound and San Francisco.

The compensation of fishing crews by means of piece rates, however, frequently shades off into intermediate systems. Hybrid methods of this kind are common on the menhaden vessels working off the South Atlantic coast, in the shrimp fisheries of the Gulf coast, and in the herring fisheries of Alaska.

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The relative importance of the different methods of wage payment in the fishing industry in 1933 is indicated in table 1. The proportions shown are not fixed, as there is a tendency to shift from one method to another in the hope that the altered arrangement will be more satisfactory to the owners or the crews. Changes were especially common on the Great Lakes during the depression, but they occurred elsewhere as well.

TABLE 1.—*Relative importance of different methods of wage payment in fishing industry, 1933* [1]

Method of remuneration	Percent of total		
	Number of vessels	Number of men	Value of catch
All methods	100	100	100
Share basis	79	72	74
Time rates	19	25	24
Piece rates [2]	2	3	2

[1] Estimated from returns to NRA questionnaire.
[2] Includes piece-rate vessels owned or operated by salmon canneries in Alaska, which were not covered by the original questionnaire.

The predominance of the share system in the fishing industry is customarily explained by the need of providing a means of rewarding the fishing crews adequately for the dangers and hardships to which they are exposed. There is, no doubt, some truth in this explanation; but the continuance of the share system is probably due, at least in part, to the influence of habit and tradition on a very conservative class of workers. At all events fishing is one of the few remaining industries in the country in which the share system of remuneration is still dominant. The variations in earnings which result and the extent to which the earnings of the mass of the workers depend directly on fluctuations of commodity prices have important effects on the status and mental attitude of the fishermen.

Average Earnings in 1933

In 1933 the value of the catch of the 567 fishing vessels for which reports were received totaled $7,649,842. Of the total, 38.6 percent ($2,951,695) went for wage disbursements. The earnings of the 5,051 workers employed by these vessels during the year varied widely, but for the industry as a whole averaged $591. Earnings of the California fishermen were highest, averaging $979. By contrast, an average of only $242 was reported for the South.

On the Great Lakes and West coast, the earnings of the share fishermen exceed those of workers employed on a straight wage basis by a substantial margin. As against an average of $1,005 for the share fishermen of California, for example, those employed on a wage basis averaged $874 in 1933. On the East coast and Gulf, however, the annual earnings of fishing crews that were paid on a wage basis had an advantage over the share fishermen. Thus, in the Middle Atlantic region the wage earners averaged $717, as compared with $630 for the share fishermen.

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A better indication of the wide variation of earnings in the fishing industry is given by table 2 which shows, by regions, the average earnings in 1933 of the fishermen engaged in each of the major branches of the industry for which information is available. In comparing these averages, it should be noted that as a general rule the members of the crew of a lay vessel are allotted one share each, and that any whose duties or responsibilities entitle them to additional or higher compensation receive it in the form of a wage or bonus. For this reason the averages given in the table closely approximate the actual average of the ordinary fishermen and of other members of the crews who did not receive special compensation.

TABLE 2.—*Earnings of fishermen in important branches of the fishing industry in 1933*

Method of remuneration, region, and branch of industry	Number of vessels	Number of men	Value of catch	Total crews' earnings [1]	Average earnings per man [1]
Share vessels:					
New England	105	1,355	$2,530,332	$769,930	$568
Groundfish	67	1,067	2,191,543	638,533	598
Mackerel	14	169	121,047	50,669	[2] 300
Miscellaneous	24	119	217,742	80,728	678
Middle Atlantic	29	185	262,601	116,186	635
Scallop	6	42	106,108	47,073	1,121
Miscellaneous	23	143	156,493	69,113	490
South	57	407	299,793	97,378	239
Red snapper	37	296	195,368	54,455	184
Shrimp	11	24	26,838	13,798	575
Miscellaneous	9	87	77,587	29,125	331
Great Lakes	21	102	126,444	67,254	679
Lake Erie	5	29	39,385	19,746	681
Lakes Huron and Michigan	16	73	87,059	47,508	679
California	58	613	1,475,656	615,676	1,006
Tuna	24	289	1,058,529	[3] 384,500	[3] 1,330
Tuna and sardine	12	124	233,867	[3] 121,970	[3] 984
Sardine, Monterey	10	110	92,380	55,311	503
Sardine, southern California	6	57	72,114	40,996	732
Miscellaneous	6	33	18,766	12,899	391
Northwest and Alaska	160	985	1,233,384	637,305	657
Halibut	69	465	808,558	398,371	857
Salmon	65	339	225,637	111,820	345
Alaska herring	19	132	144,600	100,772	763
Miscellaneous	7	49	54,589	26,342	538
Time-rate vessels:					
New England, oyster	16	125	417,518	88,127	711
Middle Atlantic	30	154	378,632	107,612	717
Oyster	21	100	316,780	70,773	737
Pound net	9	54	61,852	36,839	682
South	27	674	279,966	163,056	243
Menhaden	18	636	224,519	143,255	225
Oyster and shrimp	9	38	55,447	19,801	582
Great Lakes (Lakes Huron and Michigan)	42	173	205,000	94,901	668
California, paranzella net	14	75	302,679	104,166	1,389
Northwest and Alaska, miscellaneous	3	7	9,450	3,675	525
Piece-rate vessels:					
California: Alaska cod	2	77	41,229	28,313	368
Northwest and Alaska: Alaska cod	3	119	87,158	58,116	488

[1] Excluding percentage bonuses charged to gross stock or vessel share.
[2] The data for 10 of the 14 vessels in the mackerel fishery covered only the mackerel season proper, and not winter participation in the southern trawl fishery. Since the southern trawl was the more profitable part of the operation of these vessels in 1933, and because of the omission the average earnings per man should be raised about 75 percent for comparison with the other fisheries.
[3] Including extra shares or half shares allotted to 4 captains in lieu of bonuses charged to the vessel share or the operating expense.

A comparison of the ratios borne by the total crew share to the value of the catch in the various fisheries with the average share per man indicates a certain rough correlation. Both the New England ground fishery and the red-snapper fishery of the South, but particularly the latter, show low average earnings as well as low propor-

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tions of crew shares. There are, however, exceptions to this relationship. The crews of the New England mackerel vessels in 1933 received a normal share of the gross, but because of low prices for their product, the average earnings per man were comparatively low. Their total earnings for the year, however, were approximately 75 percent higher than the average indicated in the table, as the realization, from winter trawling operations in the South, of 10 of the 14 vessels covered, was not included. As the prices received for the trawl catch were relatively much better in 1933 than were those received for mackerel, the excluded shares are believed to have represented about half the earnings for the year of the crews of the 10 vessels.

In the Monterey sardine fishery in California and in the salmon fishery of the Pacific Northwest also, normal ratios of the crew share to gross stock were combined with low earnings per man, though the discrepancy was less extreme than in the New England mackerel fishery.

Another factor that should be considered in comparing earnings in the different branches of the industry is that allowance has to be made for the fact that the cost of food for the crews of some of the vessels has been deducted from the gross stock before arriving at the crew share. On the Great Lakes, in the shrimp industry of the South, and in the salmon troll fishery of Washington and Oregon, the vessels reporting were not ordinarily out of port for more than a day at a time and the men as a rule supplied their own food. In the Monterey sardine and the Alaska herring fisheries, and in a few other branches of the industry, the crew's share was determined before deducting the cost of the food. The individual shares for all of these fishermen are somewhat higher than they should be for strict comparison with the corresponding figures for the share vessels of the New England and Middle Atlantic areas, for the California tuna fishery, for the Pacific halibut fishery, and for some others. No data are available for adjusting the individual share figures accurately to offset this difference.

Furniture Manufacturing Industry—Earnings, 1936, 1937, and 1941[1]

As defined in this article, the furniture industry includes the manufacture of three broad classes of product; namely, wood household furniture, office furniture, and public-building furniture. The scope of the industry studied is somewhat more limited than the census classification, which also embraces household furniture made of metal, fiber, reed, ratten and willow, "laboratory, hospital, and other professional furniture" and "partitions, shelving, cabinet work, and office and store fixtures." Establishments engaged primarily in the manufacture of these products, however, probably employ less than one-fifth of the wage earners in the broader industry and differ from the rest of the industry in their wage structure and in other characteristics.

[1] Summary of an article by Victor S. Baril, Bureau of Labor Statistics, in the Monthly Labor Review for September 1941.

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The branches covered in the Bureau of Labor Statistics survey are estimated to have employed in 1939 some 125,000 workers, and to have manufactured products worth approximately $500,000,000; of this amount, wood household furniture represented roughly seven-eighths, office furniture about one-tenth, and public-building furniture about one-twentieth.

The sample on which the 1941 survey was based was selected entirely from among 373 plants studied in a 1937 survey of the industry. This method was adopted in the interest of speed and economy, and in the belief that these 373 plants, originally selected from a list of all furniture manufacturers, were still reasonably representative of the industry.

The information on which the survey is based was obtained directly from plant records by field representatives of the Bureau. The basic information included the occupation, sex, color, and method of wage payment of each worker, as well as his actual hours of work and his actual earnings for one representative pay-roll period. For each worker extra earnings due to overtime worked at punitive rates of pay were reported separately from earnings at regular rates of pay. The average hourly earnings used in this report, unless otherwise specified, are based on earnings at regular rates of pay and do not reflect any extra earnings received by workers for overtime worked at punitive rates of pay. In this respect the figures for 1941 differ from those for 1937, as the latter are based on earnings at all rates and therefore reflect any extra earnings for overtime worked at higher rates. This difference, however, does not impair the validity of general comparisons, since relatively few of the plants paid extra rates for overtime work in 1937. In the North 29 of the 93 plants covered paid extra for overtime but in most cases the amount of such payments during the period surveyed is believed to have been small.

Wood Household Furniture Branch

The average hourly earnings of 10,430 workers in 72 plants in the wood household branch of the furniture industry in February 1941 amounted to 48.7 cents.[2] Although a few workers earned less than 30 cents an hour and some earned more than $1.20, the vast majority had earnings within a much more limited range. Four-fifths of the workers earned between 30 and 62.5 cents, and one-fifth had earnings within the 2.5-cent interval from 30 to 32.5 cents. (See table 1.) Workers in the North averaged 55.6 cents an hour or half again as much as workers in the South, whose earnings amounted to 36.9 cents.

Average hourly earnings in the 72 plants were slightly higher in 1941 than in the same plants in 1937. Workers in the North averaged 0.9 cent more per hour (55.6 compared to 54.7 cents) and in the South 1.9 cents more per hour (36.9 as against 35 cents). The net gain for the industry as a whole, however, amounted to only 0.1 cent. This seeming inconsistency is explained by the fact that the southern plants with their much lower wage level, experienced substantial

[2] This average is based on earnings at regular rates of pay. If, however, extra earnings for overtime at punitive rates of pay are added to the earnings at regular rates of pay, the over-all average is increased by 1.3 cents.

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gains in employment during the 3½-year period and consequently received greater weight in 1941 than they did in 1937.

TABLE 1.—*Percentage distribution of workers in wood household furniture branch, by average hourly earnings and region, October 1937 and February 1941*

Average hourly earnings	United States		North		South	
	1937	1941	1937	1941	1937	1941
Under 30.0 cents	9.2	0.2	3.4	(1)	22.9	0.4
30.0 and under 32.5 cents	9.4	19.2	2.7	5.4	25.1	44.7
32.5 and under 35.0 cents	6.0	5.3	2.9	2.1	13.3	11.1
35.0 and under 37.5 cents	5.7	7.0	4.1	4.8	9.6	11.2
37.5 and under 40.0 cents	4.6	4.3	4.4	3.7	4.8	5.4
40.0 and under 42.5 cents	8.9	8.3	10.1	9.2	6.2	6.6
42.5 and under 47.5 cents	11.0	10.9	13.2	13.3	5.4	6.6
47.5 and under 52.5 cents	9.9	10.2	11.8	12.9	5.3	5.2
52.5 and under 57.5 cents	7.0	8.0	8.7	10.5	2.9	3.4
57.5 and under 62.5 cents	6.0	5.9	7.8	8.1	1.7	1.8
62.5 and under 67.5 cents	5.9	4.7	7.9	6.6	1.2	1.3
67.5 and under 72.5 cents	3.9	4.1	5.3	5.9	.8	.9
72.5 and under 77.5 cents	3.6	3.6	5.0	5.2	.2	.7
77.5 and under 82.5 cents	2.5	2.2	3.5	3.2	.1	.4
82.5 and under 87.5 cents	2.1	1.5	3.0	2.2	.1	.1
87.5 and under 92.5 cents	1.1	1.1	1.6	1.7	.1	.1
92.5 and under 100.0 cents	1.0	1.0	1.4	1.5	.2	(1)
100.0 and under 110.0 cents	1.0	1.4	1.4	2.1	.1	1
110.0 and under 120.0 cents	.6	.7	.9	1.0	(1)	(1)
120.0 cents and over	.6	.4	.9	.6		
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of plants	72	72	56	56	16	16
Number of workers	9,690	10,430	6,771	6,766	2,919	3,664
Average hourly earnings	$0.486	$0.487	$0.547	$0.556	$0.350	$0.369

[1] Less than one-tenth of 1 percent.

The modest increase in earnings since 1937 is due largely to the raising of wage rates for a substantial number of workers who previously received less than 30 cents an hour. This adjustment, which meant wage increases for 3.4 percent of the workers in the North and 22.5 percent of those in the South, undoubtedly resulted from the application of the 30-cent minimum wage under the Fair Labor Standards Act. Practically all of the workers formerly receiving less than 30 cents were earning between 30 and 32.5 cents in 1941; most of these workers in fact received exactly 30 cents.

Substantial variations in average earnings existed among the four product groups of the wood household-furniture branch. In 1941 the highest average hourly earnings (56.8 cents) were found in plants producing upholstered furniture, the next highest (50.5 cents) in novelty furniture, and the lowest (44.2 cents) in case goods. The average for kitchen furniture plants, 45.8 cents, closely approximated that for case goods. (See table 2.) These differences reflect the skill requirements of the labor force and the wage levels of the regions in which the manufacture of the various products is concentrated.

In the country as a whole three of the four product groups showed slightly higher average hourly earnings in 1941 than in 1937. The increases ranged from 0.1 cent for upholstered furniture plants to 0.9 cent in kitchen furniture plants. The average for novelty furniture was 1.2 cents lower in 1941 than in 1937.

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TABLE 2.—*Percentage distribution of workers in the wood household furniture branch by average hourly earnings and by product, October 1937 and February 1941*

Average hourly earnings	Case goods		Upholstered furniture		Kitchen furniture		Novelty furniture	
	1937	1941	1937	1941	1937	1941	1937	1941
Under 30.0 cents	12.1	0.2	5.8	0.3	11.2	------	6.2	(1)
30.0 and under 32.5 cents	11.5	25.4	7.7	11.7	12.7	22.5	5.7	13.0
32.5 and under 35.0 cents	8.6	6.5	3.2	4.3	6.1	6.0	3.9	3.2
35.0 and under 37.5 cents	7.0	8.2	3.7	4.7	6.7	10.9	5.3	6.0
37.5 and under 40.0 cents	5.3	4.7	2.9	3.1	2.9	4.1	5.8	4.9
40.0 and under 42.5 cents	9.8	9.0	6.8	7.1	8.8	3.6	9.8	9.6
42.5 and under 47.5 cents	11.3	12.0	9.6	8.9	11.4	9.9	11.5	11.4
47.5 and under 52.5 cents	10.3	9.7	9.1	9.9	10.7	11.3	9.7	11.8
52.5 and under 57.5 cents	6.3	6.4	7.4	8.6	10.6	12.0	6.5	9.6
57.5 and under 62.5 cents	4.8	5.0	6.7	5.7	6.8	8.1	7.5	7.7
62.5 and under 67.5 cents	6.0	3.5	6.8	5.7	3.1	3.1	5.5	6.8
67.5 and under 72.5 cents	2.4	3.3	5.8	5.6	4.1	2.8	4.8	4.7
72.5 and under 77.5 cents	1.5	2.5	5.2	4.3	2.2	2.8	6.8	5.6
77.5 and under 82.5 cents	1.0	1.2	4.3	3.9	1.6	1.7	3.7	2.3
82.5 and under 87.5 cents	.7	1.0	3.3	3.0	.1	.8	4.8	1.0
87.5 and under 92.5 cents	.3	.5	2.6	2.7	.4	.3	1.4	.9
92.5 and under 100.0 cents	.5	.5	2.5	2.6	------	------	.5	.5
100.0 and under 110.0 cents	.3	.2	2.9	4.7	.3	.1	.1	.4
110.0 and under 120.0 cents	.2	.1	1.6	2.1	------	------	.5	.5
120.0 cents and over	.1	.1	2.1	1.1	.3	------	------	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of plants	29	29	24	24	6	6	13	13
Number of workers	4,462	4,965	2,584	2,708	765	714	1,879	2,043
Average hourly earnings	$0.436	$0.442	$0.567	$0.568	$0.449	$0.458	$0.517	$0.505

[1] Less than one-tenth of 1 percent.

It is apparent from table 3 that average hourly earnings of workers in the wood household branch tend to vary directly with the size of the community. Although the various averages show some irregularity, the average for plants in the largest communities (67.5 cents) is highest among the various size groups, while that for the smallest communities (39.8 cents) is by far the lowest. The tendency is even more pronounced when the communities are segregated by region.

In all product groups there existed a substantial difference in average hourly earnings in favor of workers in trade-union plants. These differences amounted to 2.7 cents in upholstered furniture, 3.4 cents in case goods, 9.7 cents in the combined novelty and kitchen furniture groups, and 6.3 cents in the wood household branch as a whole.

There appears to be no consistent relationship between size of plant and average hourly earnings.

TABLE 3.—*Average hourly earnings in the wood-household furniture branch, by size of community and region, February 1941*

Size of community	United States			North			South		
	Number of plants	Number of workers	Average hourly earnings	Number of plants	Number of workers	Average hourly earnings	Number of plants	Number of workers	Average hourly earnings
Under 10,000	17	2,779	$0.397	9	1,178	$0.462	8	1,601	$0.351
10,000 and under 20,000	13	2,426	.487	10	1,347	.583	3	1,079	.378
20,000 and under 50,000	9	1,363	.467	7	954	.490			
50,000 and under 100,000	4	553	.515	4	553	.515	5	984	.388
100,000 and under 500,000	12	1,667	.476	9	1,092	.537			
500,000 and over	17	1,642	.675	17	1,642	.675			
Total	72	10,430	.487	56	6,766	.556	16	3,664	.369

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Office Furniture Branch

The 1,960 workers in 16 plants manufacturing wood office furniture earned an average of 47.9 cents an hour in February 1941. (See table 4.) This average is 0.8 cent lower than the general average for wood household furniture but 3.7 cents higher than the average for case goods, the product most comparable to wood office furniture.

Average hourly earnings were 2.9 cents higher in February 1941 than in October 1937. The increase was due largely to the almost complete elimination of the "under 30 cents" group in 1941. Most of the workers formerly receiving less than 30 cents had been shifted to the next higher wage class.

TABLE 4.—*Percentage distribution of workers in wood office furniture branch, by average hourly earnings, October 1937 and February 1941*

Average hourly earnings	1937	1941	Average hourly earnings	1937	1941
Under 30.0 cents	4.7	0.1	77.5 and under 82.5 cents	1.0	1.9
30.0 and under 32.5 cents	8.3	11.2	82.5 and under 87.5 cents	.9	1.4
32.5 and under 35.0 cents	5.4	4.2	87.5 and under 92.5 cents	.3	.8
35.0 and under 37.5 cents	7.3	14.7	92.5 and under 100.0 cents	.1	.8
37.5 and under 40.0 cents	8.9	4.1	100.0 and under 110.0 cents	.5	.4
40.0 and under 42.5 cents	14.2	11.6	110.0 and under 120.0 cents	.1	.2
42.5 and under 47.5 cents	16.8	10.9			
47.5 and under 52.5 cents	11.8	11.8			
52.5 and under 57.5 cents	6.3	7.6	Total	100.0	100.0
57.5 and under 62.5 cents	5.4	5.5			
62.5 and under 67.5 cents	4.3	6.0	Number of plants	16	16
67.5 and under 72.5 cents	1.9	3.7	Number of workers	1,655	1,960
72.5 and under 77.5 cents	1.8	3.1	Average hourly earnings	$0.450	$0.479

Workers in the metal office furniture division are on the whole the highest-paid group of workers in the industry. The average hourly earnings of the 3,717 workers surveyed amounted to 68.7 cents in February 1941. These earnings exceeded by nearly 10 cents those for workers in the public-building branch and by at least 20 cents those in the wood household branch and in the wood office division of the industry. (See table 5.)

TABLE 5.—*Percentage distribution of workers in metal office furniture branch, by average hourly earnings, October 1937 and February 1941*

Average hourly earnings	1937	1941	Average hourly earnings	1937	1941
Under 40.0 cents	0.5	1.2	87.5 and under 92.5 cents	5.7	5.2
40.0 and under 42.5 cents	2.5	1.5	92.5 and under 100.0 cents	3.3	5.2
42.5 and under 47.5 cents	5.7	4.7	100.0 and under 110.0 cents	2.0	2.4
47.5 and under 52.5 cents	12.6	8.3	110.0 and under 120.0 cents	.7	1.4
52.5 and under 57.5 cents	10.4	11.3	120.0 cents and over	.5	.5
57.5 and under 62.5 cents	11.5	13.1			
62.5 and under 67.5 cents	10.9	11.2	Total	100.0	100.0
67.5 and under 72.5 cents	9.8	11.4			
72.5 and under 77.5 cents	9.4	9.2	Number of plants	11	11
77.5 and under 82.5 cents	8.4	7.0	Number of workers	2,402	3,717
82.5 and under 87.5 cents	6.1	6.4	Average hourly earnings	$0.673	$0.687

Public-Building Furniture Branch

The average hourly earnings of workers in the public-building furniture branch, 59.2 cents in February 1941, were next to the highest for any division of the furniture industry. Though 9.5 cents lower

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than the average for metal office furniture workers, the earningse of the 1,719 workers in public-building furniture exceeded by 11.3 cents the average for wood office furniture and by 10.5 cents that for wood household furniture. (See table 6.)

TABLE 6.—*Percentage distribution of workers in public-building furniture branch, by average hourly earnings, October 1937 and February 1941*

Average hourly earnings	1937	1941	Average hourly earnings	1937	1941
Under 30.0 cents	3.8	0.1	77.5 and under 82.5 cents	3.8	6.2
30.0 and under 32.5 cents	4.4	5.0	82.5 and under 87.5 cents	2.4	3.8
32.5 and under 35.0 cents	3.5	4.1	87.5 and under 92.5 cents	2.3	2.3
35.0 and under 37.5 cents	7.1	5.5	92.5 and under 100.0 cents	2.6	1.9
37.5 and under 40.0 cents	5.6	2.9	100.0 and under 110.0 cents	.9	1.9
40.0 and under 42.5 cents	5.1	4.8	110.0 and under 120.0 cents	.2	.7
42.5 and under 47.5 cents	8.0	9.9	120.0 cents and over	.2	.2
47.5 and under 52.5 cents	8.4	7.9			
52.5 and under 57.5 cents	9.4	7.8	Total	100.0	100.0
57.5 and under 62.5 cents	10.2	8.2			
62.5 and under 67.5 cents	8.3	9.0	Number of plants	13	13
67.5 and under 72.5 cents	6.6	9.0	Number of workers	1,708	1,719
72.5 and under 77.5 cents	7.2	8.8	Average hourly earnings	$0.548	$0.592

Furniture Industry as a Whole

The figures in table 7 present a composite picture for the industry covered in this survey, i. e., wood household, wood and metal office, and public-building furniture. Due to the fact that the wood household branch was not sampled in the same proportion as the other divisions of the industry, it was necessary to assign a weight of 4 to the data for the wood household branch in order that it might be represented in the same proportion as those for the office and public-building furniture branches. Inasmuch as the weights used are approximations, the resulting figures must be considered estimates.

TABLE 7.—*Estimated percentage distribution of workers in the furniture industry, by average hourly earnings and region, October 1937 and February 1941*

Average hourly earnings	United States		North		South	
	1937	1941	1937	1941	1937	1941
Under 30.0 cents	8.4	0.1	3.0	(1)	22.8	0.4
30.0 and under 32.5 cents	8.7	17.0	2.6	4.7	25.1	44.7
32.5 and under 35.0 cents	5.6	4.8	2.7	1.9	13.4	11.4
35.0 and under 37.5 cents	5.5	6.8	4.0	4.9	9.6	11.2
37.5 and under 40.0 cents	4.5	3.9	4.4	3.3	4.8	5.4
40.0 and under 42.5 cents	8.6	7.8	9.5	8.3	6.2	6.6
42.5 and under 47.5 cents	10.7	10.4	12.5	12.1	5.5	6.6
47.5 and under 52.5 cents	10.0	10.1	11.8	12.2	5.3	5.3
52.5 and under 57.5 cents	7.2	8.2	8.9	10.4	2.8	3.3
57.5 and under 62.5 cents	6.4	6.5	8.2	8.6	1.7	1.8
62.5 and under 67.5 cents	6.2	5.4	8.1	7.2	1.2	1.3
67.5 and under 72.5 cents	4.3	4.8	5.6	6.6	.8	.8
72.5 and under 77.5 cents	4.0	4.2	5.4	5.7	.2	.6
77.5 and under 82.5 cents	2.8	2.7	3.8	3.7	.1	.3
82.5 and under 87.5 cents	2.3	1.9	3.1	2.8	.1	.1
87.5 and under 92.5 cents	1.4	1.5	1.9	2.1	.1	.1
92.5 and under 100.0 cents	1.2	1.3	1.5	1.9	.2	(1)
100.0 and under 110.0 cents	1.0	1.5	1.4	2.1	.1	.1
110.0 and under 120.0 cents	.6	.7	.8	1.0	(1)	(1)
120.0 cents and over	.6	.4	.8	.5		
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average hourly earnings	$0.496	$0.505	$0.554	$0.571	$0.350	$0.369

[1] Less than a tenth of 1 percent.

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Workers in the furniture industry earned an average of 50.5 cents an hour in February 1941 or 0.9 cents more than in October 1937. In the North workers averaged 57.1 cents an hour, and in the South 36.9 cents. These averages represent increases over 1937 of 1.7 and 1.9 cents, respectively.

In 1937, 3 percent of the northern workers and 22.8 percent of the southern workers received less than 30 cents an hour. Most of these workers were absorbed by 1941 in the 30 and under 32.5 cent interval. It is probable that a very high percentage of these workers were receiving exactly 30 cents an hour, the minimum under the Fair Labor Standards Act.

Increases in earnings were also received by workers who already earned more than the minimum of 30 cents. In the North these increases appear to be largely confined to the wage brackets under 72.5 cents and in the South to the wage brackets under 57.5 cents.

Estimated Distribution of Hourly Earnings of Office Workers

Separate wage information was obtained for certain office employees (other than salesmen, professional and technical workers, proprietors, mangers, and officials). These employees worked in offices attached to the plants surveyed. Employees in central offices away from the plants surveyed were not covered.

The distributions presented in table 8 are estimates, based on actual returns for 983 workers. It was necessary to weight the data reported for the wood household branch by 4, in order that the data for all branches might be combined on a comparable basis.

Office workers in the furniture industry earned in February 1941 an average of 54.2 cents an hour, but there was a rather wide dispersion of individual earnings about this average.

TABLE 8.—*Estimated percentage distribution of office workers in the furniture industry by average hourly earnings and region, February 1941*

Average hourly earnings	United States	North	South	Average hourly earnings	United States	North	South
Under 30.0 cents	0.9	0.4	2.6	77.5 and under 82.5 cents	2.7	2.5	3.4
30.0 and under 32.5 cents	6.2	6.5	4.7	82.5 and under 87.5 cents	2.0	2.3	.9
32.5 and under 35.0 cents	3.6	3.8	2.6	87.5 and under 92.5 cents	2.0	2.3	.9
35.0 and under 37.5 cents	7.7	9.5	1.1	92.5 and under 100.0 cents	.7	.8	----
37.5 and under 40.0 cents	5.5	4.5	9.5	100.0 and under 110.0 cents	2.1	1.8	3.4
40.0 and under 42.5 cents	7.8	7.3	9.7	110.0 and under 120.0 cents	.8	1.0	----
42.5 and under 47.5 cents	15.7	15.9	15.4	120.0 cents and over	1.3	1.7	----
47.5 and under 52.5 cents	13.2	12.2	16.9	Total	100.0	100.0	100.0
52.5 and under 57.5 cents	6.8	7.1	5.4	Average hourly earnings	$0.542	$0.545	$0.514
57.5 and under 62.5 cents	7.9	7.3	10.3				
62.5 and under 67.5 cents	6.0	6.2	5.4				
67.5 and under 72.5 cents	4.2	3.5	6.9				
72.5 and under 77.5 cents	2.9	3.4	.9				

The average hourly earnings of office employees in the South, 51.4 cents an hour, were only 3.1 cents lower than those of office employees in the North. Comparing the two distributions it will be seen that there were substantially more workers in the South with earnings in the intermediate wage brackets (37.5 to 62.5 cents), but few workers with earnings in the wage brackets either above or below the intermediate group.

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Earnings in Minor Branches of Industry

In addition to its more detailed survey of the wage structure of the major branches of the furniture industry, the Bureau obtained information on earnings in a limited number of establishments producing juvenile, porch, and camp furniture made of wood, and household furniture made of fiber, reed, rattan, and willow. Data for these branches have been excluded from the preceding discussion of the furniture industry.

The average hourly earnings of 2,394 workers in 29 plants manufacturing wood juvenile, porch, and camp furniture amounted in February 1941 to 46.1 cents. Individual earnings were largely confined to the lower wage brackets.

Regional differences account for much of the variation in individual earnings. Fully four-fifths of the workers in the South, as against only 28.7 percent of those in the North, had average hourly earnings of less than 40 cents. Much variation in average hourly earnings is due to product differences. Thus, workers in plants making wood juvenile furniture averaged 50.9 cents, while workers in plants manufacturing wood porch and camp furniture averaged only 40.2 cents.

The general average hourly earnings of 554 workers in 11 plants manufacturing household furniture made of fiber, reed, rattan, and willow amounted to 49.7 cents.

Annual Earnings in Northern Factories, 1936[3]

The average annual earnings in the furniture manufacturing industry in the North in 1936 amounted to $1,202 for wage earners whose employment extended over 12 months. When the group was enlarged to include those working 9 months or more, the average fell slightly to $1,177, and then dropped again, to $1,133, when employees working at least 6 months were included. For all of the employees who had work in these factories at any time during the year, the average was only $997. These averages relate only to the earnings of employees in factories in which they were at work in October 1937.

It should be pointed out that the figures cover only the total earnings and number of pay-roll periods in 1936 of each employee in the establishment in which he worked during October 1937, which includes the pay-roll period covered by the wages and hours data. This limitation makes it necessary to classify the wage earners according to the number of months worked in that plant in 1936, the classes used here embracing those employees whose work extended over (1) 12 months (2) 9 months or more, (3) 6 months or more, and (4) any part of the year. Those who worked in the same establishments throughout the year constitute the permanent employees. However, those who worked 9 but less than 12 months may also be classified with the permanent labor force, because in most instances the opportunities for such persons to obtain work in other plants are very small. In other words, for these employees the figures obtained by the Bureau cover more or less their total annual earnings for 1936. No such reliance may be placed on the data when the group is enlarged to include those whose work extended over 6 months or more and, least of all, when those employees are included who worked any part of the

[3] From the Monthly Labor Review for April 1939.

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year, as each of these classes includes a large number of employees who quite likely worked in other establishments.

Earnings by Skill

Classified on the basis of skill, the average annual earnings of employees who worked during 12 months were $1,317 for skilled, $1,120 for semiskilled, and $988 for unskilled employees. (See table 9.) This means a difference of $197 between skilled and semiskilled workers, as compared with a difference of $132 between semiskilled and unskilled employees. The average annual earnings of employees who worked 9 months or more were $1,177, or only $25 less than the average of those working throughout the year.

In view of the small coverage, any generalizations with respect to differences in average annual earnings among the various product divisions of the industry should be made with caution. Generally speaking, the highest average annual earnings were reported in the metal office and public seating furniture branches of the industry. Upholstered furniture plants occupied a middle position, while the lowest figures are shown for plants making case goods, novelty, kitchen, and wood office furniture.

TABLE 9.—*Average annual earnings in 68 furniture factories in the North, 1936, by product and skill*

Employees whose work extended over—	All branches of the industry	Wood furniture							Metal office furniture	Public seating furniture
		Total	Household furniture					Wood office furniture		
			Total	Case goods	Upholstered	Novelty	Kitchen			
12 months	$1,202	$1,175	$1,178	$1,149	$1,229	$1,125	$1,162	$1,150	$1,278	$1,328
Skilled	1,317	1,287	1,287	1,266	1,331	1,206	(1)	1,284	1,409	1,479
Semiskilled	1,120	1,089	1,092	1,059	1,126	1,096	(1)	1,052	1,214	1,232
Unskilled	988	964	965	971	(1)	(1)	(1)	(1)	(1)	(1)
9 months or more	1,177	1,131	1,131	1,093	1,194	1,096	1,071	1,135	1,304	1,272
Skilled	1,294	1,245	1,245	1,208	1,301	1,195	(1)	1,249	1,452	1,402
Semiskilled	1,104	1,048	1,047	1,018	1,083	1,053	1,033	1,054	1,240	1,215
Unskilled	965	926	921	922	947	(1)	(1)	(1)	1,057	(1)
6 months or more	1,133	1,084	1,082	1,056	1,163	992	1,045	1,109	1,261	1,252
Skilled	1,254	1,205	1,204	1,169	1,270	1,126	(1)	1,219	1,416	1,365
Semiskilled	1,063	1,005	1,002	989	1,055	941	1,009	1,035	1,197	1,200
Unskilled	910	864	856	868	909	789	(1)	(1)	1,015	(1)
Any part of the year	997	958	956	919	1,045	871	958	972	1,114	1,062
Skilled	1,168	1,121	1,121	1,074	1,186	1,058	(1)	1,121	1,350	1,245
Semiskilled	923	879	879	857	935	817	937	883	1,030	1,011
Unskilled	701	667	657	657	688	630	(1)	(1)	811	721

[1] Employees too few to justify computation of an average.

Granite Industry—Earnings and Hours, August 1937[1]

In the granite industry, as well as in most of the other stone industries, it is customary to classify the product into (1) broken or crushed stone and (2) dimension stone. Broken or crushed stone includes

[1] Abstract of article in the Monthly Labor Review for December 1937, prepared by J. Perlman, P. J. Jones, and O. R. Witmer, of the Bureau of Labor Statistics.

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irregular fragments of various sizes, while dimension stone includes that cut to specific sizes and shapes. The dimension-granite industry, which is covered by the present article, may be further subdivided, by process, into quarrying and finishing. Some plants do quarrying only and sell rough blocks or slabs, some do both quarrying and finishing, and some buy rough stock and limit their activities to finishing only.

Granites are found in many parts of the country, the chief areas being the Appalachian district from Maine to Georgia, the Middle Western States (especially Minnesota and Wisconsin), the Rocky Mountain States, and the Pacific States (chiefly California).

As regards the uses of dimension granite,[2] the products in order of importance are monumental stone, building stone, paving blocks, curbing stone, and rubble. Monumental stone is used for tombstones and large monuments or mausoleums. The latter are made from the best grade of granite, which is carefully selected on the basis of color, texture, and freedom from blemish. A high polish is important to the stone. This requires considerable skill. Increasing quantities of polished stone are also being used for building purposes, because such stone is attractive and can be cleaned more easily than rough stone. Most of the building granite, however, consists of unpolished stone cut to specified shape and size in accordance with building needs.

Of the 185 plants covered in this survey, 39 did quarrying only, 102 finishing only, and 44 both quarrying and finishing. In selecting the plants the Bureau exercised great care to make the sample representative of the industry.

The information obtained related mainly to a pay-roll period in the first half of August 1937, although in a few plants it was necessary to take a period immediately before or after that time. Reports indicate that in all cases this period was representative.

Average Hourly Earnings

Most of the employees in the quarries were paid on a time-rate basis. In 30 of the 83 establishments covered, punitive overtime rates, usually time and one-half, were paid to some employees. In 67 plants overtime compensation on a pro rata basis was paid to some of the workers.

In the finishing plants nearly all of the employees, with the exception of blacksmiths and paving cutters in some of the plants, were paid on a time-rate basis. In a number of cases it was the custom for the firm to pay the blacksmith a fixed amount for each man for whom he sharpened tools. In 86 finishing establishments overtime rates on a punitive basis, usually time and one-half, were paid to some of the workers. Pro rata rate for overtime to some of the employees was also found in 121 plants.

The 1,741 workers employed in the 83 quarries covered in this survey averaged 53.7 cents per hour in August 1937. The range of earnings was from about 10 cents an hour for a few unskilled workers in the lowest-wage quarries to more than a dollar for the best-paid workers. (See table 1.)

[2] Broken or crushed stone is used chiefly for road construction, railroad ballast, concrete aggregate, etc.

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The average hourly earnings of the 3,669 workers employed in the 146 finishing plants included in this survey amounted to 75.5 cents in August 1937. This was nearly 22 cents higher than the corresponding figure (53.7 cents) for quarries.

TABLE 1.—*Distribution of employees in dimension-granite industry by average hourly earnings, August 1937*

Average hourly earnings	Quarrying			Finishing		
	Number of employees	Simple percentage	Cumulative percentage	Number of employees	Simple percentage	Cumulative percentage
10.0 and under 12.5 cents	5	0.3	0.3	2	0.1	0.1
12.5 and under 17.5 cents	75	4.3	4.6	23	.6	.7
17.5 and under 22.5 cents	53	3.0	7.6	45	1.2	1.9
22.5 and under 27.5 cents	53	3.1	10.7	65	1.8	3.7
27.5 and under 32.5 cents	89	5.1	15.8	58	1.6	5.3
32.5 and under 37.5 cents	104	6.0	21.8	99	2.7	8.0
37.5 and under 42.5 cents	164	9.4	31.2	195	5.3	13.3
42.5 and under 47.5 cents	59	3.4	34.6	136	3.7	17.0
47.5 and under 52.5 cents	120	6.9	41.5	257	7.0	24.0
52.5 and under 57.5 cents	157	9.0	50.5	156	4.2	28.2
57.5 and under 62.5 cents	133	7.6	58.1	155	4.3	32.5
62.5 and under 67.5 cents	212	12.2	70.3	203	5.5	38.0
67.5 and under 72.5 cents	232	13.3	83.6	137	3.7	41.7
72.5 and under 77.5 cents	129	7.4	91.0	191	5.2	46.9
77.5 and under 82.5 cents	21	1.2	92.2	237	6.5	53.4
82.5 and under 87.5 cents	19	1.1	93.3	90	2.4	55.8
87.5 and under 92.5 cents	36	2.1	95.4	155	4.3	60.1
92.5 and under 97.5 cents	10	.6	96.0	54	1.4	61.5
97.5 and under 102.5 cents	34	2.1	97.9	1,017	27.8	89.3
102.5 and under 107.5 cents				128	3.5	92.8
107.5 and under 112.5 cents				54	1.4	94.2
112.5 and under 125.0 cents	36	2.1	100.0	92	2.5	96.7
125.0 and under 150.0 cents				114	3.1	99.8
150.0 cents and over				6	.2	100.0
Total	1,741	100.0		3,669	100.0	

Geographical and Occupational Differences

The average hourly earnings of all employees in quarries surveyed ranged from 24.6 cents in Georgia and South Carolina combined to 72.4 cents in Vermont. North Carolina averaged 36.5 cents, while the average of Pennsylvania and Maryland was approximately 42 cents. The three Middle Western States—Wisconsin, Minnesota, and South Dakota—had a combined average of 54 cents, and occupied more or less a middle position between the two extremes. New York and Connecticut together averaged about 60 cents, while the remaining New England States averaged about 66 cents, thus being near the top limit denoted by the Vermont average.

In the finishing plants the hourly earnings of all employees by States in the establishments surveyed ranged from 38.7 cents in South Carolina to $1.052 in New York, but, excluding these two States, the spread was only from 58.6 cents in North Carolina to 91.2 cents in New Hampshire. The average for finishing plants surveyed in Georgia was slightly higher than in North Carolina, in this respect apparently differing from quarries. But in both branches of the industry, the three Southern States had the lowest averages. Finishing plants in Pennsylvania and Maryland had higher averages

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than those in the three Middle Western States. This also represents a change in the regional relationship found in quarrying. As in quarries, the highest averages in the finishing branch of the industry also appeared in the New England States. The average of California was on a par with the lowest averages reported in the New England States.

Of the 1,741 quarry employees covered, 1,216, or 69.9 percent, were classified by the plants as skilled. The remaining employees were divided almost equally between semiskilled (246, or 14.1 percent) and unskilled (279, or 16.0 percent). There were only five apprentices (classified as semiskilled) found in this branch of the industry.

Skill is one of the elements responsible for the variations in individual earnings, as may be seen from the fact that the average hourly earnings amounted to 59.1 cents for skilled, 44.6 cents for semiskilled, and 38.4 cents for unskilled workers.

The frequency distributions of the earnings of individual employees in finishing plants further indicate the relative advantage of skilled workers. Thus, only 1.7 percent of the workers classified as skilled earned less than 37.5 cents an hour, as compared with 24.1 percent of the semiskilled, 25.1 percent of the apprentices, and 35.4 percent of the unskilled. The figure 37.5 cents per hour is just below the average of the unskilled.

There is also considerable variation in the average hourly earnings among the various occupations belonging to each skill. Occupational averages are presented in table 2 for the region with the highest average wage for all occupations and for the region with the lowest average.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings in dimension-granite industry, August 1937, by skill and occupation*

QUARRYING

Skill and occupation	Average hourly earnings	Average weekly hours	Average weekly earnings	Average hourly earnings	Average weekly hours	Average weekly earnings
	Vermont			North Carolina, Georgia, and South Carolina [1]		
All employees	$0.724	37.1	$26.84	$0.281	45.9	$12.92
Skilled employees	.779	37.2	29.03	.317	47.6	15.08
Blacksmiths	.851	37.5	31.97	.503	46.5	23.38
Channel bar operators	.744	35.6	26.44	.280	44.5	12.46
Derrickmen	.691	38.8	26.83	.232	44.9	10.43
Drillers	[2]	[2]	[2]	.196	50.9	9.96
Hoist engineers	.711	38.7	27.52	.302	48.3	14.58
Miscellaneous engineers	[2]	[2]	[2]	.398	50.7	20.14
Quarrymen	.678	36.4	24.70	.202	46.1	9.33
Working foremen	1.287	36.7	47.17	.565	48.4	27.32
Miscellaneous, skilled	.867	39.7	34.43	.387	50.2	19.41
Semiskilled employees	.667	35.6	23.72	.239	43.7	10.45
Bar gang men				[2]	[2]	[2]
Derrick signalmen	.696	34.5	24.05	[2]	[2]	[2]
Truck drivers	[2]	[2]	[2]	.325	41.0	13.32
Miscellaneous helpers	.637	35.4	22.57	.191	49.8	9.51
Miscellaneous, semiskilled [3]	[2]	[2]	[2]	[2]	[2]	[2]
Unskilled employees	.524	37.7	19.87	.226	43.8	9.92
Grouters	.567	35.3	20.02	.190	42.0	7.96
Laborers	[2]	[2]	[2]	.228	45.1	10.26
Tool runners	[2]	[2]	[2]	.196	44.6	8.72
Miscellaneous, unskilled	[2]	[2]	[2]	.289	38.5	11.13

See footnotes at end of table.

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TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings in dimension-granite industry, August 1937, by skill and occupation*—Continued

FINISHING

Skill and occupation	Average hourly earnings	Average weekly hours	Average weekly earnings	Average hourly earnings	Average weekly hours	Average weekly earnings
	Vermont			North Carolina, Georgia, and South Carolina		
All employees	$0.895	37.3	$33.39	$0.552	38.1	$21.06
Skilled employees	.984	37.1	36.47	.714	36.3	25.93
Bed setters	1.018	39.4	40.08	(2)	(2)	(2)
Blacksmiths	1.004	35.2	35.35	.685	35.4	24.24
Boxers	.812	39.1	31.72	.366	41.7	15.25
Carbo sawyers	.959	36.1	34.60	(2)	(2)	(2)
Carvers	1.295	38.3	49.59	(2)	(2)	(2)
Cranemen	.817	40.1	32.77	.455	37.3	16.97
Cutters	1.002	36.2	36.24	.801	36.2	29.00
Drillers				.352	35.3	12.42
Foremen	(2)	(2)	(2)	.970	43.4	42.11
Lumpers	.804	38.4	30.83	(2)	(2)	(2)
Machinists	(2)	(2)	(2)	(2)	(2)	(2)
Paving cutters				.750	24.7	18.53
Polishers	1.040	37.7	39.22	.655	43.4	28.41
Sandblasters	1.077	37.5	40.33	.774	34.2	26.49
Sawyers	.988	40.8	40.32	.557	33.7	18.79
Surfacers	1.012	36.1	36.51	.731	36.6	26.76
Incapacitated employees [4]	(2)	(2)	(2)	(2)	(2)	(2)
Miscellaneous, skilled	(2)	(2)	(2)	(2)	(2)	(2)
Semiskilled employees	.461	39.7	18.27	.316	41.1	12.96
Learners	(2)	(2)	(2)	(2)	(2)	(2)
Sawyers' helpers	(2)	(2)	(2)			
Tool grinders	.483	38.2	18.44	(2)	(2)	(2)
Truck drivers				.282	46.3	13.06
Miscellaneous helpers	(2)	(2)	(2)	.299	41.7	12.45
Miscellaneous, semiskilled	(2)	(2)	(2)	(2)	(2)	(2)
Unskilled employees	.511	39.5	20.18	.241	41.8	10.09
Laborers	.538	38.2	20.55	.235	43.5	10.24
Tool runners	(2)	(2)	(2)	.248	37.3	9.23
Miscellaneous, unskilled	.502	40.8	20.51	(2)	(2)	(2)
Apprentices	.532	36.5	19.41	.371	40.8	15.12
Cutters' apprentices, first year	.398	34.6	13.77	.265	41.3	10.93
Cutters' apprentices, second year	.475	38.4	18.22	.382	42.6	16.28
Cutters' apprentices, third year	.649	36.0	23.36	.457	42.0	19.20
Cutters' apprentices, miscellaneous				(2)	(2)	(2)
Miscellaneous apprentices	.560	37.5	20.99	.345	41.7	14.38

[1] Includes only 1 quarry in South Carolina.
[2] Not enough employees to justify the computation of an average.
[3] Includes apprentices and learners.
[4] Workers who are not so proficient as regular employees because of old age or physical disability.

Unionization

Quarrying.—With one exception, all the trade-union quarries in the sample were located in the New England States. The number of trade-union establishments found within this area was 24, which may be compared with a total of 83 quarries covered.[3]

Considering all employees, there was very little difference in the average hourly earnings between the trade-union and non-trade-union establishments in the New England States including New York, the respective averages being 68.6 and 69.3 cents. For skilled workers, however, the average in trade-union plants was 68.9 cents, as compared with 74.1 cents in non-trade-union plants. Examination of the data indicates that the higher average in non-trade-union establish-

[3] Since the survey was made, additional plants have signed union agreements.

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ments was due entirely to the influence of a few plants that operated under an employee-representation plan. On the other hand, in the case of semiskilled and unskilled workers, the average (58.8 cents per hour) in the trade-union plants exceeded that (54.4 cents) in the non-trade-union establishments.

Finishing.—Of the 146 finishing plants in the sample, 68 were trade-union establishments.[4] Fifty-eight of the trade-union plants were located in the New England States including New York.

In the New England States including New York, the average hourly earnings were greater in trade-union than in non-trade-union establishments. Taking all employees, the trade-union average was 92.9 cents as compared with 76.0 cents for non-trade-union shops, the respective averages for skilled being 96.4 and 89.3 cents and for semiskilled, unskilled, and apprentices 54.0 and 50.9 cents. A similar difference was found in the Middle Western States, where the trade-union average was 75.5 and the non-trade-union average 63.0 cents for all employees, with the respective averages for the skilled workers amounting to 78.5 and 71.1 cents.

Earnings of Colored Workers

One of the principal reasons for the low wages in quarries in the Southern States is the presence of a relatively large number of colored workers. This is especially true of Georgia and South Carolina combined, where the majority of each group according to skill was composed of Negro employees. (See table 3.)

TABLE 3.—*Average hourly earnings of employees in quarries of dimension-granite industry in Southern States, August 1937, by skill and color*

Skill and color	Number of employees			Average hourly earnings		
	Total	North Carolina	Georgia and South Carolina [1]	Total	North Carolina	Georgia and South Carolina [1]
Skilled employees	205	49	156	$0.317	$0.466	$0.279
White	85	37	48	.470	.498	.450
Colored	120	12	108	.217	.354	.206
Semiskilled employees	61	25	36	.239	.316	.203
White	24	15	9	.275	.330	(2)
Colored	37	10	27	.222	(2)	.199
Unskilled employees	97	52	45	.226	.287	.168
White	29	22	7	.268	.304	(2)
Colored	68	30	38	.211	.276	.165

[1] Includes only 1 quarry in South Carolina.
[2] Fewer than 12 employees; no average computed.

Weekly Hours and Earnings

Average hours worked by all employees in the quarrying branch of the industry amounted to 41.8 per week. Only about 9 percent

[4] Since the survey was made, additional plants have signed union agreements.

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of the employees worked less than 32 hours per week. More than one-third of the workers (36.4 percent) had a week of less than 40 hours, and about one-fifth of them (19.7 percent) worked exactly 40 hours. Almost 25 percent of the employees, however, worked 48 hours and above.

For all employees in finishing plants average hours were 39.1 per week. Twelve percent of the employees worked under 32 hours. One-third of the employees worked under 40 hours, but nearly four-tenths (38.7 percent) had a workweek of exactly 40 hours. Only 11.7 percent of the employees worked 48 hours or more.

The average weekly earnings of all employees in quarries were $22.47. More than one-fifth of the workers (21.0 percent) earned under $15 and more than one-third (35.8 percent) received less than $20 per week. As many as 85 percent of the employees earned under $30, thus leaving less than one-sixth of them receiving as much as $30 and over.

Gray-Iron and Malleable-Iron Foundries—Earnings in 1938-39[1]

During the latter part of 1938 and the early months of 1939, hourly earnings of all male workers in gray-iron foundries averaged 67.1 cents, according to findings in a study made by the Bureau of Labor Statistics. Weekly hours averaged 35.0 and the average weekly earnings amounted to $23.44. Male workers in malleable-iron foundries, on the other hand, had average hourly earnings of 68.9 cents and average weekly hours and earnings of 35.4 and $24.37, respectively.

An important factor in the wage structure of the foundry industry is the predominance of males in the labor force. Virtually the entire personnel in gray-iron foundries, 99.7 percent, consists of men. Of these males, about two-fifths (39 percent) were classed as skilled, 24 percent as semiskilled, and 37 percent as unskilled. In malleable-iron foundries, also, the labor force was composed almost entirely of men. Of these males, 35.8 percent were classed as skilled, 25.9 percent as semiskilled, and 38.3 percent as unskilled. All of this branch of the foundry industry is in the Northern States, and race is not a factor of importance in accounting for differences in hourly earnings.

[1] Abstract of article in the Monthly Labor Review for November 1940, prepared by O. R. Mann and D. L. Helm, of the Bureau of Labor Statistics.

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Hourly Earnings

Of the 36,749 male workers in gray-iron foundries covered by the study, only 7.7 percent had hourly earnings of less than 40 cents, and about one-fourth (26.8 percent) of the total earned less than 52.5 cents an hour. In contrast, there was a fairly substantial number of employees in the higher wage brackets, 23.9 percent earning 82.5 cents or more and 9.5 percent with earnings of $1 or more an hour.

An outstanding feature of the wage structure in malleable-iron foundries is the small proportion of workers in the low-wage brackets. Of the 6,157 males covered, only 0.7 percent had earnings of less than 40 cents an hour. By contrast, 4.9 percent had hourly earnings of $1 or more. Two-thirds (65.1 percent) of all male workers had hourly earnings concentrated within the comparatively narrow range of 52.5 and under 82.5 cents.

Geographical Variations

In gray-iron foundries there are pronounced geographical differences in hourly earnings. Against an average of 80.4 cents for all gray-iron foundry employees in the State of Washington, those in Florida, Georgia, and South Carolina averaged 41.8 cents. In any geographical comparison in this industry, however, the factor of race should be considered. In the Northern States, colored workers are found in all of the skill classifications, whereas in the South, the colored workers are confined almost entirely to the unskilled group.

Hours and Earnings by Occupation

Hourly earnings in gray-iron foundries are dependent to a large extent on the specific occupations of the individual employees. The skilled occupations, with but few exceptions, had average hourly earnings ranging between 80 and 90 cents. These occupations were made up of such skilled craftsmen as molders, pattern makers, core makers, etc. Most of the semiskilled occupations had average hourly earnings of between 53.9 cents (the average for apprentices) and 65 cents. Among the unskilled jobs, consisting mostly of various types of foundry labor, the range was from 41.8 cents for watchmen to 60.3 cents for core-oven tenders.

By far the greatest proportion of the few females employed in gray-iron foundries held semiskilled jobs. The average hourly earnings of all females were 58.3 cents, and their weekly earnings amounted to $18.69 for an average workweek of 32.1 hours.

Skilled workers in malleable-iron foundries had average hourly earnings of 80.4 cents, with most of the occupational averages coming within the narrow range of 75 to 85 cents an hour. Semiskilled workers in malleable-iron foundries averaged 65.7 cents an hour and the unskilled workers had an hourly average of 60.5 cents. Of the few females employed, about two-thirds were in semiskilled jobs and the remainder were unskilled. Hourly earnings of all females averaged 55.6 cents. Their average workweek was 33.4 hours, with average weekly earnings of $18.55.

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Average hourly earnings, weekly hours, and weekly earnings of foundry workers, 1938 and 1939, by occupation, sex, and skill

GRAY-IRON FOUNDRIES

Occupation, sex, and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
All occupations	36,749	$0.671	35.0	$23.44
Skilled workers	14,419	.834	34.3	28.66
Core makers, skilled	2,165	.847	34.5	29.24
Foremen, working, skilled	816	.924	40.4	37.33
Maintenance and repairmen, skilled	295	.775	39.5	30.59
Millwrights	122	.778	41.7	32.48
Miscellaneous skilled workers, direct	116	.869	36.8	32.03
Miscellaneous skilled workers, indirect	35	.900	40.0	36.03
Molders, hand, bench	2,446	.796	32.5	25.86
Molders, hand, floor	4,614	.818	32.5	26.57
Molders, machine, skilled	2,224	.840	34.2	28.73
Molders, nonferrous	58	.818	36.3	29.72
Pattern makers, metal	291	.836	38.7	32.31
Pattern makers, wood	1,142	.893	37.5	33.51
Welders and burners	95	.692	37.2	25.76
Semiskilled workers	8,743	.620	36.1	22.38
Apprentices, foundry	1,064	.539	35.0	18.86
Carpenters, flask	316	.641	36.5	23.39
Chippers	1,543	.588	34.9	20.51
Core makers, semiskilled	505	.618	35.1	21.66
Core pasters	277	.706	37.5	26.46
Crane operators	699	.646	35.8	23.13
Cupola tenders	630	.640	36.1	23.09
Factory clerks	130	.614	38.3	23.48
Foremen, working, semiskilled	313	.652	38.8	25.32
Inspectors and testers	295	.612	37.9	23.16
Ladle liners	135	.600	35.8	21.48
Maintenance and repairmen, semiskilled	243	.614	37.7	23.14
Miscellaneous furnace men	39	.787	35.6	28.05
Miscellaneous semiskilled workers, direct	273	.605	38.2	23.10
Miscellaneous semiskilled workers, indirect	113	.623	36.5	22.75
Miscellaneous machine operators	97	.608	34.7	21.08
Molders, machine, semiskilled	799	.712	35.4	25.23
Pourers and ladlemen	509	.632	35.8	22.61
Shipping and receiving clerks	290	.585	37.9	22.18
Storekeepers	156	.644	37.8	24.31
Truck drivers	197	.570	41.0	23.33
Truckers, power	120	.633	35.8	22.64
Unskilled workers	13,587	.533	34.9	18.58
Casting cleaners	582	.530	35.0	18.58
Core carriers	212	.469	33.7	15.82
Core makers' helpers	625	.534	35.4	18.90
Core-oven tenders	141	.603	36.5	21.98
Cupola chargers and helpers	1,022	.542	33.9	18.36
Flask and pattern carriers	243	.547	35.9	19.64
Grinders, rough	1,262	.573	35.5	20.35
Janitors	167	.511	36.5	18.65
Laborers, foundry	2,231	.493	34.7	17.11
Learners	245	.507	37.7	19.10
Loaders and unloaders	234	.445	30.8	13.68
Maintenance helpers	98	.553	38.3	21.17
Miscellaneous furnace helpers	68	.569	34.8	19.79
Miscellaneous unskilled workers, direct	244	.502	36.9	18.50
Miscellaneous unskilled workers, indirect	156	.550	34.6	19.01
Molders' helpers	1,870	.523	34.0	17.79
Sandblasters	308	.592	36.1	21.38
Sand conditioners, hand	264	.506	34.6	17.48
Sand conditioners, machine	353	.602	36.4	21.91
Shake-out men	2,026	.580	32.7	18.97
Stock and shipping-room labor	170	.458	37.4	17.12
Truckers, hand	184	.538	34.0	18.29
Tumbler operators	481	.556	36.0	20.01
Watchmen	357	.418	44.0	18.35
Packers and wrappers	44	.577	39.0	22.50
Females				
All occupations [1]	94	.583	32.1	18.69

[1] Includes 64 semiskilled core makers with average hourly earnings of 62.5 cents.

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Average hourly earnings, weekly hours, and weekly earnings of foundry workers, 1938 and 1939, by occupation, sex, and skill—Continued

MALLEABLE-IRON FOUNDRIES

Occupation, sex, and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
All occupations	6,157	$0.689	35.4	$24.37
Skilled workers	2,205	.804	34.5	27.71
Core makers, skilled	254	.757	34.8	26.36
Foremen, working, skilled	95	.796	38.9	30.93
Maintenance and repairmen, skilled	119	.754	37.6	28.37
Millwrights	38	.715	38.9	27.80
Miscellaneous skilled workers, direct	35	.757	39.6	29.99
Miscellaneous skilled workers, indirect	24	.804	40.7	32.71
Molders, hand, bench	525	.758	31.5	23.90
Molders, hand, floor	100	.771	29.3	22.60
Molders, machine, skilled	887	.862	34.7	29.92
Pattern makers, metal	89	.792	38.9	30.76
Pattern makers, wood	39	.809	35.6	28.79
Semiskilled workers	1,592	.657	36.7	24.13
Annealers	220	.664	37.3	24.77
Apprentices, foundry	27	.483	34.5	16.65
Carpenters, flask	47	.684	37.8	25.82
Chippers	227	.654	36.3	23.72
Core makers, semiskilled	38	.662	35.9	23.80
Core pasters	24	.589	39.5	23.30
Crane operators	36	.697	38.3	26.72
Foremen, working, semiskilled	49	.654	39.2	25.66
Inspectors and testers	206	.614	37.3	22.90
Ladle liners	46	.616	35.3	21.74
Maintenance and repairmen, semiskilled	53	.640	35.7	22.82
Miscellaneous furnace men	68	.721	37.8	27.28
Miscellaneous semiskilled workers, direct	76	.689	34.8	24.00
Miscellaneous semiskilled workers, indirect	101	.601	38.8	23.32
Miscellaneous machine operators	60	.678	35.3	23.98
Molders, machine, semiskilled	124	.703	32.7	23.02
Pourers and ladlemen	56	.811	36.6	29.70
Shipping and receiving clerks	30	.604	36.2	21.89
Straighteners	59	.701	39.9	27.97
Truckers, power	45	.604	37.0	22.36
Unskilled workers	2,360	.605	35.4	21.40
Annealing firemen	52	.553	39.1	21.59
Casting cleaners	71	.575	35.6	20.46
Core carriers	32	.579	35.2	20.38
Core-makers' helpers	90	.552	35.4	19.51
Core-oven tenders	34	.590	36.3	21.42
Flask and pattern carriers	38	.575	35.3	20.32
Grinders, rough	389	.659	35.4	23.34
Janitors	50	.538	35.9	19.29
Laborers, foundry	431	.570	33.4	19.06
Loaders and unloaders	41	.686	30.3	20.78
Maintenance helpers	48	.623	37.0	23.04
Miscellaneous furnace helpers	116	.631	36.3	22.92
Miscellaneous unskilled workers, direct	79	.505	37.0	18.72
Miscellaneous unskilled workers, indirect	21	.604	36.8	22.24
Molders' helpers	101	.635	34.4	21.82
Sandblasters	54	.666	36.4	24.21
Sand conditioners, hand	62	.608	36.4	22.09
Sand conditioners, machine	84	.642	36.8	23.61
Shake-out men	196	.678	34.1	23.11
Stock and shipping room labor	62	.516	37.1	19.15
Truckers, hand	92	.596	34.4	20.48
Tumbler operators	83	.682	34.4	23.47
Watchmen	72	.496	43.7	21.69
Packers and wrappers	62	.560	35.4	19.79
Females				
All occupations	244	.556	33.4	18.55
Semiskilled workers [1]	157	.558	33.3	18.57
Unskilled workers	87	.552	33.5	18.52

[1] Includes 121 core makers with average hourly earnings of 56.6 cents.

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Hat Industries—Earnings and Hours, 1939[1]

The Bureau of Labor Statistics made a study in 1939 of earnings and hours in the four hat industries—manufacturing, respectively, fur-felt hats, wool-felt bodies and finished wool-felt hats for men, straw hats, and hat materials.

Fur-Felt Hats

The survey of the fur-felt hat industry covered 7,182 wage earners, or approximately half of the total employed in the industry. Over three-fourths (77.7 percent) of the workers were males. The majority of the males were in skilled occupations, whereas most of the females were classed as semiskilled.

Most of the women employed in the fur-felt hat industry are engaged in the various finishing processes, known in the industry as front-shop operations. These jobs include binding hat brims, fitting and inserting hat bands and linings, and various other trimming operations. In the manufacture of rough hat bodies, which is called the back-shop operation, men are employed almost exclusively. Many of the processes in this department require a high degree of skill and also involve continuous exposure to dust and hot water.

The hourly earnings of all workers in this branch averaged 66.3 cents in the early part of 1939. Males averaged 71.2 cents an hour, as against only 49.1 cents for females. The hourly earnings of male workers were higher in the back shops than in the front shops. The reverse was true, however, for the females.

The majority of the establishments covered by the survey were on a 40-hour week basis. The actual workweek during the pay period covered by the survey averaged 37.2 hours. Male wage earners averaged 37.3 hours, as against 36.9 hours for females.

The weekly earnings of all workers in the fur-felt hat industry averaged $24.69. The average was $26.57 for males and $18.13 for females. Skilled males were paid $30.86 as compared with $23.48 for skilled females. The earnings of semiskilled workers amounted to $22.54 per week for males and $17.92 for females. Unskilled males earned $17.01 on the average, as against $14.51 for unskilled females.

Wool-Felt Hats

The separation of back- and front-shop operations in the wool-felt hat industry is similar to that found in the fur-felt plants. Likewise, as in the fur-felt branch, a large majority (74.0 percent) of the workers were males. Male employees constituted four-fifths (79.6 percent) of the labor force in the back shops but less than three-fifths (56.9 percent) in the front shops. Only 18.8 percent of the workers were classed as skilled. All of these employees were males. The unskilled occupations included only 9.0 percent of the entire labor force.

The earnings of all workers in the wool-felt hat industry averaged 49.8 cents an hour. The average for males was 52.2 cents as against 43.0 cents for females. The skilled males earned 66.3 cents an hour.

[1] Abstract of article from the Monthly Labor Review for October 1939.

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Among the semiskilled employees the males averaged 48.6 cents, which was 5.4 cents higher than the average for females. The average for unskilled males was 41.7 cents, or 1.4 cents higher than the hourly earnings of unskilled females.

The actual hours worked in the wool-felt hat industry as a whole average 39.0 per week. The averages for the various types of plants did not differ materially, amounting to 38.0 hours in the independent back shops as against 38.7 hours in the independent front shops and 39.6 hours in the establishments that combine both back- and front-shop operations. One-third (33.5 percent) of the workers worked exactly 44 hours per week during the selected pay period while 15.0 percent averaged exactly 40 hours.

The weekly earnings of all workers in the wool-felt hat industry averaged $19.46. The average for males was $20.55, which may be compared with $16.37 for females.

Straw Hats

The survey covered 2,489 wage earners in plants making dress-straw hats and 483 workers in harvest-hat establishments. This constituted almost 100 percent of the total employment in both branches.

Most of the employees in both dress-straw and harvest-hat plants are semiskilled. For the industry as a whole about two-thirds (65.6 percent) of the workers were semiskilled. In the harvest-hat plants, however, 84.3 percent of the workers were classed as semiskilled, while only 5.8 percent were skilled. In the dress-straw-hat establishments 30.7 percent of the workers were skilled and 62.0 percent were semi-skilled. The labor force in the total industry was composed of nearly equal proportions of males and females (48.1 percent males as against 51.9 percent females). Males constituted 59.2 percent in the harvest-hat branch as against only 46.0 percent in the dress-straw hat plants.

The earnings of all workers covered in the survey of the straw-hat industry averaged 49.1 cents an hour. Male employees received 57.3 cents, as compared with 41.1 cents for females. The average hourly earnings of all workers in dress-straw-hat establishments were exactly 50.0 cents. This may be compared with 44.1 cents for employees of harvest-hat plants.

The actual time worked by all employees covered in the survey of the straw-hat industry averaged 41.2 hours per week. The average was 41.3 hours in the dress-straw branch as against 40.3 in the harvest-hat establishments. Average actual weekly hours ranged from 45.2 for the unskilled males in dress-straw-hat plants to 38.2 for semi-skilled females in the harvest-hat branch. Over one-third (34.7 percent) of the workers in the industry as a whole worked exactly 44 hours, while 16.2 percent worked exactly 40 hours per week at the time of the survey.

The weekly earnings of all employees in the straw-hat industry averaged $20.20. The level of earnings was somewhat higher in the dress-straw than in the harvest-hat establishments, their respective averages being $20.66 and $17.80. This difference was primarily due to the higher earnings of the skilled workers in dress-straw-hat plants.

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Hat Materials

The hat-materials industry includes establishments engaged in the manufacture of hatters' fur and hat trimmings. The survey, which included virtually 100 percent of the industry, covered 3,126 wage earners employed in 52 establishments. A majority of the occupations were classed as semiskilled, 70.0 percent of the workers being in this category. In the trimmings branch, which includes plants manufacturing such products as sweat bands, linings, and ribbons, 45.5 percent of the workers were semiskilled, while 37.7 percent were skilled and 16.8 percent unskilled. Male employees made up 61.8 percent of the labor force in hatters' fur as against 51.3 percent in trimmings plants.

Average hourly earnings in the hat industries, 1939, by division of industry, type of plant, skill, and sex

Type of plant	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Fur-felt hats												
All plants	$0.663	$0.712	$0.491	$0.843	$0.855	$0.628	$0.543	$0.586	$0.488	$0.417	$0.423	$0.386
Back shops	.758	.767	.405	.907	.907	------	.638	.642	(1)	.438	.443	.396
Front shops	.603	.660	.496	.778	.796	.628	.523	.561	.488	.388	.391	.381
Integrated plants	.734	.776	.546	.909	.918	.697	.634	.686	.546	.455	.458	.441
Back shops	.785	.792	.432	.928	.928	------	.660	.661	(1)	.458	.461	.428
Front shops	.691	.757	.552	.880	.902	.697	.626	.699	.547	.451	.452	.446
Independent back shops	.714	.726	.380	.872	.872	------	.597	.607	(1)	.412	.419	.358
Independent front shops	.529	.572	.453	.699	.714	.575	.438	.425	.448	.293	.298	.280
Wool-felt hats												
All plants	.498	.522	.430	.663	.663	------	.468	.486	.432	.415	.417	.403
Back shops	.482	.500	.407	.660	.660	------	.452	.467	.408	.402	.405	(1)
Front shops	.545	.608	.461	.671	.671	------	.517	.590	.464	.451	.468	.424
Integrated plants	.496	.515	.432	.672	.672	------	.463	.475	.433	.424	.426	.416
Back shops	.475	.485	.405	.676	.676	------	.444	.451	.406	.409	.410	(1)
Front shops	.540	.610	.448	.667	.667	------	.508	.590	.450	.456	.480	.425
Independent back shops	.493	.530	.408	.642	.642	------	.464	.502	.410	.391	.396	(1)
Independent front shops	.571	.599	.531	(1)	(1)	------	.560	.591	.533	(1)	(1)	(1)
Straw hats												
All products	.491	.573	.411	.713	.747	.497	.424	.455	.409	.308	.305	.314
Dress straw hats	.500	.595	.416	.717	.753	.497	.419	.437	.414	.301	.298	.308
Harvest hats	.441	.482	.337	.615	.615	------	.441	.485	.380	.336	.333	(1)
Hat materials												
All products	.552	.651	.406	.790	.821	.514	.520	.649	.407	.427	.455	.368
Hatters' fur	.527	.612	.377	.739	.739	------	.539	.671	.380	.446	.468	.361
Trimmings	.588	.715	.437	.802	.842	.514	.480	.558	.446	.385	.402	.373

[1] Number of workers not sufficient to justify computation of an average.

The hourly earnings of all employees covered in the survey of the hat-materials industry averaged 55.2 cents. Males received 65.1 cents an hour on the average as against 40.6 cents for females, a difference of 24.5 cents. The hourly earnings of all workers in the hat-trimmings branch averaged 58.8 cents, which is 6.1 cents higher than the average shown for all employees in the hatters' fur establishments. For some of the skill and sex groups, however, higher averages were found in the hatters' fur than in the trimmings plants.

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The actual weekly hours of all employees in the hat-materials industry averaged 37.8. The average was 38.8 hours in hatters' fur establishments as against 36.5 hours for the workers in hat-trimmings plants. Over one-third (36.4 percent) of the hatters' fur workers and one-half (50.7 percent) of the hat-trimmings employees worked exactly 40 hours. On the other hand, 18.4 percent in the fur-cutting establishments as against 6.0 percent in the trimmings branch worked exactly 44 hours.

The weekly earnings of all employees in the hat-materials industry averaged $20.89. The levels of weekly earnings for the two branches were quite similar, amounting to $20.45 in hatters' fur and $21.47 in hat trimmings. In both branches weekly earnings of males were substantially higher than the average for females, due to the fact that male employees had not only a higher hourly average but also worked more hours per week.

Hosiery Manufacture—Earnings and Hours, 1937, 1938, and 1940[1]

Full-Fashioned Hosiery

The full-fashioned stocking is made by knitting a flat fabric, which is subsequently seamed into a tubular form. The fashioning process consists in changing the number of rows of loops by adding or dropping stitches. This makes it possible to widen or narrow the stocking, which then conforms to the shape of the leg.

A distinguishing characteristic of the full-fashioned branch is the homogeneity of its products. In 1935, the latest year for which census data are available, over 95 percent of the output consisted of women's stockings made of all-pure-thread-silk or pure-thread-silk with lisle or cotton tops, heels, and toes.

The manufacturing processes in full-fashioned hosiery are carried on in two stages. Beginning with the prepared yarn, the first stage involves the knitting of "gray" goods. The knitting is done on flat-bed, spring-needle knitting machines which are extremely complicated and difficult to adjust and operate, so that in case of error the losses due to damaged products may be quite large. Also, the principal raw material used, namely silk, is very fragile and must be handled with great care during every stage of the process. The second stage covers the dyeing and finishing of the "gray" goods.[2]

The knitting and finishing processes are usually carried on within a single establishment. In recent years, however, there has developed a group of commercial finishing plants that specialize in dyeing and finishing full-fashioned stockings.

The survey on which this article is based included 105 plants and 26,807 wage earners in the full-fashioned branch of the hosiery industry, and covered, for the most part, a pay-roll period during September 1938.

The manufacturing of full-fashioned hosiery is predominantly a northern industry, being most heavily concentrated in eastern Penn-

[1] Abstract of articles in the Monthly Labor Review for May and June 1939, and January 1940, by Jacob Perlman, H. E. Riley, and E. B. Morris, of the Bureau of Labor Statistics.

[2] The production of ingrained full-fashioned hosiery (i. e., made of previously dyed yarn) is relatively insignificant.

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sylvania and to a lesser extent in the other Middle Atlantic States. In recent years, the industry has exhibited a decided trend toward the Southern States.

In the northern region, full-fashioned hosiery manufacture is mostly concentrated in the larger communities. Of the 78 plants covered in that territory, 42 are in metropolitan areas having a population of 1,000,000 or more. The Philadelphia district alone contained 27 of these 42 mills. By contrast, most of the southern plants are in smaller communities. Of the 27 mills surveyed in the South, only 3 with 15 percent of the total workers scheduled in that territory are in metropolitan areas of 100,000 to 250,000.

The single-plant company is, on the whole, most typical of the full-fashioned industry. However, some of the mills recently established in the Southern States are controlled by companies having plants in the North.

The equipment used in the full-fashioned branch of the industry represents a high degree of technical development. In connection with the knitting operations, most plants employ two types of machines, namely the "legger" and "footer." The leg part of the stocking is knitted on the "legger," from which it is transferred to the "footer" to complete the knitting process. Following this step, the stocking is seamed up the back. It is then completed by the looping operation, which closes the heel and toe openings, after which the stocking is ready to go to the dyeing and finishing department.

A considerable amount of skilled labor is required at each step of the manufacturing process, especially in the knitting department. The operators of both "leggers" and "footers" must have long experience. A high degree of dexterity and good eyesight are the prerequisites for the toppers, who transfer the stocking from one machine to the other. The seaming and looping operators also require skill and dexterity. These are the most important of a number of skilled occupations in the industry.

Average Hourly Earnings

The large majority of the workers in the full-fashioned branch are paid on a straight piece-rate basis. In four mills, some of the wage earners were working under production-bonus systems.

Of the 52 trade-union plants, 15 reported that as a matter of general policy no overtime was worked. In the mills having some overtime, 9 paid the regular rate to all direct employees, 4 paid this rate to hourly workers (no overtime was worked by piece workers), and the remaining 24 plants paid extra rates for overtime.

Among the non-trade-union plants, 44 of the 53 paid the regular rate for overtime to all direct employees. In 4 additional plants, extra rates applied only to certain direct hourly workers, such as dye-house employees; but in 2 of these plants no overtime was worked by piece workers. In considering overtime pay, it should be remembered that the pay-roll period covered by the survey occurred during September 1938, prior to the effective date of the Fair Labor Standards Act.

Penalties for faulty work were imposed in only 9 trade-union and 19 non-trade-union plants.

Variations by sex and skill.—Hourly earnings of the 26,807 full-fashioned hosiery workers included in the survey averaged 65.8 cents in September 1938.

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The average hourly earnings of all males for the country as a whole amounted to 83.5 cents an hour, as compared with 50.9 cents for all females. (See table 1.) The higher average for males was largely due to the 45.5 cents difference between the earnings of skilled males and skilled females. On the other hand, males averaged only 3.1 cents more than females for semiskilled workers, while among unskilled employees the averages were practically the same. It should be noted, however, that for each sex-skill group the average was considerably higher in the North than in the South.

TABLE 1.—*Average hourly earnings of full-fashioned hosiery workers, 1938, by region, skill, and sex*

Region	All workers			Skilled			Semiskilled			Unskilled		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
United States	$0.658	$0.835	$0.509	$0.773	$1.002	$0.547	$0.509	$0.528	$0.497	$0.378	$0.377	$0.378
North	.693	.867	.541	.809	1.028	.580	.537	.555	.524	.424	.437	.417
South	.581	.760	.440	.694	.939	.480	.430	.440	.424	.292	.285	.298

As table 2 indicates, the distribution of hourly earnings of all workers in the country as a whole covers a very wide spread, ranging from under 17.5 cents to over $1.50. There is no marked concentration in the data, but instead the hourly earnings are widely scattered throughout the distribution.

TABLE 2.—*Percentage distribution of full-fashioned hosiery workers according to average hourly earnings, 1938, by skill and sex*

Average hourly earnings (in cents)	All workers			Skilled			Semiskilled			Unskilled		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 17.5	0.5	0.5	0.5	0.1	------	0.2	0.3	0.6	0.2	3.0	3.9	2.5
17.5 and under 22.5	1.8	1.3	2.3	.2	(1)	.4	.8	1.0	.7	11.6	9.8	12.8
22.5 and under 25.0	.8	.5	.9	.3	(1)	.6	.8	.8	.9	2.8	3.6	2.3
25.0 and under 27.5	1.6	.9	2.1	.6	(1)	1.1	1.9	1.7	2.0	6.0	4.9	6.6
27.5 and under 30.0	.9	.5	1.2	.5	0.1	.9	1.4	1.3	1.5	2.1	1.8	2.3
30.0 and under 32.5	2.1	1.4	2.7	.9	.1	1.6	3.0	2.5	3.3	6.6	7.6	6.0
32.5 and under 35.0	3.3	2.2	4.2	1.3	.1	2.3	6.2	6.0	6.2	8.5	8.6	8.4
35.0 and under 37.5	3.3	1.9	4.5	1.5	.2	2.6	6.4	4.7	7.4	6.9	7.4	6.6
37.5 and under 40.0	5.1	2.6	7.0	2.6	.3	4.7	8.3	7.1	9.1	11.4	9.8	12.5
40.0 and under 42.5	4.6	3.0	5.9	3.0	.6	5.2	7.3	8.5	6.5	8.1	9.0	7.5
42.5 and under 47.5	7.6	4.0	10.4	6.0	1.1	10.5	11.1	11.5	10.8	9.5	9.2	9.7
47.5 and under 52.5	8.4	3.7	12.1	7.2	1.5	12.6	11.2	8.8	12.7	8.8	9.2	8.7
52.5 and under 57.5	8.5	4.0	11.9	8.3	2.0	14.3	9.1	8.3	9.5	7.2	8.6	6.3
57.5 and under 62.5	7.5	3.7	10.6	8.3	2.8	13.4	7.9	7.5	8.2	3.0	2.8	3.1
62.5 and under 67.5	6.6	4.2	8.5	7.6	3.6	11.3	6.5	7.6	5.9	1.8	1.5	2.0
67.5 and under 72.5	5.1	4.0	6.0	5.9	4.0	7.6	5.1	5.4	4.9	1.3	1.1	1.4
72.5 and under 77.5	4.0	4.3	3.8	4.7	4.5	5.0	3.9	5.5	2.9	.5	.6	.4
77.5 and under 82.5	3.1	4.0	2.4	3.5	4.5	2.6	3.4	4.1	2.9	.3	.2	.3
82.5 and under 87.5	2.5	4.1	1.3	3.3	5.3	1.5	1.6	2.1	1.3	.3	.2	.4
87.5 and under 92.5	2.6	4.9	.8	3.4	6.4	.6	1.9	2.0	1.8	.1	.1	(1)
92.5 and under 100.0	3.8	7.8	.6	5.4	10.6	.6	1.3	2.0	.8	.1	.1	.1
100.0 and under 110.0	4.9	10.8	.2	7.6	15.5	.3	.4	.6	.3	------	------	------
110.0 and under 120.0	4.3	9.7	.1	6.7	13.9	.1	.2	.3	.2	------	------	------
120.0 and under 130.0	3.1	6.9	(1)	4.8	9.9	(1)	(1)	.1	(1)	.1	------	.1
130.0 and under 140.0	1.7	3.8	(1)	2.7	5.5	(1)	------	------	------	------	------	------
140.0 and under 150.0	1.0	2.3	(1)	1.6	3.3	------	(1)	(1)	------	(1)	------	(1)
150.0 and over	1.3	3.0	------	2.0	4.2	------	(1)	(1)	------	------	------	------
Total	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] Less than a tenth of 1 percent.

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This wide dispersion in average hourly earnings is due to differences caused by a variety of factors, such as geographical location, sex, skill, occupation, unionization, type of plant, etc.

Occupational differences.—Table 3 presents the average hourly earnings of workers in the various occupational classes.

For the country as a whole, the most important skilled occupations numerically for males are footer and legger knitters. Their respective average hourly earnings were $1.125 and 99.2 cents. The relatively small group of single-unit knitters, which is a new occupation, averaged only slightly more than the legger knitters.

As regards skilled females, the most important occupations numerically are toppers, seamers, and loopers. Their respective average hourly earnings amounted to 58.1, 50.8, and 54.8 cents.

TABLE 3.—*Average earnings and hours of full-fashioned hosiery workers, 1938, by occupation*

Skill, sex, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers				
Males:				
Foremen, working	141	$1.055	43.5	$45.87
Knitters, footer	1,801	1.125	37.4	42.13
Knitters, legger	5,440	.992	39.0	38.65
Knitters, single-unit	68	1.010	39.1	39.51
Machine fixers	263	1.084	43.8	47.45
Toppers	315	.615	36.5	22.46
Miscellaneous skilled, direct	67	.700	41.2	28.80
Miscellaneous skilled, indirect	172	.696	45.3	31.51
Females:				
Forewomen, working	57	.641	41.5	26.58
Knitters, miscellaneous	107	.564	39.6	22.31
Loopers	1,635	.548	36.5	20.01
Menders	891	.487	36.7	17.88
Seamers	2,254	.508	37.1	18.82
Toppers	3,927	.581	36.6	21.28
Semiskilled workers				
Males:				
Boarders, automatic	219	.759	37.6	28.57
Boarders, other	441	.607	36.8	22.32
Clerks, factory	159	.535	43.5	23.26
Dye-machine operators	148	.607	42.0	25.45
Knitters' helpers	657	.422	38.4	16.19
Packers	184	.433	42.6	18.43
Stock handlers	156	.453	40.9	18.51
Subforemen, working	66	.659	44.7	29.45
Miscellaneous semiskilled, direct	163	.515	40.7	20.98
Miscellaneous semiskilled, indirect	161	.508	46.3	23.55
Females:				
Boarders, automatic	153	.759	37.0	28.10
Boarders, other	583	.632	36.6	23.15
Clerks, factory	101	.396	41.6	16.47
Inspectors and examiners	1,516	.445	38.2	16.97
Pairers	994	.519	36.9	19.17
Stock handlers	141	.357	39.9	14.26
Subforewomen, working	122	.507	41.5	21.03
Winders	163	.439	37.0	16.21
General workers and helpers	116	.350	37.0	12.95
Unskilled workers				
Males:				
Cleaners, machine	83	.375	42.4	15.88
Janitors and cleaners	120	.358	45.0	16.14
Learners and apprentices, full-fashioned knitters	457	.383	39.9	15.27
Learners and apprentices, other	103	.245	36.5	8.96
Watchmen	167	.384	50.2	19.28
Work distributors	156	.399	41.0	16.36
Miscellaneous unskilled direct	133	.416	41.8	17.39
Miscellaneous unskilled indirect	48	.429	42.5	18.22
Females:				
Clippers	77	.402	37.4	15.04
Folders, wrappers, and boxers	888	.447	37.6	16.82
Learners and apprentices	609	.254	38.5	9.77
Stampers and labelers	337	.423	38.4	16.24
Work distributors	135	.359	39.3	14.13
Miscellaneous unskilled direct	113	.391	38.7	15.14

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Earnings in union and nonunion plants.—Because of the fact that the sample included only 1 union establishment in the southern territory, comparison of average hourly earnings between union and nonunion plants must be confined to the North, where data were obtained for 51 union and 27 nonunion mills.

Based on data covering individual workers in the northern territory, the hourly earnings averaged 74.3 cents in union and 60.5 cents in nonunion plants, a difference of 13.8 cents. (See table 4.)

TABLE 4.—*Average hourly earnings of full-fashioned hosiery workers in the North, 1938, by unionization and skill*

Sex and unionization	All workers	Skilled	Semiskilled	Unskilled
Both sexes	$0.693	$0.809	$0.537	$0.424
Union plants	.743	.836	.573	.446
Nonunion plants	.605	.744	.490	.405
Males	.867	1.028	.555	.437
Union plants	.949	1.065	.584	.446
Nonunion plants	.736	.941	.527	.433
Females	.541	.580	.524	.417
Union plants	.573	.601	.567	.446
Nonunion plants	.480	.532	.460	.381

Weekly Hours and Earnings

Shift operation was quite common in the full-fashioned branch of the hosiery industry in September 1938. In the northern territory, of 60 integrated establishments that reported on this point, only 7 operated 1 shift, while 50 worked during 2 shifts and 3 during 3 shifts. Of the 14 independent finishing plants, however, only 3 operated for 2 shifts and 1 for 3 shifts. In the southern region, of the 23 mills reporting this information, 20 operated for 2 shifts and 4 for 3 shifts. In nearly every case, the second and third shifts were confined to the knitting department.[3]

The 8-hour shift and 40-hour week generally prevailed in this branch of the industry at the time of the survey.

For the country as a whole weekly hours actually worked averaged 38.2. Hours were slightly longer in the South than in the North—39.3 as compared with 37.8—a situation which obtained for all of the various sex-skill groups (table 5).

The average weekly earnings of all males in the country as a whole amounted to $32.97, as against $18.94 for all females. The averages were $29.22 for all skilled, $19.64 for semiskilled, and $14.96 for unskilled employees. On a sex-skill basis, the averages ranged from $39.55 for skilled males in the North to $11.67 for unskilled females in the South.

As was shown in table 3, the average weekly earnings among skilled males in the country as a whole ranged from $47.45 for machine fixers to $22.46 for toppers. For semiskilled males, they varied from $29.45 for working subforemen to $16.19 for knitters' helpers. The spread for unskilled males was from $19.28 for watchmen to $8.96 for miscellaneous learners and apprentices. Among skilled females the

[3] In 14 establishments, located in both the northern and southern territories, there was a wage differential in favor of employees working on the second and third shifts.

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average varied from $26.58 for working forewomen to $17.88 for menders. The range for semiskilled females was from $28.10 for automatic boarders to $12.95 for general workers and helpers. The averages for unskilled females varied from $16.82 for folders, wrappers, and boxers to $9.77 for learners and apprentices.

TABLE 5.—*Average actual weekly hours and average weekly earnings of full-fashioned hosiery workers, 1938, by skill, sex, and region*

Region	All workers			Skilled			Semiskilled			Unskilled		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average actual weekly hours											
United States	38.2	39.5	37.2	37.8	38.9	36.8	38.6	40.0	37.7	39.6	42.1	38.1
North	37.8	39.0	36.8	37.3	38.5	36.2	38.2	39.6	37.4	39.1	41.8	37.7
South	39.3	40.5	38.3	38.9	40.0	38.0	39.6	41.2	38.8	40.6	42.5	39.2
	Average weekly earnings											
United States	$25.16	$32.97	$18.94	$29.22	$38.97	$20.13	$19.64	$21.09	$18.76	$14.96	$15.88	$14.42
North	26.17	33.85	19.87	30.21	39.55	21.03	20.52	21.98	19.59	16.57	18.27	15.69
South	22.81	30.79	16.86	26.98	37.55	18.24	17.02	18.13	16.42	11.87	12.14	11.67

Annual Earnings, 1937

In the full-fashioned branch of the hosiery industry, the average annual earnings in 1937 of employees who worked throughout the year amounted to $1,328, as compared with $1,264 for all who had employment for 40 weeks and over, $1,198 for those who worked 26 weeks and over, and $1,120 for all employees on the pay roll during any part of the year.

These averages cover only wage earners on the pay roll of the establishments surveyed in September 1938, who were employed by the same plant for one or more pay-roll periods in 1937.[4] Owing to the fact that the figures were obtained from employers' records, they cover only the total earnings and number of pay-roll periods in 1937 of each wage earner in the plant in which he worked during September 1938. Hence, the annual figures do not include any earnings of an individual in other establishments in which he may have worked during 1937. However, employees who were on the pay roll of a plant for a considerable number of weeks were not likely to have had opportunity for employment elsewhere.

Table 6 shows the average annual earnings of workers in full-fashioned hosiery plants by region, skill, and sex.

The average annual earnings were higher for males than females. With one exception, this was true in each region and for each skill group. The exception was found in the case of unskilled workers employed throughout the year in the South; among them females averaged $41 more than males. The differences were especially pronounced for skilled workers. Furthermore, for identical groups of employees, the differences were generally greater in the northern than the southern region.

[4] Annual earnings data were received for only 18,061 workers in 78 plants.

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TABLE 6.—*Average annual earnings of full-fashioned hosiery workers, by region, skill, and sex, 1937*

Region, and skill of workers	Average annual earnings of employees whose work extended over—											
	52 weeks			40 weeks and over			26 weeks and over			Any part of the year		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
United States	$1,328	$1,717	$946	$1,264	$1,664	$906	$1,198	$1,582	$859	$1,120	$1,490	$799
Skilled	1,513	1,973	1,008	1,436	1,888	965	1,369	1,816	916	1,297	1,743	859
Semiskilled	976	1,099	876	909	1,039	833	852	948	792	783	859	734
Unskilled	799	895	736	765	842	709	713	795	658	640	710	592
North	1,383	1,778	973	1,288	1,685	923	1,220	1,596	876	1,154	1,517	826
Skilled	1,630	2,099	1,075	1,478	1,924	996	1,407	1,837	948	1,349	1,778	902
Semiskilled	996	1,118	878	922	1,058	838	861	961	794	797	879	742
Unskilled	797	968	703	775	879	704	728	841	657	666	765	602
South	1,248	1,623	910	1,205	1,608	864	1,138	1,543	815	1,031	1,414	735
Skilled	1,367	1,802	930	1,338	1,798	894	1,276	1,760	843	1,171	1,648	765
Semiskilled	935	1,047	873	868	971	819	824	896	787	740	789	714
Unskilled	802	781	822	734	743	727	668	678	660	573	582	565

Among males, the difference in the annual earnings of skilled and semiskilled workers was much greater than the difference between the semiskilled and unskilled groups. In the country as a whole, the average annual earnings for all skilled males who were employed throughout the year amounted to $1,973, which was $874 more than the average for semiskilled males ($1,099). The average of the latter group, however, exceeded that of unskilled males by only $204.

Seamless Hosiery

The seamless stocking is so named because it is knit in tubular form. It differs from the full-fashioned stocking in having all the rows of loops parallel throughout its length. Consequently, the seamless product has approximately the same diameter at the ankle as at the top. A slight degree of shape may be given to the stocking by tightening the yarn during the knitting of the ankle section.

In contrast with the full-fashioned hosiery industry, the seamless branch makes a wide variety of products. Its output in 1935, the latest year for which census data are available, included 42.6 million dozen pairs of men's hose, 14.6 million dozen pairs of boys', misses' and children's hose, 13.7 million dozen pairs of women's hose, and 5.5 million dozen pairs of infants' hose.

Most of the work in seamless-hosiery mills consists of knitting operations. A large proportion of the hosiery produced in this branch contains two or more colors. The method of manufacturing these products usually requires a previously dyed yarn, although some of the men's and women's seamless stockings are dyed and finished by methods similar to those used in full-fashioned establishments. However, because of the wide variety of styles and color combinations, most seamless-hosiery plants find it impractical to dye their own yarns. Instead, they purchase the yarns from textile-dyeing firms.

The survey of the seamless branch of the hosiery industry covered 97 representative plants (with 18,270 wage earners), giving a fairly accurate picture of the seamless industry as to geographical

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distribution of mills, size of community, size of establishment, and unionization.

The majority of the seamless mills in the southern territory are located in relatively small communities. On the other hand, 21 of the 32 northern establishments, which included nearly three-fifths of the workers in this territory, were located in metropolitan areas of 100,000 and over.

As in the full-fashioned branch, the single-plant company predominates in the seamless industry. Although there are several large corporations having more than 1 mill, a majority of the industry's output is produced by single-establishment companies.

Most of the knitting machines used in the seamless branch are highly automatic in operation. Several types of circular latch-needle machines are employed, but they all require very little attention and relatively limited skill on the part of the operators. It is customary to employ a male machine fixer to make adjustments and repairs on a large number of machines. The machines themselves are operated by women whose duties consist largely of tying broken yarn, removing completed stockings, and transferring rib tops for certain types of hosiery. Most of the seamless stockings are then completed by a looping operation, which is quite similar to that performed in the manufacture of full-fashioned hosiery.

An outstanding feature of the manufacture of seamless hosiery is the large proportion of female employees. They constituted 69 percent of the total wage earners scheduled. Another characteristic of the industry is the predominance of workers in occupations regarded by employers as semiskilled.

Average Hourly Earnings

As in full-fashioned hosiery plants, the great majority of the employees in the seamless branch are paid on a straight piece-rate basis. With the exception of one establishment, this method of wage payment was found in all mills surveyed. In three plants, including the one with no piece workers, some of the wage earners worked under production-bonus plans.

The payment of regular rates for overtime generally prevailed in this branch of the industry. Time and one-half was allowed to all hourly employees by only 2 plants, while 2 mills paid this higher rate only to their machine fixers.[5]

Penalties of various types for faulty work were provided in 38 of the 97 mills. In 29 establishments the employees received no pay for unsatisfactory stockings, and 3 mills applied penalties for poor work in excess of a small maximum tolerance.

Variations by sex and skill.—The hourly earnings of the 18,270 wage earners in the seamless hosiery mills included in the survey averaged 35.1 cents in September 1938.

The male employees in the country as a whole averaged 42.5 cents an hour, or 11.1 cents more than the average of 31.4 cents for females. A considerable part of this difference was attributable to the relatively high earnings of skilled males, who averaged 64.2 cents. (See table 7.) Among the semiskilled workers, the difference in hourly earnings

[5] Overtime compensation earned either at regular or extra rates usually does not apply to salaried employees, who are expected to work above full-time hours without additional remuneration.

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between males and females was 5.5 cents, whereas in the unskilled group the earnings of males and females averaged about the same.

Similar differences in average earnings per hour were found among the sex-skill groups in each region. Furthermore, for each sex-skill group, the average was considerably higher in the northern than the southern territory.

TABLE 7.—*Average hourly earnings of seamless hosiery workers, 1938, by region, skill, and sex*

Region	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
United States	$0.351	$0.425	$0.314	$0.642	$0.334	$0.374	$0.319	$0.299	$0.305	$0.298
North	.412	.538	.367	.693	.395	.490	[1].372	.356	.387	.348
South	.331	.398	.295	.624	.314	.349	[2].299	.283	.286	.283

[1] Includes 23 workers reported as skilled.
[2] Includes 26 workers reported as skilled.

The distribution of hourly earnings covering all workers in the country as a whole ranged from under 17.5 cents to over $1.00 (table 8), but the largest concentration (18.7 percent) occurred between 27.5 and 32.5 cents.

TABLE 8.—*Percentage distribution of seamless-hosiery workers, according to average hourly earnings, 1938, by skill and sex*

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female [1]	Total	Male	Female
Under 17.5 cents	4.7	1.8	6.0	-------	3.9	1.4	4.8	9.0	5.9	9.8
17.5 and under 22.5 cents	8.9	5.8	10.3	0.1	8.5	6.5	9.2	13.1	11.2	13.5
22.5 and under 25.0 cents	6.9	4.4	8.0	-------	7.4	5.1	8.3	7.2	8.1	6.9
25.0 and under 27.5 cents	9.6	5.8	11.2	.3	9.9	6.6	11.3	11.5	10.4	11.9
27.5 and under 30.0 cents	8.2	5.3	9.5	.3	9.0	7.2	9.7	7.7	4.1	8.7
30.0 and under 32.5 cents	10.5	10.2	10.6	1.2	10.7	10.1	10.8	13.1	24.7	10.0
32.5 and under 35.0 cents	9.7	7.1	10.8	.9	10.4	8.5	11.0	10.3	10.0	10.4
35.0 and under 37.5 cents	8.4	6.7	9.1	1.7	9.1	8.3	9.4	7.8	6.6	8.2
37.5 and under 40.0 cents	6.5	5.7	6.9	1.4	7.3	7.4	7.2	5.4	4.1	5.7
40.0 and under 42.5 cents	5.6	6.5	5.3	2.5	6.2	8.2	5.4	4.6	4.1	4.8
42.5 and under 47.5 cents	7.3	9.4	6.3	5.3	8.0	11.7	6.6	5.3	5.2	5.4
47.5 and under 52.5 cents	4.4	8.0	2.8	11.2	4.4	8.0	3.0	2.3	3.1	2.1
52.5 and under 57.5 cents	2.8	5.4	1.6	8.7	2.7	5.2	1.7	1.2	1.1	1.2
57.5 and under 62.5 cents	1.8	3.8	.9	10.8	1.2	2.1	.9	.9	1.2	.8
62.5 and under 67.5 cents	1.5	4.0	.4	13.3	.7	1.8	.4	.3	.1	.4
67.5 and under 72.5 cents	1.2	3.4	.2	13.3	.4	.9	.2	.1	.1	[2]
72.5 and under 77.5 cents	.8	2.4	.1	9.8	.2	.6	.1	.1	-------	.1
77.5 and under 82.5 cents	.4	1.3	[2]	5.7	[2]	.1	[2]	.1	-------	.1
82.5 and under 87.5 cents	.1	.4	[2]	1.6	[2]	.1	[2]	-------	-------	-------
87.5 and under 92.5 cents	.3	1.0	[2]	4.7	[2]	.1	[2]	-------	-------	-------
92.5 and under 100.0 cents	.2	.7	-------	3.1	[2]	.1	-------	-------	-------	-------
100.0 cents and over	.2	.9	[2]	4.1	[2]	-------	[2]	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Includes 49 females classed as skilled.
[2] Less than a tenth of 1 percent.

Geographical and occupational differences.—Geographical differences in wages account in part for the relatively wide dispersion found in the hourly earnings of employees in seamless mills. For all workers, the averages were 41.2 cents in the northern and 33.1 cents in the southern region—a difference of 8.1 cents.

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Occupational differences.—The average hourly earnings of the various occupational classes in the seamless branch of the industry are shown in table 9.

The highest-paid occupations were those of working foremen and machine fixers, the former averaging 76.9 and the latter 62.1 cents.

TABLE 9.—*Average earnings and hours of seamless-hosiery workers, 1938, by occupation*

Skill, sex, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers				
Males:				
Foremen, working	212	$0.769	45.0	$34.61
Machine fixers	873	.621	43.3	26.88
Miscellaneous skilled, indirect	93	.551	48.0	26.43
Semiskilled workers				
Males:				
Boarders	1,203	.376	34.8	13.07
Clerks, factory	113	.420	45.0	18.90
Dye-machine operators	104	.397	44.6	17.71
Knitters, automatic	607	.381	38.4	14.65
Knitters, rib	213	.327	40.4	13.22
Knitters, string	292	.417	37.0	15.42
Knitters, transfer	354	.290	39.0	11.30
Machine fixers' helpers	158	.431	45.4	19.57
Machine operators, miscellaneous	92	.341	39.7	13.54
Packers	235	.359	44.4	15.93
Miscellaneous semiskilled, direct	162	.412	41.8	17.20
Miscellaneous semiskilled, indirect	109	.383	48.7	18.66
Females:				
Boarders	214	.391	36.6	14.30
Clerks, factory	109	.332	41.8	13.86
Inspectors and examiners	1,046	.312	36.0	11.24
Knitters, automatic	130	.336	39.1	13.11
Knitters, rib	69	.313	35.1	10.97
Knitters, string	137	.355	39.2	13.88
Knitters, transfer	2,614	.299	36.6	10.92
Finishers, miscellaneous	82	.272	30.7	8.33
Loopers	3,465	.326	36.5	11.90
Menders	521	.312	35.9	11.21
Seamers	729	.336	32.4	10.87
Stock handlers	90	.318	42.6	13.57
Winders	130	.334	33.3	11.13
Miscellaneous semiskilled	[1] 315	.352	40.2	14.15
Unskilled workers				
Males:				
Clippers	75	.333	32.6	10.86
Dye-house laborers	83	.298	42.7	12.70
Janitors and cleaners	79	.285	43.1	12.27
Learners and apprentices	93	.281	36.9	10.36
Watchmen	114	.311	51.0	15.87
Work distributors	214	.313	39.6	12.40
Miscellaneous unskilled, direct	115	.295	32.0	9.42
Miscellaneous unskilled, indirect	34	.326	40.3	13.15
Females:				
Clippers	415	.295	33.6	9.88
Folders, wrappers, and boxers	591	.334	35.7	11.91
Learners and apprentices	290	.157	34.7	5.44
Pairers	699	.322	37.0	11.91
Separators	237	.316	34.4	10.87
Stampers and labelers	452	.304	37.1	11.27
Miscellaneous unskilled	308	.280	34.3	9.59

[1] Includes 49 workers who were reported as skilled.

Trade-Union Organization

Very little trade-union organization was found among employees in seamless-hosiery establishments. Of the 97 plants included in the sample, only 5 reported written agreements with independent labor organizations, of which 4 were with the American Federation of

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Hosiery Workers and 1 with a federal union directly affiliated with the American Federation of Labor. The workers scheduled in these mills amounted to 7.2 percent of the total coverage. Most of the trade-union plants were located in the northern territory.

Weekly Hours and Earnings

The majority of the establishments included in the sample of the seamless branch were operating on a 2- or 3-shift basis in September 1938. Of the 97 plants scheduled, 60 were on 2 or 3 shifts, relatively few having a third shift. In the mills having more than 1 shift, however, the second and third shifts were usually confined to selected occupations, most frequently in the knitting department. About three-fourths of the southern plants had at least some employees on second or third shifts, but only a third of the northern mills worked more than 1 shift.

As in the full-fashioned industry, the 8-hour shift and 40-hour week were common.

The actual weekly hours of all workers in the seamless branch for the country as a whole averaged 37.4 in September 1938. They were slightly more in the northern than in the southern region—37.4 as compared with 37.3 hours. (See table 10.) Male employees in the country as a whole averaged 40.1 hours, which may be compared with 36.2 hours for females. The highest averages of actual hours worked per week were found for skilled males. Among the females, the semiskilled averaged more than the unskilled, but the opposite was true of the male workers.

The average weekly earnings for all workers in the northern area exceeded those in the southern area by $3.05, the figures being respectively $15.42 and $12.37. Whereas more than one-half (53.5 percent) of the southern employees earned under $12 a week, the number found in this classification in the North amounted to less than three-tenths (29.2 percent) of the total. For the country as a whole, the average weekly earnings were $17.04 for all males and $11.37 for females. In terms of sex-skill groups, the averages ranged from $29.66 for skilled males in the North to $10.02 for unskilled females in the South.

TABLE 10.—*Average actual weekly hours of seamless-hosiery workers, 1938, by skill, sex, and region*

Region	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
	Average actual weekly hours									
United States	37.4	40.1	36.2	44.0	37.0	38.8	36.3	36.5	39.9	35.5
North	37.4	40.4	36.5	42.8	37.1	39.2	[1] 36.6	36.6	40.6	35.8
South	37.3	40.0	36.0	44.4	37.0	38.8	[2] 36.2	36.4	39.7	35.5
	Average weekly earnings									
United States	$13.11	$17.04	$11.37	$28.24	$12.37	$14.50	$11.61	$10.91	$12.14	$10.58
North	15.42	21.76	13.39	29.66	14.63	19.19	[1] 13.63	13.03	15.75	12.47
South	12.37	15.91	10.63	27.72	11.62	13.53	[2] 10.83	10.32	11.36	10.02

[1] Includes 23 workers reported as skilled. [2] Includes 26 workers reported as skilled.

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Annual Earnings, 1937

The annual earnings in the seamless branch of the industry were considerably lower than those in the full-fashioned branch, the average earnings being $772 for employees who worked 52 weeks, $674 for those who worked 40 weeks or over, $643 for those who worked 26 weeks and over, and $602 for all employees on the pay roll any time in the year. The differences in annual earnings between the two branches reflect largely the differences in hourly earnings.

These averages cover only wage earners on the pay roll of the establishments surveyed in September 1938 who were employed by the same plant for one or more pay-roll periods in 1937. The annual figures obtained do not include any earnings of an individual in other establishments in which he may have worked during 1937.[6]

The average annual earnings of workers in seamless-hosiery establishments are shown in table 11.

TABLE 11.—*Average annual earnings of seamless-hosiery workers, 1937, by region, skill, and sex*

Region, and skill of workers	Average annual earnings of employees whose work extended over—											
	52 weeks			40 weeks and over			26 weeks and over			Any part of the year		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
United States	$772	$994	$641	$674	$899	$571	$643	$867	$545	$602	$811	$511
Skilled	1,445	1,445	.....	1,381	1,381	.....	1,368	1,368	.....	1,325	1,325	.....
Semiskilled [1]	702	822	648	621	745	576	592	717	548	557	670	517
Unskilled	658	789	615	586	702	555	564	674	534	511	603	486
North	878	1,223	716	800	1,148	674	764	1,106	644	733	1,080	616
Skilled	1,534	1,534	.....	1,504	1,504	.....	1,491	1,491	.....	1,481	1,481	.....
Semiskilled [2]	812	1,087	723	748	1,008	679	714	970	649	689	950	625
Unskilled	751	980	690	693	904	649	665	848	625	618	790	580
South	716	897	595	620	815	524	592	785	499	548	725	463
Skilled	1,398	1,398	.....	1,326	1,326	.....	1,313	1,313	.....	1,259	1,259	.....
Semiskilled [3]	642	718	601	566	663	526	539	638	499	502	589	467
Unskilled	617	722	579	546	644	518	526	620	499	473	549	451

[1] Includes 44 skilled females.
[2] Includes 21 skilled females.
[3] Includes 23 skilled females.

As in the full-fashioned branch, substantial differences were found between average annual earnings of males and females in seamless-hosiery plants. These differences were generally larger among semiskilled than unskilled workers. The differences were also greater in northern than southern establishments.

Average annual earnings generally varied considerably with the skill of the workers. For example, the average of all skilled males whose work extended over 52 weeks was $1,445. This was $623 more than the average ($822) received by the semiskilled males in the same group. The unskilled males averaged $789, or only $33 less than the annual earnings of the semiskilled men.

[6] Annual earnings data were secured for only 12,413 workers in 75 plants.

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Average Hourly Earnings in 1940[7]

A survey of the seamless-hosiery industry was made by the Bureau of Labor Statistics in the fall of 1940, for the purpose of examining the industry's wage structure after 2 years of operation under general minimum-wage rates. Seamless-hosiery mills had operated under the statutory minimum wage of 25 cents an hour between October 24, 1938, and September 18, 1939. On the latter date a minimum wage of 32.5 cents an hour, recommended by an industry committee and approved by the Administrator of the Fair Labor Standards Act, was applied. This was the minimum in effect at the time of the Bureau's survey.

The study covered 30,410[8] workers or approximately one-half of the industry's wage earners. Somewhat more than half of the sizable establishments in the industry were included, but mills employing fewer than 10 wage earners were generally excluded. Many of the larger mills were covered only to the extent of one-half their total employment; out of a total of 237 mills surveyed, 40 were covered only partially. In all such cases, the sample of workers from the individual mill was carefully selected to include a balanced representation of all occupations. This mill-sampling procedure among the larger establishments was adopted as a means of including a considerable number of these larger mills without permitting them to influence the total picture unduly. The sample of mills was selected in such a way as to give adequate consideration to type of product, geographical location, size of community, size of company, extent of union affiliation, and other significant industry characteristics.

Although the coverage of the 1940 survey was somewhat broader than that on which the 1938 study was based, it included the mills in the 1938 sample, and special tabulations permit a direct comparison of 1938 and 1940 data for identical mills.

The hourly earnings of all workers in the seamless-hosiery mills averaged 41.2 cents[9] in September 1940.

Individual earnings were confined almost entirely within the limits of the 60-cent range between 32.5 and 92.5 cents an hour. A percentage distribution by average hourly earnings intervals of 2.5 cents is given in table 12, for all workers, by sex and region. This distribution reveals a marked concentration at exactly the minimum wage (32.5 cents). One-fifth (20.8 percent) of all workers earned only the minimum wage, and more than a third (34.2 percent) earned 32.5 and under 35.0 cents.

Average hourly wages lower than 32.5 cents were received by 2.9 percent of the workers, representing certificated subminimum workers (2.1 percent) and apparent violations of the minimum wage (an additional 0.8 percent).[10]

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[7] Abstract of an article by Frances M. Jones, Bureau of Labor Statistics, in the Monthly Labor Review for June 1941.

[8] This figure does not include office workers, nor wage earners engaged in the manufacture of surgical hosiery.

[9] This average is based on earnings at straight-time rates, the extra earnings from punitive overtime rates having been excluded. However, the amount of overtime worked during the period studied was not sufficient to change materially the average hourly wage. With the extra pay for overtime work included, the average hourly earnings are increased only by two-tenths of a cent, or from 41.2 cents to 41.4 cents. The average of 43.5 cents for the North is increased to 43.8 cents, and the average of 40.4 cents for the South to 40.6 cents.

[10] Some of the workers represented as earning less than 32.5 cents an hour were employed in two mills that did not reckon formal rest periods as a part of the working week. These workers were being paid the legal minimum for time worked as computed by their employers.

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TABLE 12.—*Percentage distribution of seamless-hosiery workers, 1940, by average hourly earnings, region, and sex*

Average hourly earnings	All regions			North			South		
	All workers	Males	Females	All workers	Males	Females	All workers	Males	Females
Under 30.0 cents	1.9	1.3	2.2	2.2	0.9	2.7	1.8	1.4	2.0
30.0 and under 32.5 cents	1.0	.8	1.2	.7	.4	.8	1.2	.9	1.3
Exactly 32.5 cents	20.8	17.8	22.2	15.6	7.9	18.6	22.4	20.3	23.5
32.6 and under 35.0 cents	13.4	6.5	16.7	8.3	1.7	10.7	15.0	7.7	18.9
35.0 and under 37.5 cents	13.9	9.6	16.1	14.6	7.4	17.2	13.7	10.1	15.7
37.5 and under 40.0 cents	10.1	6.8	11.7	10.1	5.0	12.1	10.1	7.3	11.6
40.0 and under 42.5 cents	8.6	8.1	8.9	8.8	7.0	9.6	8.4	8.3	8.6
42.5 and under 45.0 cents	6.0	5.3	6.3	7.4	5.0	8.2	5.5	5.3	5.6
45.0 and under 47.5 cents	5.2	6.0	4.8	7.2	7.9	6.9	4.6	5.5	4.0
47.5 and under 50.0 cents	3.5	4.2	3.2	4.5	5.6	4.1	3.2	3.8	2.9
50.0 and under 52.5 cents	3.6	6.0	2.4	4.6	7.6	3.4	3.3	5.6	2.1
52.5 and under 57.5 cents	4.2	7.6	2.5	4.7	8.5	3.3	4.0	7.4	2.2
57.5 and under 62.5 cents	2.2	4.6	1.1	3.1	7.4	1.4	1.9	3.9	.9
62.5 and under 67.5 cents	1.7	4.4	.4	2.2	6.4	.6	1.6	3.9	.4
67.5 and under 72.5 cents	1.2	3.1	.2	2.1	7.0	.3	.9	2.1	.2
72.5 and under 77.5 cents	.9	2.5	.1	1.3	4.6	.1	.7	1.9	.1
77.5 and under 82.5 cents	.5	1.5	(1)	.7	2.5	(1)	.5	1.3	(1)
82.5 and under 87.5 cents	.4	1.1	(1)	.7	2.5	-------	.3	.8	(1)
87.5 and under 92.5 cents	.4	1.3	(1)	.4	1.6	(1)	.4	1.2	(1)
92.5 and under 97.5 cents	.2	.7	-------	.4	1.5	-------	.2	.5	-------
97.5 and under 102.5 cents	.1	.4	-------	.2	.7	-------	.1	.4	-------
102.5 and under 112.5 cents	.1	.2	-------	.1	.5	-------	.1	.2	-------
112.5 cents and over	.1	.2	(1)	.1	.4	-------	.1	.2	(1)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	30,410	9,944	20,466	7,417	1,998	5,419	22,993	7,946	15,047
Average hourly earnings	$0.412	$0.472	$0.380	$0.435	$0.536	$0.392	$0.404	$0.454	$0.375

[1] Less than a tenth of 1 percent.

Variations among mills.—Much of the limited variation in individual average hourly earnings can be attributed to differences in wage levels among mills rather than to occupational and skill wage differences within establishments. There was a spread of 76.7 percent between the average earnings in the lowest-wage and the highest-wage mills.[11] The lowest average wage found in any finished-goods mill[12] covered in the survey was 32.6 cents; the highest, 57.6 cents an hour. Approximately 8 percent of the mills had a wage level between 32.5 and 35.0 cents, and 3 percent paid wages which averaged 50 cents or more. A distribution of mills by plant average hourly earnings is presented in table 13.

TABLE 13.—*Distribution of mills and workers in seamless-hosiery industry, 1940, by groups of mills with specified wage levels and by region*

Plant average hourly earnings	All regions			North			South		
	Mills		Workers employed (percent)	Mills		Workers employed (percent)	Mills		Workers employed (percent)
	Number	Percent		Number	Percent		Number	Percent	
32.5 and under 35.0 cents	19	8.0	5.7	3	3.8	0.8	16	10.1	7.3
35.0 and under 37.5 cents	49	20.7	14.8	7	9.0	3.7	42	26.4	18.4
37.5 and under 40.0 cents	62	26.1	23.7	18	23.1	16.6	44	27.6	25.9
40.0 and under 42.5 cents	39	16.5	19.1	15	19.2	19.8	24	15.1	18.9
42.5 and under 45.0 cents	36	15.2	17.8	20	25.7	31.3	16	10.1	13.4
45.0 and under 47.5 cents	14	5.9	6.2	6	7.7	8.1	8	5.0	5.6
47.5 and under 50.0 cents	11	4.6	8.6	5	6.4	12.1	6	3.8	7.5
50.0 cents and over	7	3.0	4.1	4	5.1	7.6	3	1.9	3.0
Total	237	100.0	100.0	78	100.0	100.0	159	100.0	100.0

[11] Since wage levels in the large mills tend to be higher than those in small mills, the overrepresentation of large mills previously mentioned has the effect of exaggerating slightly the number of mills with high wage levels.

[12] The survey included gray goods mills and finishing plants, as well as finished-goods mills.

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Regional differences.—Wages paid by mills located in the Northern States are higher, in general, than those paid by southern mills. Average wages in the North were 43.5 cents, as compared with a southern average wage of 40.4 cents an hour (table 14). The median wage in the North was about 39 cents. Approximately 16 percent of the northern workers earned exactly the minimum wage, slightly more than a fourth earned less than 35 cents, and 51.5 percent received less than 40 cents. The median southern wage was about 36 cents. Almost a fourth of the southern workers earned exactly the minimum, two-fifths earned less than 35 cents, and about two-thirds were paid less than 40 cents.

The broad classifications of "North" and "South," however, tend to obscure other important regional differences.

TABLE 14.—*Average hourly earnings of seamless-hosiery workers, 1940, and distribution of mills by region and by specified wage levels*

Region	Average hourly earnings	Number of mills paying average hourly wages in 1940 of—							
		32.5 and under 35.0 cents	35.0 and under 37.5 cents	37.5 and under 40.0 cents	40.0 and under 42.5 cents	42.5 and under 45.0 cents	45.0 and under 47.5 cents	47.5 and under 50.0 cents	50.0 cents and over
All regions	$0.412	19	49	62	39	36	14	11	7
North	.435	3	7	18	15	20	6	5	4
Pennsylvania and adjacent area	.422	1	4	12	8	12	5	2	-------
Philadelphia	.433	-------	-------	1	1	2	1	-------	-------
Reading	.428	-------	1	3	1	2	1	1	-------
Remainder of area	.418	1	3	8	6	8	3	1	-------
North Atlantic	.420	2	3	3	3	3	-------	1	1
Midwest	.458	-------	-------	3	4	5	1	2	3
Rockford, Ill.[1]	.478	-------	-------	-------	-------	-------	-------	-------	-------
Remainder of area [1]	.454	-------	-------	-------	-------	-------	-------	-------	-------
South	.404	16	42	44	24	16	8	6	3
North Carolina	.423	1	20	26	17	13	7	5	2
Triangle area	.450	-------	2	5	8	7	7	5	2
Burlington	.439	-------	-------	3	2	1	3	1	1
High Point	.457	-------	-------	-------	-------	3	3	1	1
Remainder of area	.449	-------	2	2	6	3	1	3	-------
Western North Carolina	.397	1	14	17	7	6	-------	-------	-------
Hickory	.397	-------	3	6	2	3	-------	-------	-------
Remainder of area	.397	1	11	11	5	3	-------	-------	-------
Remainder of State	.381	-------	4	4	2	-------	-------	-------	-------
Other South	.385	15	24	18	7	3	1	1	1
Georgia	.377	4	6	4	2	-------	-------	1	-------
Tennessee	.389	8	7	5	3	2	1	-------	1
Virginia	.392	1	1	4	2	-------	-------	-------	-------
Border States	.400	-------	3	2	-------	1	-------	-------	-------
Remainder of area	.366	2	5	3	-------	-------	-------	-------	-------
Number of workers, all regions	30,410	1,741	4,504	7,182	5,817	5,408	1,880	2,627	1,251
Number of workers, North	7,417	56	278	1,228	1,470	2,322	601	897	565
Number of workers, South	22,993	1,685	4,226	5,954	4,347	3,086	1,279	1,730	686

[1] The distribution of mill averages is omitted to prevent identification of plant-average data for Rockford, Ill. A partial coverage of all Rockford mills was included in the survey.

North Carolina is the largest seamless-hosiery producing State in the country, and North Carolina's most important hosiery center pays wages that are among the highest in the industry. The average earnings in High Point (45.7 cents) are exceeded in the industry only by earnings in Rockford, Ill. (47.8 cents), a much smaller center. Mills in Burlington, N. C., pay wages (43.9 cents) more than equal to the average Philadelphia wage (43.3 cents). Average earnings in

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North Carolina as a whole (42.3 cents) exceed slightly the averages for both Pennsylvania (42.2 cents) and the North Atlantic States (42.0 cents).

Influence of size of community.—The concentration of the industry in small towns undoubtedly contributes to the low level of wages which prevails generally. This condition is accentuated in the lower-wage areas of the South where a substantial proportion of the mills are scattered among small towns in which the economic pattern is more rural than urban in character, job opportunities are scarce, and the percentage of workers organized for bargaining is very low.

It is significant that only 29 percent of the workers in the North were in communities smaller than 25,000 population, as compared with 68 percent in the South. In the high-wage Middle West, less than 15 percent of the workers were found in communities smaller than 25,000 population, as compared with 27 percent in Pennsylvania, and 64 percent in the North Atlantic area. A large part of the high-wage Triangle area in North Carolina is urban in character, whereas 97 percent of the workers in the remainder of the State, where lower wages prevail, were in communities of less than 25,000 population.

Table 15 shows average hourly earnings by size of community for the North, the South, and the country as a whole.

TABLE 15.—*Average hourly earnings of seamless-hosiery workers, 1940, by size of community and region*

Size of community [1] (population)	All regions		North		South	
	Average hourly earnings	Percent of average earnings in smallest community class	Average hourly earnings	Percent of average earnings in smallest community class	Average hourly earnings	Percent of average earnings in smallest community class
All sizes	$0.412	106.2	$0.435	107.7	$0.404	104.7
Under 5,000	.388	100.0	.404	100.0	.386	100.0
5,000 and under 10,000	.392	101.0	.416	103.0	.389	100.8
10,000 and under 25,000	.412	106.2	.426	105.4	.409	106.0
25,000 and under 100,000	.431	111.1	.441	109.2	.429	111.1
100,000 and under 500,000	.420	108.2	.433	107.2	.408	105.7
500,000 and over	.449	115.7	.449	111.1	----	----

[1] Community size is not to be confused with corporate size of town. As used here, the term refers to the metropolitan district or labor-market area, within which there is competition among workers for jobs as well as among employers for workers. The U. S. Bureau of the Census metropolitan districts were utilized for communities of 100,000 population or more which embraced a town of at least 50,000 corporate population. Similar labor-market areas were established for smaller communities.

Price of product and average hourly earnings.—There is a noticeable tendency towards the payment of lower wages in the manufacture of cheap hosiery than are generally paid in the production of higher-priced goods. This fact is demonstrated in table 16, which classifies each mill according to the dominant retail price of its product and distributes the mills by plant-average wage classes. The average hourly earnings of mills in each retail-price class also are shown in table 16. There is a difference of approximately 3 cents in average wages between the group of mills which specialize in hosiery that retails for less than 25 cents, and those mills which produce principally high-priced goods.

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TABLE 16.—*Average hourly earnings of seamless-hosiery workers, 1940, and distribution of mills by dominant retail price of mill product and specified wage levels*

Dominant retail-price class of mill product	Total number of—		Average hourly earnings	Number of mills paying average hourly wages in 1940 of—							
	Mills	Workers		32.5 and under 35.0 cents	35.0 and under 37.5 cents	37.5 and under 40.0 cents	40.0 and under 42.5 cents	42.5 and under 45.0 cents	45.0 and under 47.5 cents	47.5 and under 50.0 cents	50.0 cents and over
All retail-price classes	237	30,410	$0.412	19	49	62	39	36	14	11	7
10 cents and under	45	5,813	.398	4	17	12	4	3	5	------	------
Over 10 and under 16 cents	70	8,396	.401	7	20	24	9	5	------	4	1
16 and under 25 cents	27	3,040	.403	2	4	9	6	3	1	1	1
25 and under 35 cents	50	7,587	.429	3	4	7	12	12	6	4	2
35 and under 50 cents	30	3,467	.428	3	4	5	5	9	2	------	2
50 cents and over	13	1,818	.419	------	------	5	2	3	------	2	1
Unknown	2	289	(1)	------	------	------	1	1	------	------	------

[1] Average was not computed.

Comparison of Wage Levels in September 1938 and September 1940

Average wages in 91 identical mills[13] advanced from 35.1 cents to 41.3 cents[14] during 2 years of operation under a general minimum wage. This represents an increase of 17.7 percent, which may be compared with an estimated pay-roll increase of 10.1 percent that was necessary to bring the wages of all workers up to the 32.5-cent minimum.

TABLE 17.—*Changes in average hourly earnings from 1938 to 1940 in 91 seamless-hosiery mills, by 1938 plant averages*

1938 plant-average hourly earnings	Total number of mills classified as of 1938	Average hourly earnings in—			Estimated direct percent of increase resulting from minimum wage under Fair Labor Standards Act [1]
		September 1938	September 1940		
			Average	Percent of increase over 1938 average	
All 1938 plants	91	$0.351	$0.413	17.7	10.1
Under 25.0 cents	9	.226	.351	55.3	52.7
25.0 and under 27.5 cents	8	.265	.373	40.8	28.8
27.5 and under 30.0 cents	9	.291	.385	32.3	21.3
30.0 and under 32.5 cents	7	.314	.384	22.3	14.2
32.5 and under 35.0 cents	15	.337	.395	17.2	9.0
35.0 and under 37.5 cents	4	.367	.402	9.5	3.8
37.5 and under 40.0 cents	12	.385	.417	8.3	
40.0 and under 42.5 cents	4	.410	.429	4.6	2.2
42.5 and under 45.0 cents	14	.436	.484	11.0	
45.0 and under 47.5 cents	4	.459	.492	7.2	.6
47.5 cents and over	5	.512	.523	2.1	

[1] Source: U. S. Department of Labor, Wage and Hour Division, Research and Statistics Branch, Minimum Wages in the Seamless Hosiery Industry, March 1941 (p. 63).

That the application of a minimum wage would result in a pronounced concentration of workers' earnings at and slightly above the

[13] The term "identical mills" as used herein refers to the complete 1938 sample of 97 mills, and the 1940 sample of 91 mills which were still in business at the time of the 1940 survey.

[14] The practically identical averages obtained in 1940 from the two samples of 91 and 237 mills (41.3 and 41.2 cents, respectively) are a commentary on the representative character of the plants included in the sample.

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wage floor was to be expected. However, the wage adjustment that occurred subsequent to September 1938 was more far-reaching than a mere increase of the wages of the lowest-paid workers to 32.5 cents. Occupational and skill differences also were maintained to a limited extent, causing wage increases among workers of all wage levels. This fact is clearly shown in table 18, which gives a distribution of employees by average hourly earnings for both the 1938 and the 1940 periods. A comparison of the data for the 2 years shows the extent to which the earnings of workers at various wage levels were adjusted.

TABLE 18.—*Cumulative percentage distribution of seamless-hosiery workers, 1938 and 1940, by average hourly earnings and by region*

Average hourly earnings	All regions		North		South	
	1938	1940	1938	1940	1938	1940
Under 32.5 cents	48.8	3.7	22.5	2.9	57.4	3.9
32.5 and under 35.0 cents	58.5	35.9	35.9	25.7	65.8	39.6
35.0 and under 37.5 cents	66.9	49.7	47.2	38.2	73.2	53.9
37.5 and under 40.0 cents	73.4	60.2	56.8	48.5	78.7	64.5
40.0 and under 42.5 cents	79.0	68.9	64.7	57.6	83.6	73.0
42.5 and under 47.5 cents	86.3	81.1	76.1	72.7	89.6	84.1
47.5 and under 52.5 cents	90.7	88.3	83.3	82.0	93.1	90.6
52.5 and under 57.5 cents	93.5	92.2	88.2	87.2	95.1	94.0
57.5 and under 62.5 cents	95.3	94.2	91.9	90.6	96.3	95.5
62.5 and under 67.5 cents	96.8	95.9	94.2	92.9	97.5	97.0
67.5 and under 72.5 cents	98.0	97.0	96.7	95.2	98.2	97.7
72.5 and under 77.5 cents	98.8	98.1	98.2	97.1	98.8	98.4
77.5 and under 82.5 cents	99.2	98.6	98.7	97.9	99.2	98.8
82.5 and under 87.5 cents	99.3	99.0	99.1	98.7	99.3	99.0
87.5 and under 92.5 cents	99.6	99.5	99.6	99.2	99.6	99.5
92.5 and under 100.0 cents	99.8	99.7	99.8	99.6	99.8	99.7
100.0 cents and over	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	18,270	17,346	4,465	4,657	13,805	12,689
Average hourly earnings	$0.351	$0.413	$0.412	$0.443	$0.331	$0.402

Iron and Steel Industry—Earnings and Hours, 1937 and 1938[1]

The iron and steel industry may be variously defined. A narrow definition of the industry would include only those branches engaged in the manufacture of crude iron and steel and of rolled products. These branches constitute the "basic" group, which includes blast furnaces, steel works, and rolling mills. Also included in this group are those departments operated in connection with rolling mills further to process the rolled products, such as wrought pipe, bolts and nuts, etc. According to the 1937 Census of Manufactures there were 497 establishments in this group, each with an annual output valued at $5,000 or more. These establishments had an average monthly employment of 502,417 wage earners.

Along with establishments in the basic group, the Bureau of Labor Statistics also covered those independent establishments engaged in the manufacture of finished iron and steel products. Thus, wire drawn from purchased rods and also independent tube mills were covered. In all, the Bureau's survey covered 276 plants in 23 States.

[1] Abstract of articles in the Monthly Labor Review for August, September, and October 1940, prepared by Victor S. Baril and Abner C. Lakeman, of the Bureau of Labor Statistics.

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The geographical classification of the data used in this report differs somewhat from that followed in previous surveys. Instead of the four districts formerly used,[2] the Bureau adopted three broad regions, namely the North, the South, and the West. The northern region, by far the largest of the three, was further divided into five divisions as follows: Eastern, Pittsburgh-Youngstown, Lake Erie, Chicago-Gary, and Inland. Essentially the change involved the breaking down into smaller divisions of the Great Lakes and middle western district, which extended from western New York to Colorado, the reclassification of a few centers of production, and finally the creation of a western classification including the Southwest and Pacific coast. The latter territory was covered for the first time in this survey.[3]

It should be pointed out that the sample was selected on the basis of department and not of firm nor of works. A firm may have several works (i. e., separate establishments or operations) and each of these works may in turn have several departments. As a rule, only certain departments were covered in any of these works. For that reason, the term "plant" or "establishment," whenever used in this article, will be construed to mean department, such as open-hearth furnaces, blooming mills, etc.—and not complete operations or works embracing a number of departments.

In most cases the pay-roll period covered was one in April 1938. Of the 276 plants furnishing information, 231 reported for a pay-roll period in April and 29 for a period in March. No information was obtained for a pay-roll period prior to January or later than September 1938.

Average Hourly Earnings

In April 1938 the over-all average hourly earnings of the 81,217 wage earners employed in the 276 establishments for which data were obtained amounted to 83.9 cents an hour. Earnings varied widely between plants, the averages ranging from 38.3 cents to $1.212. It will be seen from table 1 that the individual plant averages are widely scattered between these two extremes.

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[2] These were the eastern, the Pittsburgh, the Great Lakes and middle western, and the southern districts.

[3] The eastern division is the same as in former surveys. It embraces Massachusetts, Rhode Island, Connecticut, Delaware, New Jersey, the eastern half of New York and of Pennsylvania, and the territory in and around Baltimore. The Pittsburgh-Youngstown division includes all of the old Pittsburgh district plus some centers in the vicinity of Youngstown which in former surveys had been classified in the Great Lakes and middle western district. The Lake Erie division, which was formerly included in the Great Lakes and middle western district, embraces all of western New York, the Lake counties of Ohio, and the territory in and around Detroit. The Chicago-Gary division, which was also included in former surveys in the Great Lake and middle western district, covers all operations in and around Chicago, Ill., and Gary, Ind. Also included in this division are the isolated operations in northwestern Illinois and in Minnesota. The inland division is made up of the remaining producing centers in the North. With the exception of the mills in Kentucky, all of the mills in the inland division were formerly classified in the Great Lakes and middle western district. The inland division extends from Ashland, Ky., to Kansas City, Mo. It includes those mills along the Ohio River in both Kentucky and Ohio, those mills in central and southern Ohio not included in the Pittsburgh-Youngstown or the Lake Erie divisions, mills in the central and southern sections of Illinois and Indiana not included in the Chicago-Gary division, and all the mills in Missouri. The Southern region differs from the district formerly used in that it does not include the Kentucky mills located along the Ohio. The Western region is made up of the mills in the Southwest and also those on the Pacific coast. The latter mills were covered for the first time in connection with the 1938 survey.

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TABLE 1.—*Distribution of individual plants in the iron and steel industry, by average hourly earnings and by region, April 1938*

Average hourly earnings	United States	North						West	South
		Total	Eastern division	Pittsburgh-Youngstown division	Lake Erie division	Chicago-Gary division	Inland division		
Total plants	276	232	56	83	37	31	25	19	25
37.5 and under 42.5 cents	1								1
42.5 and under 47.5 cents	1								1
47.5 and under 52.5 cents	1								1
52.5 and under 57.5 cents	2	2	2						
57.5 and under 62.5 cents	12	2					2		10
62.5 and under 67.5 cents	9	7	4		3				2
67.5 and under 72.5 cents	17	15	10	1	3		1		2
72.5 and under 77.5 cents	32	27	8	10	3	4	2	1	4
77.5 and under 82.5 cents	56	53	13	24	4	7	5	2	1
82.5 and under 87.5 cents	58	54	8	23	11	9	3	3	1
87.5 and under 92.5 cents	44	39	9	18	4	5	3	3	2
92.5 and under 100.0 cents	30	24	1	5	8	6	4	6	
100.0 and under 110.0 cents	7	4	1	1	1		1	3	
110.0 and under 120.0 cents	5	4					4	1	
120.0 cents and over	1	1		1					

Despite the wide dispersion of the plant averages, the average hourly earnings of individual workers displayed a pronounced central tendency. This may be seen from the distribution presented in table 2. Approximately one-sixth of the workers (16.2 percent) averaged between 62.5 and 67.5 cents. The fact that the lower limit of this interval coincides to a considerable extent with the common-labor rate in effect for the majority of the workers in the northern region largely explains this concentration.

TABLE 2.—*Distribution of workers in the iron and steel industry, by average hourly earnings, April 1938*

Average hourly earnings (in cents)	Number of workers	Simple percentage	Cumulative percentage	Average hourly earnings (in cents)	Number of workers	Simple percentage	Cumulative percentage
Total workers	81,217	100.0		82.5 and under 87.5	6,714	8.3	66.7
				87.5 and under 92.5	5,648	7.0	73.7
Under 30.0	10	(1)	(1)	92.5 and under 100.0	6,075	7.5	81.2
30.0 and under 32.5	80	0.1	0.1	100.0 and under 110.0	5,200	6.4	87.6
32.5 and under 35.0	26	(1)	.1	110.0 and under 120.0	3,401	4.2	91.8
35.0 and under 37.5	137	.2	.3	120.0 and under 130.0	2,270	2.8	94.6
37.5 and under 40.0	121	.1	.4	130.0 and under 140.0	1,248	1.5	96.1
40.0 and under 42.5	248	.3	.7	140.0 and under 150.0	831	1.0	97.1
42.5 and under 47.5	605	.7	1.4	150.0 and under 160.0	534	.7	97.8
47.5 and under 52.5	1,096	1.3	2.7	160.0 and under 170.0	493	.6	98.4
52.5 and under 57.5	2,639	3.2	5.9	170.0 and under 180.0	368	.5	98.9
57.5 and under 62.5	3,642	4.5	10.4	180.0 and under 190.0	290	.4	99.3
62.5 and under 67.5	13,083	16.2	26.6	190.0 and under 200.0	151	.2	99.5
67.5 and under 72.5	9,685	11.9	38.5	200.0 and under 220.0	199	.2	99.7
72.5 and under 77.5	8,399	10.3	48.8	220.0 and under 240.0	115	.1	99.8
77.5 and under 82.5	7,758	9.6	58.4	240.0 and over	151	.2	100.0

[1] Less than a tenth of 1 percent.

The extreme range in the individual averages (from less than 30 cents to over $2.40) is, to a very large extent, due to the fact that over one-half of the employees were either piece or bonus workers, the remainder being time workers.

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Hourly Earnings of Male Workers, by Skill

Inasmuch as iron and steel workers are overwhelmingly male, it is only natural that the distribution of hourly earnings of all males (see table 3) should follow very closely that of all workers.

TABLE 3.—*Distribution of male workers in the iron and steel industry, April 1938, by average hourly earnings and by skill*

Average hourly earnings	Total workers		Skilled workers		Semiskilled workers		Unskilled workers	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total workers	80,711	100.0	27,320	100.0	32,594	100.0	20,797	100.0
Under 30.0 cents	10	(1)			2	(1)	8	(1)
30.0 and under 32.5 cents	80	0.1	3	(1)	29	0.1	48	0.2
32.5 and under 35.0 cents	26	(1)	6	(1)	14	(1)	6	(1)
35.0 and under 37.5 cents	136	.2	6	(1)	23	.1	107	.5
37.5 and under 40.0 cents	119	.1	13	(1)	55	.2	51	.2
40.0 and under 42.5 cents	247	.3	27	0.1	63	.2	157	.8
42.5 and under 47.5 cents	600	.7	57	.2	159	.5	384	1.8
47.5 and under 52.5 cents	1,089	1.3	116	.6	468	1.4	505	2.4
52.5 and under 57.5 cents	2,281	2.8	184	.7	727	2.2	1,370	6.6
57.5 and under 62.5 cents	3,536	4.4	370	1.4	1,414	4.3	1,752	8.4
62.5 and under 67.5 cents	13,069	16.3	883	3.2	4,371	13.5	7,815	37.7
67.5 and under 72.5 cents	9,683	12.1	1,381	5.1	5,586	17.2	2,716	13.2
72.5 and under 77.5 cents	8,397	10.5	2,241	8.2	4,521	14.0	1,635	7.9
77.5 and under 82.5 cents	7,757	9.6	2,877	10.5	3,730	11.4	1,150	5.5
82.5 and under 87.5 cents	6,712	8.3	3,168	11.5	2,701	8.3	843	4.1
87.5 and under 92.5 cents	5,645	7.0	2,689	9.8	2,225	6.8	731	3.5
92.5 and under 100.0 cents	6,075	7.5	3,357	12.3	2,084	6.4	634	3.0
100.0 and under 110.0 cents	5,199	6.4	2,890	10.6	1,945	6.0	364	1.8
110.0 and under 120.0 cents	3,400	4.2	2,057	7.5	1,084	3.3	259	1.2
120.0 and under 130.0 cents	2,270	2.8	1,444	5.3	700	2.1	126	.6
130.0 and under 140.0 cents	1,248	1.5	889	3.3	324	1.0	35	.2
140.0 and under 150.0 cents	831	1.0	617	2.3	177	.5	37	.2
150.0 and under 160.0 cents	534	.7	443	1.6	82	.3	9	(1)
160.0 and under 170.0 cents	493	.6	438	1.6	46	.1	9	(1)
170.0 and under 180.0 cents	368	.5	312	1.1	35	.1	21	.1
180.0 and under 190.0 cents	290	.4	252	.9	13	(1)	25	.1
190.0 and under 200.0 cents	151	.2	141	.5	10	(1)		
200.0 and under 220.0 cents	199	.2	194	.7	5	(1)		
220.0 and under 240.0 cents	115	.1	114	.4	1	(1)		
240.0 cents and over	151	.2	151	.6				

[1] Less than a tenth of 1 percent.

Quite naturally, the number of skilled workers in the upper wage brackets exceeded by a wide margin that of the semiskilled and the unskilled workers. Thus, 70 percent of all the skilled workers earned 82.5 cents or more and well over one-third (36.4 percent) earned $1 or more. In contrast, only 34.9 percent of the semiskilled and 14.8 percent of the unskilled averaged 82.5 cents or better an hour, and only 13.4 percent of the former and 4.2 percent of the latter as much as $1 an hour.

Unskilled workers accounted for the major share of the iron and steel workers earning less than 62.5 cents an hour. One-fifth of the unskilled (20.9 percent) averaged less than 62.5 cents, compared to 9 percent of the semiskilled and only 3 percent of the skilled workers. It should be pointed out, however, that only 5.9 percent of the unskilled earned less than 52.5 cents and less than 1 percent (0.9) averaged under 40 cents an hour.

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Hourly Earnings of Female Workers

There are few females employed in iron and steel establishments. All but 2 of the 506 females covered in the survey were found in tin-plate mills and most of them were employed as assorters of tin plate. Female workers earned an average of 57.8 cents an hour, or 26.3 cents less than male workers.

The average hourly earnings of female workers, unlike those of male workers, were confined to extremely narrow limits, as may be seen from the distribution in table 4.

TABLE 4.—*Distribution of female workers in the iron and steel industry, April 1938, by average hourly earnings*

Average hourly earnings	Number of workers	Percent of workers
Total workers	506	100.0
Under 52.5 cents	16	3.2
52.5 and under 57.5 cents	358	70.7
57.5 and under 62.5 cents	106	20.9
62.5 and under 67.5 cents	14	2.8
67.5 cents and over	12	2.4

Regional Variations

For purposes of comparison, the country has been divided into three broad regions, namely the North, the West, and the South, and the information collected has been classified according to these regions.

The distribution of individual plants according to average hourly earnings (see table 5) indicates quite definitely that each region has a distinctive wage structure. Despite some overlapping, it is evident that the highest wage level is found in the West and the lowest in the South, the northern wage level being somewhat lower than the former, yet substantially higher than the latter.

TABLE 5.—*Average hourly earnings in the iron and steel industry, April 1938, by region, division, and skill*

Region and division	Total workers		Skilled workers		Semiskilled workers		Unskilled workers	
	Number	Average hourly earnings	Number	Average hourly earnings	Number	Average hourly earnings	Number	Average hourly earnings
United States	81,217	$0.839	27,338	$0.992	33,074	$0.793	20,805	$0.689
North	74,325	.847	25,025	.992	30,321	.802	18,979	.703
Eastern division	9,927	.778	3,797	.917	3,544	.729	2,586	.629
Pittsburgh-Youngstown division	35,284	.858	11,550	1.003	14,736	.812	8,998	.718
Lake Erie division	9,251	.825	3,121	.968	3,638	.781	2,492	.691
Chicago-Gary division	14,302	.857	4,582	.998	6,092	.815	3,628	.726
Inland division	5,561	.918	1,975	1.098	2,311	.858	1,275	.719
West	2,632	.923	1,008	1.137	986	.829	638	.713
South	4,260	.660	1,305	.854	1,767	.622	1,188	.489

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In appraising the regional influence on the wage structure of the industry, one should bear in mind that the extremely uneven distribution of the iron and steel industry among the three broad regions reduces greatly the influence of some regions on the general wage level of the industry as a whole. Thus, over 90 percent of the wage earners in the industry are found in the North and less than 10 percent in the other two regions. Despite this fact, however, the West and the South, having respectively the highest and lowest wage levels, do exert a definite though not extensive influence on the general wage structure of the iron and steel industry.

Variations According to Branch of Industry

Branch of industry also exerts some influence on the general wage structure. This is clearly indicated by the averages for each branch. The lowest average hourly earnings (73.6 cents) were found in blast furnaces and the highest (87.3 cents) in steel works. The average for rolling mills (84.4 cents) was only 2.9 cents below that for steel works, but 10.8 cents above that for blast furnaces. The averages by branches are presented in table 6.

TABLE 6.—*Average hourly earnings in the iron and steel industry, April 1938, by branch, region, and skill*

Branch and skill of workers	United States		North		West		South	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
All branches	81,217	$0.839	74,325	$0.847	2,632	$0.923	4,260	$0.660
Skilled	27,338	.992	25,025	.992	1,008	1.137	1,305	.854
Semiskilled	33,074	.793	30,321	.802	986	.829	1,767	.622
Unskilled	20,805	.689	18,979	.703	638	.713	1,188	.489
Blast furnaces	5,596	.736	4,746	.772	214	(1)	1,036	(1)
Skilled	2,045	.869	1,715	.881	74	(1)	256	(1)
Semiskilled	2,403	.691	1,859	.734	74	(1)	470	(1)
Unskilled	1,548	.602	1,172	.641	66	(1)	310	(1)
Steel works	11,457	.873	10,353	.873	819	.915	285	(1)
Skilled	4,667	1.022	4,232	1.018	312	1.086	123	(1)
Semiskilled	3,368	.821	3,013	.822	271	.861	84	(1)
Unskilled	3,422	.692	3,108	.694	236	.721	78	(1)
Rolling mills	63,764	.844	59,226	.849	1,599	.949	2,939	.679
Skilled	20,626	.999	19,078	.998	622	1.200	926	.861
Semiskilled	27,303	.799	25,449	.805	641	.828	1,213	.651
Unskilled	15,835	.698	14,699	.709	336	.713	800	.494

[1] Plant coverage too small to justify presentation of averages.

Variations by Departments

It will be remembered that the iron and steel survey was conducted on a departmental basis, information being obtained for a representative number of establishments in 21 departments. Of these, 3 were in the steel-works branch and 17 in the rolling-mills branch. In the blast-furnace branch of the industry there is only the one department.

Of the 21 departments, blast furnaces had the lowest average, 73.6 cents, and tin mills the highest, 89.0 cents. (See table 7.) In only four departments was the average under 80 cents and in only one was it under 77 cents. On the other hand, 12 departments averaged between 81 and 85 cents and 5 averaged at least 85 cents. If the highest and lowest averages are overlooked, the spread in average hourly earnings of the remaining 19 departments was only slightly more than 10 cents—from 77.4 cents in puddle mills to 87.7 cents in strip mills.

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TABLE 7.—*Average hourly earnings of iron and steel workers, April 1938, by department and skill*

Department	Number of workers				Average hourly earnings of—			
	Total	Skilled	Semi-skilled	Unskilled	All workers	Skilled workers	Semi-skilled workers	Unskilled workers
All departments	81,217	27,337	33,074	20,806	$0.839	$0.992	$0.793	$0.689
Blast furnaces	5,996	2,044	2,403	1,549	.736	.869	.691	.602
Steel works	11,457	4,667	3,368	3,422	.873	1.022	.821	.692
Bessemer converters	813	333	207	273	.847	.964	.789	.728
Open-hearth furnaces	9,784	3,950	2,908	2,926	.878	1.030	.829	.691
Electric furnaces	860	384	253	223	.845	.980	.775	.663
Rolling mills	63,764	20,626	27,303	15,835	.844	.998	.799	.698
Puddling mills	355	192	99	64	.774	.887	.643	.606
Blooming mills	3,728	1,239	1,632	857	.861	1.049	.785	.682
Billet mills	1,055	365	497	193	.839	1.015	.767	.664
Plate mills	3,487	1,005	1,395	1,087	.820	.979	.786	.692
Rail mills	1,110	329	492	289	.811	.968	.789	.652
Structural mills	1,169	322	543	304	.834	.978	.816	.682
Bar mills	5,068	1,833	1,658	1,577	.789	.952	.739	.636
Rod mills	1,860	652	690	518	.824	1.039	.741	.657
Wire mills	4,603	2,432	1,131	1,040	.811	.903	.769	.651
Skelp mills	491	171	146	174	.818	1.004	.723	.699
Lap-weld tube mills	1,994	413	931	650	.793	.908	.800	.700
Butt-weld tube mills	2,698	575	1,321	802	.810	.973	.788	.717
Seamless tube mills	2,726	887	1,301	538	.810	.884	.817	.662
Sheet- and tin-bar mills	975	340	406	229	.824	.967	.785	.650
Strip mills	11,107	3,337	5,206	2,564	.877	1.044	.827	.721
Sheet mills	10,443	2,627	4,873	2,943	.852	1.059	.819	.707
Tin mills	10,895	3,907	4,982	2,006	.890	1.039	.805	.776

Occupational Differences

Broadly speaking, the highest hourly earnings in the iron and steel industry are paid to rollers in the rolling mills. For this occupation hourly earnings in April 1938 ranged from an average of $1.620 in sheared-plate mills to $2.927 in strip mills. Other occupational groups with high hourly earnings were blowers in the blast furnaces, melters and pourers in steel works, and heaters in rolling mills. All of these are highly skilled occupations and in most cases averaged well above $1 an hour.

At the bottom of the scale, in terms of hourly earnings, are the workers engaged on the heavy manual jobs. These are for the most part common laborers and helpers. Comparatively little skill is required on these jobs, and the earnings of the overwhelming majority of these employees were restricted to the 10-cent range of 60 and under 70 cents an hour in April 1938. Even on these jobs, where brawn rather than skill is the primary requirement, general averages of less than 60 cents an hour were reported for only two of the occupational groups. The exceptions were hookers in rod mills, who averaged 58.1 cents, and door operators in open-hearth furnaces, who averaged 55.8 cents.

Occupation likewise sets a rigid outside limit on weekly earnings. Certain of the highly skilled employees, such as rollers in strip mills, averaged as much as $100 a week. Weekly pay envelopes of this amount were by no means typical, however, even among the highly skilled employees. In other departments the weekly earnings of the higher-paid occupational groups ranged from $50 to $75, and a very substantial majority of skilled groups averaged less than $40 a week.

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A step below the skilled groups were the helpers and attendants whose weekly earnings for the most part ranged from about $20 to $30. For the unskilled occupational groups the range of weekly earnings was much lower. In fact, the overwhelming majority of the unskilled workers averaged less than $20 a week in the early part of 1938, and weekly pay envelopes containing less than $15 were reported for a considerable number. Well above this level, however, were unskilled workers employed in the butt-weld tube mills. For all unskilled employees in this department weekly earnings averaged $25.94, while the hook boys averaged $35.39 a week.

Taken as a whole, weekly earnings in the iron and steel industry in April 1938 were low, considering the relatively high level of hourly earnings, because of the reduced operating time that prevailed in virtually all branches of the industry at that time. For the industry as a whole, the weekly working time averaged only 28.5 hours in April 1938. The nearest approach to full-time operation at the time of the survey was 34.3 hours, the average for the rod mills. At the other extreme, an average workweek of only 22.3 hours was reported for the employees of the Bessemer converters.

Wages and Hours, by Departments

The following series of tables shows, by department, the hours of work per week, average hourly earnings, and average weekly earnings for each major occupation in 1938.

Blast Furnaces

The relatively low wage level of wage earners employed by the blast furnaces was due primarily to the comparatively small segment of the labor force found in the high-wage brackets. Top wages in this branch of the industry were paid to blowers, who, averaged $1.194 an hour in April 1938. This group, however, accounted for only a small fraction of the total wage earners. Earnings of other occupational groups lagged far behind.

TABLE 8.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in blast furnaces, April 1938, by occupation and skill.*

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
All occupations	2,733	$0.720	30.4	$21.89
Skilled	594	.894	32.8	29.30
Blowers	115	1.194	40.0	47.76
Blowing engineers	95	.899	34.1	30.63
Blowing engineers' assistants	75	.750	27.8	20.53
Keepers	194	.716	29.4	21.01
Ore-bridge operators	95	.888	32.4	28.79
Other skilled workers	20	.828	37.9	31.39
Semiskilled	1,407	.680	29.6	20.15
Keepers' helpers	504	.640	27.4	17.55
Larrymen	175	.693	29.9	20.70
Pig-machine men	262	.668	30.0	20.06
Skip operators	146	.712	30.8	21.93
Stove tenders	160	.735	32.8	24.15
Transfer-car operators	74	.695	32.4	22.50
Other semiskilled workers	86	.725	30.5	22.11
Unskilled	732	.640	30.1	19.23
Cindermen (at dump)	49	.688	31.1	21.39
Larrymen's helpers	91	.621	32.4	20.15
Stockers	394	.644	28.6	18.44
Other unskilled workers	198	.628	31.6	19.84

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Steel Works

Highest wages in the steel-works branch of the industry were paid to melters. At open-hearth furnaces these employees averaged $1.895 an hour and at electric furnaces the average was $1.468. Other skilled workers with high averages were melters' first helpers, steel pourers, vessel men, and stopper setters. All of these occupational groups averaged more than $1 an hour. The lowest paid of the skilled occupational classes was that of molders in electric furnaces, who showed an average of 75.2 cents.

TABLE 9.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in steel works, April 1938, by occupation and skill*

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Bessemer converters				
All occupations	298	$0.934	22.3	$20.79
Skilled	120	1.090	23.2	25.32
Blowing engineers	9	.885	27.1	23.97
Ingot strippers	12	.881	19.9	17.54
Mixermen	16	.917	34.2	31.34
Steel pourers	12	1.334	23.9	31.82
Stopper setters	13	1.125	19.3	21.70
Vesselmen	14	1.333	23.2	30.87
Other skilled workers	44	1.133	20.4	23.05
Semiskilled	39	.961	22.5	21.60
Vesselmen's helpers	17	1.062	23.2	24.69
Other semiskilled workers	22	.877	21.9	19.22
Unskilled	139	.780	21.4	16.66
Cinder pitmen	51	.718	21.2	15.23
Stockers	56	.841	20.3	17.10
Other unskilled workers	32	.776	23.4	18.18
Open-hearth furnaces				
All occupations	4,965	.979	26.3	25.72
Skilled	2,101	1.154	28.0	32.28
Charging-floor cranemen	184	.912	24.4	22.27
Charging-machine operators	213	.997	28.8	28.73
Ingot strippers	133	.886	27.2	24.12
Ladle cranemen	263	968	28.1	27.16
Melters	110	1.895	39.1	74.04
Melters' helpers, first	684	1.447	26.0	37.69
Steel pourers	146	1.038	30.7	31.83
Stock cranemen	226	.815	27.9	22.76
Other skilled workers	142	.841	29.6	24.89
Semiskilled	1,308	.935	26.0	24.28
Melters' helpers, second	723	1.069	24.8	26.47
Nozzle setters	113	.835	27.1	22.63
Stopper setters	99	.967	28.4	27.49
Other semiskilled workers	373	.720	27.3	19.68
Unskilled	1,556	.745	24.3	18.07
Door operators	124	.558	18.6	10.36
Melters' helpers, third	737	.802	24.7	19.80
Mold cappers	130	.774	24.2	18.73
Stockers	523	.693	24.9	17.25
Other unskilled workers	42	.722	25.7	18.57
Electric furnaces				
All occupations	533	.860	30.7	26.36
Skilled	249	1.006	31.9	32.15
Ladle cranemen	35	.924	25.8	24.83
Ladlemen (steel pourers)	35	.919	29.3	26.93
Melters	34	1.468	40.4	59.32
Melters' helpers, first	71	1.015	33.7	34.15
Molders	50	.752	33.6	25.26
Other skilled workers	24	.898	24.4	21.86

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TABLE 9.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in steel works, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Electric furnaces—Continued				
Semiskilled	140	$0.772	29.8	$23.03
Ladlemen's helpers	22	.804	30.0	24.09
Melters' helpers, second	52	.834	29.8	24.81
Melters' helpers, third	37	.735	24.7	18.19
Other semiskilled workers	29	.693	36.3	25.20
Unskilled	144	.670	29.2	19.58
Chargers, hand	21	.705	35.8	25.27
Stockers	111	.665	27.6	18.37
Other unskilled workers	12	.641	32.5	20.80

Rolling Mills

Hourly earnings of rolling-mill employees cover an unusually wide range. Some of the employees rank with the highest-paid wage earners in the country. Earnings of others, by contrast, are low in comparison with the general wage level prevailing in the iron and steel industry.

Broadly speaking, the highest hourly earnings are found in the strip and tin-plate mills. In both of these divisions there are a number of occupational groups in the upper-wage classes. As previously indicated, rollers in strip mills averaged as high as $2.927 an hour. In addition to this occupation, heaters averaged $1.752, while the respective averages of assistant rollers and cold reduction rollers were $1.493 and $1.291. Even among the semiskilled strip-mill workers there were occupations with averages above $1 an hour. This was true of heaters' helpers who averaged $1.161 and shear and leveler operators who averaged $1.047. Moreover, none of the unskilled occupational groups in strip mills averaged less than 75 cents an hour. In the tin-plate mills there was no occupation averaging as much as rollers in the strip mills, but the general level of wages was relatively high for each of the principal groups of wage earners.

TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Puddling mills				
All occupations	296	$0.798	30.8	$24.57
Skilled	172	.895	32.3	28.91
Puddlers	48	.952	31.8	30.28
Puddlers, level-handed	101	.875	33.3	29.11
Other skilled workers	23	.864	29.1	25.16
Semiskilled	79	.651	28.6	18.66
Puddlers' helpers	51	.654	29.8	19.45
Other semiskilled workers	28	.647	26.6	17.23
Unskilled	45	.639	28.7	18.35
Stockers	19	.623	30.3	18.90
Other unskilled workers	26	.651	27.6	17.95

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Billet mills				
All occupations	619	$0.883	26.4	$23.26
Skilled	212	1.128	24.8	27.98
Guide setters	12	1.041	26.4	27.47
Inspectors, product	50	.805	28.0	22.50
Roll engineers, electric	7	.750	21.7	16.29
Roll engineers, steam	23	.872	12.3	10.72
Rollers	31	1.745	26.1	45.46
Rollers, assistant	11	1.124	16.6	18.62
Shearmen	30	.930	28.1	26.15
Tilting-table operators	27	1.186	24.7	29.35
Other skilled workers	19	1.568	29.2	45.79
Semiskilled	302	.788	28.3	22.31
Chippers and grinders	200	.757	29.5	22.29
Hotbed men	15	.803	24.6	19.74
Transfer-table operators	10	.799	20.1	16.06
Other semiskilled workers	77	.871	27.1	23.65
Unskilled	105	.691	23.9	16.49
Shearmen's helpers	20	.812	19.9	16.17
Other unskilled workers	85	.668	24.8	16.57
Blooming mills				
All occupations	1,926	.915	26.7	24.39
Skilled	602	1.198	28.4	34.01
Heaters	106	1.377	32.4	44.55
Manipulators	69	1.280	25.4	32.57
Pit cranemen	162	1.053	29.3	30.84
Roll engineers, electric	24	.991	30.0	29.75
Roll engineers, steam	30	1.339	25.6	34.21
Rollers	65	1.772	27.8	49.27
Shearmen	85	.996	25.3	25.18
Other skilled workers	61	.833	28.1	23.39
Semiskilled	866	.802	26.7	21.42
Bottom makers	83	.953	25.8	24.55
Chippers and grinders	465	.760	27.2	20.69
Gas makers	36	.673	35.4	23.81
Heaters' helpers	61	1.063	29.1	30.89
Shearmen's helpers	103	.766	21.6	16.56
Transfer-table operators	40	.835	26.4	22.00
Other semiskilled workers	78	.780	25.7	20.08
Unskilled	458	.714	24.3	17.34
Bottom makers' helpers	99	.789	25.0	19.68
Buggy operators	45	.822	24.0	19.70
Cover operators	44	.672	25.2	16.91
Other unskilled workers	270	.674	24.0	16.16
Plate mills				
All occupations	1,687	.886	24.4	21.62
Skilled	613	1.052	25.8	27.15
Charging-crane and charging-machine operators	80	.917	26.9	24.69
Heaters	65	1.266	32.3	40.89
Inspectors, product	80	.830	23.6	19.62
Layers-out and markers	98	.915	23.5	21.48
Roll engineers, electric	16	.966	20.2	19.49
Roll engineers, steam	13	.834	27.8	23.21
Rollers, sheared-plate	30	1.620	33.2	53.83
Rollers, universal-plate	6	1.652	26.5	43.84
Screwmen, sheared-plate	34	1.282	27.1	34.71
Shearmen	125	1.020	23.7	24.14
Other skilled workers	66	.997	25.1	24.97
Semiskilled	647	.799	23.6	18.85
Cold-roll operators	46	.812	22.8	18.55
Heaters' helpers	47	.908	24.6	22.35
Hookmen, sheared-plate	90	.903	25.7	23.21
Layers-out and markers' assistants	76	.779	21.9	17.06
Transfer-table operators	47	.767	22.3	17.09
Other semiskilled workers	341	.761	23.5	17.90
Unskilled	427	.758	23.6	17.88
Shearmen's helpers	350	.784	22.6	17.70
Other unskilled workers	77	.663	28.2	18.69

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Rail mills				
All occupations	703	$0.847	28.2	$23.90
Skilled	185	1.046	29.9	31.26
Charging-machine operators	8	.959	25.1	24.04
Guide setters	8	.929	35.6	33.12
Inspectors, rails	48	.771	29.5	22.74
Roll engineers, electric and steam	12	.805	29.0	23.47
Rollers	7	1.711	37.9	64.77
Straighteners, gag press	49	1.369	28.8	39.42
Table levermen	29	.876	29.8	26.14
Other skilled workers	24	1.098	30.8	33.80
Semiskilled	332	.822	27.6	22.68
Chippers	79	.867	22.4	19.41
Drillers and punchers	68	.885	30.5	26.95
Hot sawmen	7	.817	30.3	24.76
Straighteners' helpers	52	.851	28.0	23.84
Other semiskilled workers	126	.754	28.9	21.83
Unskilled	186	.677	27.7	18.75
Hotbed men	88	.673	29.2	19.62
Other unskilled workers	98	.682	26.4	17.97
Structural mills				
All occupations	652	.868	29.2	25.39
Skilled	161	1.108	30.6	33.94
Guide setters	11	1.013	33.8	34.27
Heaters	12	1.306	38.1	49.72
Inspectors, product	30	.849	23.6	20.06
Roll engineers, electric	16	.910	25.2	22.90
Rollers	13	1.717	41.7	71.57
Rollers, assistant	13	1.255	36.3	45.58
Straighteners	31	.907	29.9	27.15
Tilting-table operators	18	.952	29.9	28.43
Other skilled workers	17	1.267	30.0	38.01
Semiskilled	250	.860	31.3	26.92
Chargers	16	.979	32.9	32.21
Chippers	29	.741	32.5	24.11
Heaters' helpers	20	.924	31.7	29.26
Shearmen	15	.932	35.6	33.12
Straighteners' helpers	23	.756	29.2	22.09
Transfer-table operators	45	.971	32.6	31.60
Other semiskilled workers	102	.820	29.9	24.53
Unskilled	241	.691	26.2	18.11
Hotbed men	44	.687	27.3	18.72
Other unskilled workers	197	.693	26.0	17.97
Bar mills				
All occupations	3,235	.827	29.3	24.20
Skilled	1,286	.993	30.5	30.28
Catchers	89	.877	29.3	25.69
Finishers	131	1.049	30.6	32.12
Heaters	141	1.105	31.4	34.69
Roll engineers, electric	19	.730	31.2	22.79
Roll engineers, steam	17	.628	31.6	19.80
Rollers	90	1.742	35.0	60.90
Roughers	213	.992	29.3	29.06
Stranders	217	.868	31.3	27.16
Other skilled workers	369	.850	29.4	25.00
Semiskilled	895	.775	28.2	21.89
Chargers and chargers' helpers	121	.783	28.3	22.19
Heaters' helpers	163	.817	27.5	22.43
Hook-ups	75	.742	28.4	21.05
Shearmen	177	.765	30.7	23.47
Transfer-table operators	104	.818	25.3	20.69
Other semiskilled workers	255	.747	28.1	21.03
Unskilled	1,054	.654	28.6	18.74
Bundlers	140	.696	23.8	16.56
Drag-downs	90	.660	30.2	19.92
Hotbed men	243	.649	27.6	17.88
Shearmen's helpers	220	.674	30.6	20.62
Stockers	119	.649	28.4	18.45
Other unskilled workers	242	.622	30.3	18.86

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Rod mills				
All occupations	1,022	$0.882	34.3	$30.21
Skilled	353	1.144	35.8	40.95
Catchers	94	1.110	36.0	39.92
Finishers	36	1.411	37.0	52.16
Heaters	38	1.182	35.7	42.18
Roll engineers, electric	14	.813	38.3	31.11
Rollers	29	1.825	39.3	71.64
Rollers, assistant	19	1.617	39.5	63.86
Roughers	32	1.066	33.2	35.40
Other skilled workers	91	.768	33.8	25.98
Semiskilled	378	.764	33.6	25.72
Chargers and chargers' helpers	67	.730	34.4	25.09
Conveyor men	85	.677	31.2	21.13
Heaters' helpers	28	.842	35.0	29.48
Hookers (rolls)	32	.581	35.8	20.83
Reelers	52	.787	32.8	25.84
Shearmen	29	.880	33.2	29.25
Other semiskilled workers	85	.864	34.9	30.13
Unskilled	291	.693	33.2	23.01
Bundlers	113	.765	30.4	23.22
Stockers	37	.692	33.5	23.14
Other unskilled workers	141	.645	35.4	22.81
Wire mills				
All occupations	3,192	.845	28.7	24.26
Skilled	1,889	.925	27.1	25.08
Die reamers	64	.826	30.7	25.39
Inspectors, product	57	.811	31.9	25.91
Testers and gagers	69	.710	31.7	22.52
Wipers	63	.841	32.5	27.34
Wire drawers	1,493	.960	26.3	25.28
Other skilled workers	143	.837	27.2	22.75
Semiskilled	776	.787	31.6	24.87
Block tenders	192	.813	32.1	26.08
Fireman, annealing and galvanizing, furnaces	70	.789	35.5	28.03
Reelers	288	.799	31.7	25.36
Straightener and cutter operators	33	.775	26.3	20.35
Truckers, power	139	.766	31.1	23.80
Other semiskilled workers	54	.670	28.9	19.33
Unskilled	527	.678	30.1	20.43
Truckers, hand	132	.630	29.4	18.53
Wire bundlers and packers	183	.691	30.1	20.82
Other unskilled workers	212	.696	30.6	21.28
Skelp mills				
All occupations	309	.834	30.3	25.22
Skilled	95	1.063	33.8	35.94
Heaters	13	1.586	32.6	51.65
Rollers	8	1.921	37.1	71.34
Rollers, assistant	11	1.269	36.8	46.66
Roughers	10	.780	32.5	25.35
Other skilled workers	53	.797	33.3	26.52
Semiskilled	73	.733	30.0	22.01
Heaters' helpers	24	.815	25.7	20.92
Shearmen	8	.711	30.3	21.57
Other semiskilled workers	41	.699	32.5	22.72
Unskilled	141	.703	28.0	19.66
Hotbed men	33	.718	34.6	24.82
Shearmen's helpers	21	.636	27.0	17.16
Other unskilled workers	87	.712	25.7	18.31
Lap-weld tube mills				
All occupations	1,387	.818	30.9	25.30
Skilled	289	.934	31.6	29.52
Benders	24	.979	34.2	33.47
Die setters	20	.881	39.3	34.63
Inspectors, product	163	.823	29.1	23.91
Roll setters	21	1.003	33.0	33.08
Welders	40	1.341	32.4	43.46
Other skilled workers	21	.883	38.1	33.63

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Lap-weld tube mills—Continued				
Semiskilled	710	$0.816	31.2	$25.44
Ballers	28	.766	27.9	21.37
Bar pullers	22	.791	29.7	23.53
Blister men	30	.782	28.3	22.13
Charging-machine operators (bending furnace)	59	.816	29.6	24.12
Coupling reamers and tappers	15	.736	33.9	24.96
Cutters and threaders	225	.852	31.7	26.97
Pipe testers, hydraulic	40	.776	31.4	24.37
Saw operators	20	.835	34.3	28.64
Straightener operators	54	.786	33.2	26.12
Takers-off	22	.796	28.6	22.74
Turn-downs	37	1.002	33.4	33.47
Other semiskilled workers	158	.765	30.8	23.53
Unskilled	388	.730	30.0	21.90
Benders' helpers	15	.864	28.9	24.96
Buggymen	28	.820	32.8	26.92
Pipe testers' helpers, hydraulic	24	.746	35.3	26.34
Pit hands (welding furnace)	98	.759	27.2	20.62
Other unskilled workers	223	.696	30.4	21.15
Butt-weld tube mills				
All occupations	1,652	.839	34.2	28.67
Skilled	284	1.031	34.6	35.65
Die setters	20	.835	36.4	30.41
Inspectors, product	169	.786	32.7	25.71
Roll setters	27	1.086	39.1	42.43
Welders	63	1.668	36.6	61.02
Other skilled workers	5	[1]	[1]	[1]
Semiskilled	940	.811	34.3	27.80
Bench movers	36	.870	35.8	31.10
Bundlers and helpers	113	.732	32.6	23.84
Chargers, hand	18	.840	32.3	27.12
Charging-machine operators	49	.896	35.2	31.58
Coupling reamers and tappers	36	.758	32.0	24.25
Cutters and threaders	148	.809	35.7	28.86
Galvanizers	24	.880	35.6	31.31
Heaters, skelp	20	.664	34.4	22.85
Pickers	56	1.066	36.5	38.92
Pipe picklers	10	.954	33.3	31.78
Pipe testers, hydraulic	92	.718	32.9	23.66
Saw operators	52	.825	32.5	26.82
Size rollers	40	.897	38.5	34.56
Skelp clippers and helpers	58	.886	35.4	31.39
Straighteners, hand	48	.704	33.5	23.56
Straighteners, machine	49	.765	36.7	28.05
Other semiskilled workers	91	.747	31.7	23.71
Unskilled	428	.772	33.6	25.94
Bell cleaners	47	.795	34.3	27.24
Hook boys	34	.920	38.5	35.39
Rackmen	54	.765	33.5	25.60
Tongsmen	65	.835	35.5	29.61
Other unskilled workers	228	.722	32.3	23.29
Seamless tube mills				
All occupations	1,553	.854	32.6	27.85
Skilled	443	.903	32.8	29.62
Heaters	16	1.291	29.3	37.79
Inspectors, product	275	.807	33.7	27.16
Piercing operators	24	1.232	28.5	35.14
Rollers, hot-mill	28	1.130	30.8	34.83
Other skilled workers	100	.991	32.6	32.29
Semiskilled	850	.876	33.3	29.12
Benchmen, cold drawing	50	.683	27.7	18.94
Cut-off operators	131	.794	33.2	26.41
Pipe picklers	10	.787	33.1	26.07
Pipe testers, hydraulic	34	.714	34.5	24.64
Pointers, cold drawing	18	.821	29.0	23.85
Straighteners, hand	25	.815	30.6	24.93
Straighteners, machine	34	.890	29.7	26.42
Other semiskilled workers	548	.924	34.2	31.56

[1] Number of workers not sufficient to permit presentation of an average.

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Seamless tube mills—Continued				
Unskilled	260	$0.686	30.2	$20.69
Benchmen's helpers, cold drawing	42	.658	26.9	17.69
Other unskilled workers	218	.690	30.8	21.27
Sheet- and tin-plate bar mills				
All occupations	466	.887	28.3	25.14
Skilled	170	1.058	28.4	30.03
Guide setters	14	.942	27.9	26.29
Inspectors, product	38	.870	30.5	26.52
Rollers	21	1.656	31.6	52.37
Shearmen	45	.906	24.5	22.15
Other skilled workers	52	1.081	29.1	31.40
Semiskilled	226	.817	29.2	23.85
Loopers	14	.738	27.3	20.17
Transfer-table operators	25	.880	20.3	17.86
Other semiskilled workers	187	.817	30.5	24.93
Unskilled	70	.684	25.5	17.45
Shearmen's helpers	48	.713	23.0	16.41
Other unskilled workers	22	.638	30.9	19.70
Strip mills				
All occupations	6,091	.914	25.0	22.86
Skilled	1,633	1.123	27.4	30.80
Cold-roll rollers (finishing)	56	.926	30.2	27.95
Gagers	38	1.228	26.4	32.39
Heaters	36	1.752	28.5	49.88
Inspectors, product	364	.848	26.4	22.41
Looper operators	47	.955	23.9	22.82
Pulpit operators	44	1.067	23.8	25.45
Roll engineers, electric	39	.986	32.3	31.84
Rollers	34	2.927	34.4	100.68
Rollers, assistant	107	1.493	24.2	36.13
Rollers, cold reduction	306	1.291	31.0	40.06
Shearmen	465	.970	25.4	24.63
Speed operators	34	1.276	25.2	32.21
Other skilled workers	63	.966	33.3	32.14
Semiskilled	3,005	.849	24.8	21.04
Chargers and chargers' helpers	69	.899	23.2	20.84
Coilers	68	.929	26.7	24.80
Cold-roll catchers (finishing)	70	.811	23.3	18.85
Heaters' helpers	56	1.161	23.1	26.85
Picklers	87	.912	24.0	21.90
Rollers' helpers, cold reduction	535	.943	25.0	23.61
Rollers, levelers	66	.829	21.0	17.44
Shear and leveler operators	54	1.047	29.1	30.44
Shearmen's helpers	598	.798	22.4	17.84
Stitcher-car operators	89	.966	26.9	25.96
Tractor operators	315	.727	26.4	19.22
Other semiskilled workers	998	.817	25.7	20.96
Unskilled	1,453	.778	22.7	17.69
Picklers' helpers	344	.829	20.8	17.22
Shear and leveler operators' helpers	54	.773	28.6	22.10
Sheet pilers	101	.844	21.6	18.21
Stitcher feeders	25	.787	27.2	21.38
Other unskilled workers	929	.755	23.1	17.45
Sheet mills				
All occupations	7,502	.903	24.1	21.77
Skilled	1,622	1.203	24.9	29.97
Catchers	151	1.163	23.8	27.64
Gagers and inspectors, product	238	.761	29.0	22.04
Pair heaters	37	1.228	25.7	31.56
Resquare shearmen	145	.818	28.8	23.53
Rollers, assistant, mechanical mills	152	1.301	21.0	27.28
Rollers, hand mills	76	2.182	25.0	54.46
Rollers' helpers and finishers, hand mills	70	1.278	24.1	30.85
Rollers, mechanical mills	153	1.885	21.0	39.55
Roughers	87	1.419	24.1	34.23
Shearmen	195	1.252	23.2	29.08
Sheet heaters	37	1.735	26.0	45.12
Other skilled workers	281	1.078	25.7	27.73

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TABLE 10.—*Average hourly earnings, weekly hours, and weekly earnings of wage earners in rolling mills, April 1938, by occupation and skill*—Continued

Skill and occupational group	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
Sheet mills—Continued				
Semiskilled	3,524	$0.870	23.8	$20.74
Cold-roll rollers	137	.865	22.7	19.67
Doublers	253	1.013	22.4	22.70
Galvanizers	84	.847	35.1	29.74
Matchers	522	1.013	21.3	21.53
Openers	384	.863	21.3	18.42
Openers, level-handed	164	.839	24.7	20.73
Picklers, sheet	70	.823	30.1	24.78
Roller and stretcher levelers	66	.856	24.6	21.07
Sheet heaters' helpers	29	1.188	27.4	32.58
Spannermen	64	1.184	23.4	27.74
Other semiskilled workers	1,751	.807	24.5	19.76
Unskilled	2,356	.737	24.0	17.66
Catchers and feeders, normalizing furnaces	61	.700	18.4	12.86
Chargers, pair and pack furnaces	373	.841	20.5	17.26
Cold-roll catchers	230	.736	22.7	16.68
Drag-ups	20	.907	24.2	21.92
Feeders, galvanizing	95	.750	32.2	24.14
Picklers' helpers, sheet	155	.716	27.0	19.32
Reelers and rack men, galvanizing	141	.644	28.4	18.27
Resquare shearmen's helpers	145	.717	23.7	17.01
Roller and stretcher levelers' helpers	85	.713	27.7	19.73
Shearmen's helpers	204	.894	21.9	19.56
Stockers	67	.651	25.4	16.55
Other unskilled workers	780	.693	24.1	16.66
Tin-plate mills				
All occupations	8,042	.938	29.4	27.59
Skilled	2,978	1.085	31.6	34.27
Catchers	306	.987	31.0	30.65
Catchers, level-handed	143	.944	36.9	34.83
Gagers and inspectors	54	.733	34.9	25.60
Heaters	102	.966	33.6	32.43
Heaters, level-handed	492	1.049	35.7	37.38
Pair heaters	275	.836	36.0	30.07
Pair heaters, level-handed	26	.966	35.1	33.89
Resquare shearmen	69	.833	29.7	24.78
Rollers	274	1.743	32.8	57.18
Rollers, level-handed	126	1.113	32.2	35.89
Roughers	287	1.077	36.2	39.02
Shearmen	239	1.181	22.5	26.59
Tinners, hand	134	1.168	20.3	23.77
Tinners, machine	166	.995	30.3	28.97
Other skilled workers	285	1.146	24.6	28.14
Semiskilled	3,962	.826	28.8	23.81
Branners	111	.672	27.4	18.39
Cold-roll roughers	145	.930	32.3	30.07
Doublers, hand	526	.815	29.8	24.31
Heaters' helpers	61	.857	37.7	32.32
Openers	545	1.104	22.0	24.33
Screw boys	280	.719	33.7	24.22
Single boys	450	.805	30.0	24.12
Other semiskilled workers	1,844	.789	29.1	22.93
Unskilled	1,102	.901	25.7	23.12
Cold-roll catchers	92	.920	29.9	27.55
Picklers' helpers	261	1.312	26.4	34.71
Shearmen's helpers	103	.816	20.4	16.68
Other unskilled workers	646	.737	25.6	18.83

Mechanical, Transportation, and Plant-Service Occupations

Most of the mechanical, transportation, and plant-service occupations that are common to all departments of the iron and steel industry were found in the intermediate earning classes. On the one hand, none of these workers had exceptionally high earnings comparable with those of rollers in strip mills. On the other hand, there were no unusually low earnings reported for these occupational groups.

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Among the mechanical, transportation, and service employees, the highest average earnings—$1.143 an hour—was reported for bricklayers. With a single exception, namely, roll turners, who averaged $1.012, this was the only occupational group whose hourly earnings exceeded $1 an hour. Most of the remaining skilled occupations earned between 80 and 90 cents an hour, although plant supervisory employees averaged 93.8 cents and machinists averaged 92.8 cents. At the bottom of the scale in terms of hourly earnings were the common laborers, numerically the most important of mechanical, transportation, and service occupations. This group averaged 60.0 cents an hour.

Very few of the mechanical, transportation, and service employees had full-time employment in April 1938. The average working time for the group as a whole was 29.7 hours a week. The range in weekly hours, however, was from 26.0 for common laborers to 36.5 for steam engineers.

Weekly earnings of the mechanical, transportation, and service employees ranged from an average of $15.58 for common laborers to $33.96 for bricklayers. The average for all occupations was $22.97 a week.

TABLE 11.—*Average hourly earnings, weekly hours, and weekly earnings of male mechanical, transportation, and service workers, April 1938, by occupation and skill*

Occupation	Number of wage earners	Average hourly earnings	Average weekly hours	Average weekly earnings
All occupations	32,354	$0.773	29.7	$22.97
Skilled workers	11,352	.896	32.2	28.83
Blacksmiths	198	.872	29.5	25.70
Boilermakers	96	.894	28.4	25.42
Bricklayers	302	1.143	29.7	33.96
Carpenters	192	.853	31.8	27.13
Cranemen, miscellaneous, skilled	198	.898	28.6	25.66
Electricians	918	.868	33.5	29.13
Engineers, locomotive	447	.864	26.1	22.57
Engineers, power, steam	101	.857	36.5	31.30
Engineers, power, electric	149	.850	33.7	28.69
Inspectors and repairmen, motors	607	.886	30.0	26.59
Ladle liners	126	.844	29.9	25.22
Machinsts	1,256	.928	31.0	28.72
Millwrights	1,333	.856	32.0	27.40
Pipe fitters	543	.840	30.8	25.89
Riggers	235	.816	30.4	24.81
Roll turners	462	1.012	32.3	32.68
Supervisory, plant	2,404	.938	35.5	33.31
Welders	409	.888	32.4	28.79
Miscellaneous skilled workers	1,376	.826	31.8	26.26
Semiskilled workers	12,274	.743	29.3	21.80
Blacksmiths' helpers	143	.643	30.0	19.30
Bricklayers' helpers	172	.643	29.0	18.63
Clerical—plant	2,611	.782	30.8	24.10
Cranemen, miscellaneous, semiskilled	3,081	.773	28.3	21.86
Crane followers	1,801	.704	28.1	19.79
Electricians' helpers	140	.692	31.7	21.92
Firemen, locomotive	62	.758	32.8	24.82
Firemen and water tenders, power	337	.742	36.4	27.03
Inspectors' and repairmen's helpers, motors	122	.753	26.6	20.00
Machinists' helpers	292	.686	31.7	21.73
Millwrights' helpers	518	.713	28.2	20.10
Oilers and greasers, equipment	901	.705	28.3	19.92
Pipe fitters' helpers	160	.662	30.9	20.45
Pumpers	153	.746	33.8	25.21
Switchmen, locomotive	510	.805	26.7	21.52
Miscellaneous semiskilled workers	1,271	.710	29.6	21.03
Unskilled workers	8,728	.629	27.1	17.01
Laborers, common	4,517	.600	26.0	15.58
Laborers, miscellaneous	2,891	.664	26.4	17.53
Service workers, plant	945	.642	32.6	20.94
Miscellaneous unskilled workers	375	.653	31.2	20.36

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Annual Earnings, 1937

Workers who were employed throughout 1937 in the iron and steel industry earned an average of $1,773. The average annual earnings of those workers employed 9 months or more amounted to $1,679, and those of workers employed 6 months or more to $1,650. The average for all wage earners who worked any part of the year was $1,628. These annual earnings reflect on the one hand the comparatively high wage level of the iron and steel industry and on the other hand the relatively stable employment in the industry in 1937.[4]

Annual earnings varied considerably between skill groups. For employees who worked 12 months the difference in favor of skilled over semiskilled workers amounted to $452 for the country as a whole. Semiskilled workers' earnings exceeded those of unskilled workers by $189. The respective skill differences in annual earnings for employees working 9 months or more were $459 and $180, and those for employees working any part of the year were $470 and $187. Table 12 shows the distribution of the iron and steel workers and their average annual earnings by skill and period of employment.

TABLE 12.—*Distribution and average annual earnings of iron and steel workers, by period of employment and skill, 1937*

Item and skill	Employees whose work extended over—			
	12 months	9 months or more	6 months or more	Any part of year
Average annual earnings:				
All workers	$1,773	$1,679	$1,650	$1,628
Skilled	$2,107	$2,023	$2,002	$1,986
Semiskilled	$1,655	$1,564	$1,538	$1,516
Unskilled	$1,466	$1,384	$1,351	$1,329
Percent of workers:				
All workers	61.7	94.9	98.2	100.0
Skilled	65.5	96.8	98.9	100.0
Semiskilled	60.6	94.7	98.0	100.0
Unskilled	58.2	92.8	97.7	100.0
Number of workers:				
All workers	45,152	69,529	71,942	73,228
Skilled	16,330	24,128	24,661	24,924
Semiskilled	18,003	28,143	29,117	29,710
Unskilled	10,819	17,258	18,164	18,594

Despite the relatively high level of annual earnings indicated by the general averages, there was considerable variation in the earnings of individual workers. Although employees who worked throughout the year earned an average of $1,773 in 1937, the earnings of individuals in this group ranged from less than $600 to over $4,000. Within this extreme range, however, over one-third of the workers (34.9 percent) earned between $1,400 and $1,800, over three-fifths (62.6 percent) between $1,200 and $2,000, and not far from seven-eighths (85.8 percent) between $1,000 and $2,400. Only 3.2 percent of those who worked 12 months in 1937 earned under $1,000, and less than 1 percent

[4] Average annual earnings were obtained only for those employees who were actually working during April 1938 in the establishments surveyed. Furthermore they include only the amounts received from the company for which they were working in April 1938. For example, if an employee earned $600 in 1937 while working for Company A and $800 while working for Company B, and appeared on Company B's pay roll in April 1938, only the $800 received from Company B would be included in 1937 average earnings.

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(0.6) under $800. On the other hand, 11 percent received $2,400 or more, and 3.9 percent $3,000 or more. Of the employees working 9 months or more, one-third (33.7 percent) earned less than $1,400 and two-thirds (66.3 percent) $1,400 or more.

Jewelry Industry—Earnings and Hours, February 1940[1]

The jewelry-manufacturing industry has been defined in general by the Wage and Hour Administrator as the "manufacturing, processing, and assembling wholly or partially from any material" of articles which are commonly or commercially known as jewelry. It covers the manufacture and processing of precious, semiprecious, synthetic, or imitation stones, as well as the manufacture, drilling, and stringing of pearls, imitation pearls, and beads for use in the manufacture of jewelry. It includes such products as "religious, school, college, and fraternal insignia; articles of ornament or adornment designed to be worn on apparel or carried on or about the person; metal mesh bags and metal watch bracelets; and chain, mesh, and parts for use in the manufacture of any of the articles included in this definition." The following are included only if made from or embellished with precious metal or precious, semiprecious, synthetic, or imitation stones: Cigar and cigarette cases, cigar and cigarette holders, cigarette lighters, pocket knives, cigar cutters, badges, emblems, military and naval insignia, belt buckles, and handbag and pocketbook frames and clasps.

In determining the scope of the survey, the Bureau of Labor Statistics followed the general outlines of the above definition. However, the actual coverage necessarily extends somewhat beyond these limits in certain cases. Thus, a considerable proportion of the cigarette lighters and cigar and cigarette cases produced in plants covered by the report were not made of precious metals or embellished with stones. The data obtained from such plants relate to all of the wage earners employed, because it was impossible to separate those who worked on the types of lighters and cases specified in the definition from those who worked on other types. On the other hand, the survey did not cover lapidary work,[2] except when carried on in jewelry factories. A preliminary investigation of the specialized lapidary industry revealed that this group of small establishments employs highly paid, skilled workers who work irregularly on a piece-rate basis.[3] For the most part, the lapidary firms do not keep time records of a type which would yield the information needed for analysis of hourly earnings.

The study was based on a representative sample, including approximately one-third of the employees in the industry. Data covering wages and hours were obtained for all classes of employees in each plant, with the exception of the supervisory and management officials.

[1] Abstract of article in the Monthly Labor Review for January 1941, prepared by H. E. Riley, of the Bureau of Labor Statistics.

[2] Lapidary work consists of the cutting, polishing, and setting of diamonds and other precious and semiprecious stones.

[3] According to the United States Census of Manufactures, the lapidary industry in 1937 consisted of 51 establishments with 217 wage earners.

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The products of the industry are usually classified, on the basis of the type of raw materials used, into two groups, namely, precious jewelry and medium- and low-priced jewelry. The precious-jewelry group embraces products made of platinum or gold of 10-karat fineness or better, and articles containing precious stones such as diamonds, pearls, etc. Medium- and low-priced jewelry includes products made of silver, base metals, plastics, wood, leather, and other materials, including gold of less than 10-karat fineness. These latter articles may be decorated with semiprecious, synthetic, or imitation stones.

Although the establishments in the industry generally tend to specialize in either precious or medium- and low-priced products, a considerable group of plants made articles in both of these categories. As none of the plants scheduled maintained separate pay-roll records for the two types of products, it has been necessary in analyzing the wage data to create a third classification embracing plants making both precious and medium- and low-priced jewelry.[4]

Average Hourly Earnings

Hourly earnings of the 9,628 factory wage earners covered in the survey averaged 58 cents in February 1940 (see table 1). The spread of earnings, shown in table 2, covers a very wide range, extending from under 30 cents to over $1.625 an hour.

TABLE 1.—*Average hourly earnings of jewelry workers, 1940, by region, type of product, sex, and skill*

Product and region	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All products	$0.580	$0.702	$0.380	$0.836	$0.861	$0.499	$0.462	$0.551	$0.382	$0.368	$0.399	$0.349
New York metropolitan	.666	.791	.424	.980	1.028	.541	.502	.568	.426	.384	.398	.373
New England	.499	.610	.362	.718	.736	.458	.423	.502	.366	.359	.402	.338
Other regions	.719	.803	.400	.903	.917	.515	.561	.669	.390	.389	.389	.390
Precious jewelry	.948	.989	.531	1.098	1.116	.664	.676	.725	.493	.415	.416	.411
New York metropolitan	1.020	1.070	.573	1.198	1.224	.718	.723	.783	.517	.436	.448	(1)
New England	.689	.728	(1)	.801	.809	(1)	.521	(1)	(1)	(1)	(1)	(1)
Other regions	.918	.947	.493	1.042	1.054	(1)	.651	.684	(1)	.381	(1)	(1)
Medium- and low-priced jewelry	.483	.591	.366	.708	.736	.445	.421	.492	.371	.360	.595	.344
New York metropolitan	.506	.597	.401	.763	.823	.466	.453	.500	.410	.367	.377	.362
New England	.468	.578	.354	.683	.705	.427	.407	.481	.358	.354	.398	.336
Other regions	.541	.676	.382	.776	.799	(1)	.442	.562	.375	.401	.438	.379
Precious and medium- and low-priced jewelry	.631	.707	.420	.803	.816	.553	.529	.612	.416	.392	.399	.382
New York metropolitan	.621	.705	.451	.830	.862	(1)	.494	.531	.449	.414	(1)	.421
New England	.595	.682	.405	.786	.794	(1)	.486	.576	.404	.388	.413	.355
Other regions	.706	.743	.421	.809	.818	(1)	.649	.713	.411	.375	.372	(1)

[1] Number of workers insufficient to warrant computation of an average.

[4] An attempt to classify these establishments in one or the other of the above groups on the basis of chief products proved to be impracticable because of the lack of adequate information as to the relative output of the two classes of products.

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TABLE 2.—*Percentage distribution of jewelry workers by average hourly earnings, sex, and skill, 1940*

Average hourly earnings	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 30.0 cents	0.4	0.4	0.5	------	------	------	0.2	0.2	0.3	1.7	2.8	1.0
Exactly 30.0 cents	10.7	4.2	21.0	1.2	1.0	4.2	12.2	4.5	18.9	26.2	20.0	29.9
30.1 and under 32.5 cents	2.3	.8	4.7	.1	(1)	.8	3.2	1.3	4.8	4.6	3.3	5.3
32.5 and under 35.0 cents	8.1	2.2	17.5	.5	.2	4.2	11.3	3.9	17.6	15.5	7.2	20.1
35.0 and under 37.5 cents	8.7	4.7	15.2	1.3	1.0	6.3	11.4	7.3	15.0	16.9	15.8	17.5
37.5 and under 40.0 cents	4.3	1.7	8.3	.7	.4	5.5	6.1	2.6	9.1	6.8	6.0	7.2
40.0 and under 42.5 cents	7.1	5.8	9.3	2.9	2.1	13.9	9.5	9.8	9.3	9.6	11.9	8.3
42.5 and under 47.5 cents	8.5	7.2	10.5	4.4	3.4	18.1	11.7	12.3	11.1	8.3	10.2	7.2
47.5 and under 52.5 cents	8.1	9.3	6.4	6.1	5.5	15.1	10.6	14.6	7.2	5.6	10.7	2.7
52.5 and under 57.5 cents	5.3	6.6	3.1	5.9	5.6	8.8	6.0	8.6	3.7	2.1	5.0	.5
57.5 and under 62.5 cents	4.7	6.7	1.3	6.5	6.5	7.1	4.3	7.9	1.2	1.7	4.3	.2
62.5 and under 67.5 cents	4.1	6.1	1.0	7.4	7.6	5.9	2.9	5.3	.9	.5	1.3	.1
67.5 and under 72.5 cents	3.5	5.3	.5	6.3	6.6	2.9	2.5	4.9	.5	.1	.3	------
72.5 and under 77.5 cents	2.8	4.5	.2	5.5	5.8	1.3	1.8	3.6	.2	.2	.7	------
77.5 and under 82.5 cents	2.4	4.0	(1)	5.3	5.7	------	1.1	2.4	(1)	.1	.2	------
82.5 and under 92.5 cents	4.2	6.8	.2	9.4	9.9	1.3	1.8	3.6	.2	.1	.3	------
92.5 and under 102.5 cents	4.3	6.9	.2	9.9	10.4	2.1	1.6	3.4	(1)	------	------	------
102.5 and under 112.5 cents	2.8	4.5	.1	7.1	7.4	2.1	.6	1.2	------	------	------	------
112.5 and under 122.5 cents	2.4	3.8	(1)	6.0	6.4	------	.4	.9	(1)	------	------	------
122.5 and under 132.5 cents	1.8	2.9	------	4.7	5.0	------	.3	.6	------	------	------	------
132.5 and under 142.5 cents	1.2	1.9	(1)	2.9	3.1	.4	.2	.5	------	------	------	------
142.5 and under 152.5 cents	1.0	1.6	------	2.6	2.8	------	.1	.3	------	------	------	------
152.5 and under 162.5 cents	.4	.7	------	1.1	1.2	------	.1	.1	------	------	------	------
162.5 cents and over	.9	1.4	------	2.2	2.4	------	.1	.2	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	9,628	5,913	3,715	3,465	3,227	238	4,502	2,088	2,414	1,661	598	1,063

[1] Less than a tenth of 1 percent.

The wide dispersion of earnings and absence of any pronounced central tendency in the data lead to the conclusion that other factors besides differences in sex and skill are needed to account for the wage structure of the jewelry industry. Although the distribution of plant averages varies considerably among the three wage areas, this difference is due chiefly to variations in the geographical distribution of the precious-jewelry plants and those making medium- and low-priced products. For example, nearly three-fifths of the plants in the New York metropolitan region averaged 65 cents an hour or more and over one-fifth showed averages of 95 cents or more, whereas only slightly more than one-tenth of the New England establishments averaged 65 cents and over, and none had wage levels exceeding 95 cents. This contrast is related to the fact that the precious-jewelry establishments, which predominate in the New York City area, show the highest wage levels, whereas the plants making medium- and low-priced products, which are concentrated in the lower earnings intervals, make up most of the coverage in the New England region. The distribution of plant averages for those establishments in the New York area which make medium- and low-priced jewelry compares rather closely with that for the same class of plants in the New England region. A similar relationship is also evident in the plant data for the area outside of the New England and New York metropolitan regions.

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The variations in hourly earnings by type of product, as shown by the plant average data, are also evident in the distributions of individual employees' earnings. (See table 3.)

TABLE 3.—*Percentage distribution of jewelry workers by average hourly earnings and type of product, 1940*

Average hourly earnings	Precious jewelry	Medium- and low-priced jewelry	Precious and medium- and low-priced jewelry
Under 30.0 cents	0.5	0.3	0.6
Exactly 30.0 cents	1.7	14.7	5.1
30.1 and under 32.5 cents	.6	3.0	1.4
32.5 and under 35.0 cents	.5	11.6	3.6
35.0 and under 37.5 cents	2.4	11.0	6.5
37.5 and under 40.0 cents	1.2	5.1	4.0
40.0 and under 42.5 cents	1.6	8.3	7.5
42.5 and under 47.5 cents	3.2	9.3	9.5
47.5 and under 52.5 cents	3.3	8.9	9.0
52.5 and under 57.5 cents	2.7	5.5	6.1
57.5 and under 62.5 cents	3.0	4.6	5.9
62.5 and under 67.5 cents	3.4	4.0	5.0
67.5 and under 72.5 cents	4.2	3.1	4.1
72.5 and under 77.5 cents	4.6	2.0	4.1
77.5 and under 82.5 cents	3.2	1.6	4.2
82.5 and under 92.5 cents	8.4	2.5	6.3
92.5 and under 102.5 cents	13.7	1.6	5.9
102.5 and under 112.5 cents	8.6	.9	4.5
112.5 and under 122.5 cents	7.8	1.0	2.7
122.5 and under 132.5 cents	7.6	.5	1.8
132.5 and under 142.5 cents	5.5	.2	.9
142.5 and under 152.5 cents	5.7	.1	.5
152.5 and under 162.5 cents	2.5	(1)	.2
162.5 cents and over	4.1	.2	.6
Total	100.0	100.0	100.0
Number of workers	1,392	6,104	2,132

[1] Less than a tenth of 1 percent.

Weekly Hours and Earnings

The actual workweek in the industry as a whole averaged 37.8 hours at the time of the survey. Hours of work averaged 35.7 a week in precious-jewelry plants, as compared with 37.8 in establishments making medium- and low-priced articles, and 39.4 in plants producing both types.

Weekly earnings of all workers covered by the survey averaged $21.96 in February 1940. Male wage earners averaged $26.90, as compared with $14.09 for females. The highest weekly earnings were received by skilled males, who averaged $32.58. The unskilled females had the lowest earnings, averaging $13.01 a week. An outstanding feature of the weekly wage picture is the wide variation in earnings of men, as compared with women, among the three skill groups. The average for skilled male workers exceeded that of the semiskilled males by $11.40. For the women, the difference amounted to only $4.43. Similarly, unskilled men received $4.98 less than semiskilled men, whereas the unskilled women averaged but $1.11 less than the average for semiskilled women.

The distribution of weekly earnings is shown in table 4.

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TABLE 4.—*Percentage distribution of jewelry workers by weekly earnings, sex, and skill, 1940*

Weekly earnings	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under $5	2.0	1.2	3.1	0.7	0.7	1.3	2.6	1.8	3.3	2.8	2.2	3.2
$5 and under $10	6.3	3.3	11.1	2.3	2.0	5.0	7.9	4.1	11.1	10.5	7.5	12.2
$10 and under $15	27.1	12.5	50.0	6.2	5.1	21.4	33.8	17.5	48.2	51.4	35.1	60.7
$15 and under $20	20.4	16.6	26.6	10.3	8.3	37.5	27.0	25.8	28.1	23.8	28.4	21.2
$20 and under $25	13.7	17.9	7.0	14.2	13.7	20.6	14.9	23.4	7.5	9.2	20.6	2.7
$25 and under $30	8.7	13.2	1.6	15.1	15.7	9.2	6.2	11.6	1.5	1.9	5.2	------
$30 and under $35	6.8	11.0	.3	13.2	14.0	2.5	4.4	9.2	.2	.3	.8	------
$35 and under $40	5.0	8.1	.1	12.1	12.9	1.3	1.5	3.1	.1	.1	.2	------
$40 and under $45	3.9	6.3	.1	9.8	10.4	.4	.9	1.8	(1)	------	------	------
$45 and under $50	2.4	3.8	.1	6.2	6.7	.4	.3	.6	(1)	------	------	------
$50 and under $55	1.7	2.8	(1)	4.6	4.9	.4	.2	.4	------	------	------	------
$55 and over	2.0	3.3	------	5.3	5.6	------	.3	.7	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	9,628	5,913	3,715	3,465	3,227	238	4,502	2,088	2,414	1,661	598	1,063

(1) Less than a tenth of 1 percent.

Jute-Bagging Industry—Hourly Earnings, 1940[1]

At the request of the Wage and Hour Division, the Bureau of Labor Statistics made a survey of average hourly earnings in the jute cotton bagging industry.

The survey was limited to the manufacture of jute cotton-bale coverings, including both the spinning and weaving of the jute yarns. The operations covered also include the repairing of used bagging. The survey did not include the manufacture of jute carpet yarns or jute fabrics for purposes other than cotton-bale coverings. Neither did it include jute cordage and twine, which was covered in a separate study of the cordage and twine industry.

According to information available at the time of the survey, there were 12 mills in the United States producing either new or reworked cotton bagging; all of these were in the cotton-growing States. The Bureau was able to study only 9 mills, however, as one company, controlling 3 mills, refused to furnish the information requested. The number of wage earners scheduled totaled 1,116.

During the period covered by the study, September 1940, hourly earnings of the wage earners averaged 33.8 cents.[2] Over one-half (56.7 percent) of the workers received exactly 32.5 cents, the legal minimum at the time of the survey, while 85.9 percent averaged under 35 cents an hour. Only 5.2 percent of the employees averaged over 40 cents an hour.

Detailed data cannot be presented for this industry, because to do so would reveal plant identities.

[1] From Monthly Labor Review for June 1941.

[2] The wage data presented in this article include only the earnings at regular rates of pay. Had the extra overtime earnings been included, the industry average would have been increased by only four-tenths of a cent.

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Knit-Goods Industries (Other Than Hosiery)—Hours and Earnings, 1937 and 1938[1]

The Bureau of Labor Statistics 1938 survey of earnings and hours in the knit-goods industries included establishments manufacturing the following products: Hosiery (full-fashioned and seamless),[2] knitted underwear, knitted outerwear, knitted cloth, and knitted gloves and mittens. A common characteristic of these industries is that all of their establishments employ knitting machines in the manufacturing operations. The yarns consumed are made of cotton, rayon, silk, wool, or other fibers, or of any mixture of fibers. This report covers knitted underwear, outerwear, cloth, gloves and mittens. Although these four industries resemble each other in some respects, each is essentially a distinct entity, possessing special characteristics that necessitate a separate treatment of the data.

The knitted-underwear and the knitted-outerwear mills both knit the fabrics and make them up into garments. The knitted-cloth mills, however, knit flat or tubular fabrics for sale to cutting and sewing establishments, which have no knitting equipment. The cloth-knitting mills produce fabrics for outerwear, underwear, and gloves and mittens.

The production of knitted gloves and mittens requires a certain amount of specialized equipment, and is influenced by different factors of style and seasonal demand from those affecting the other knit-goods industries.

The survey of the knit-goods industries was made on the basis of a representative sample, which was selected with great care to assure adequate coverage with respect to all significant characteristics of the various branches, including geographical distribution, size of establishment,[3] size of community, product, corporate affiliation, and unionization.

The data collected included annual earnings for the calendar year 1937, wherever available, for employees who were on the plant's pay roll at the time of the survey.

For most of the plants in the survey, the information covered a pay-roll period in August or September 1938. The monthly indexes of employment in knit-goods mills, as compiled by the Bureau's Division of Employment Statistics, indicate that the general level of activity during that period was fairly normal as compared with the year as a whole.

Knitted Underwear

Based on the definition of the Census of Manufactures, the knitted-underwear industry included 179 establishments in 1937, with 39,923 wage earners (average for the year). The coverage of the survey includes 61 establishments and 12,545 wage earners.

An analysis of the sample shows that the knitted-underwear industry is widely distributed geographically. Very little production is found west of the Mississippi River, however, except in the State of Minnesota. New York is the leading State, including 32.3 percent of the

[1] Abstract of articles by H. E. Riley and J. Perlman, of the Bureau of Labor Statistics, in the Monthly Labor Review for November 1939 and February 1940.
[2] See p. 162 for data on the hosiery industry.
[3] No establishment with fewer than 10 wage earners was included in the survey.

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workers covered by the survey. Pennsylvania ranks second in importance, with 17.4 percent of the wage earners. A substantial proportion of the industry is located in the Southern States, 23.9 percent of the employees being found in that region.

In common with other textile industries, underwear manufacturing has been shifting into the Southern States in recent years.

The knitted-underwear industry contains relatively few very small plants. Of the 61 establishments included in the survey, 17 with 6.1 percent of the workers scheduled had under 100 employees, 13 with 14.4 percent of the wage earners had 101 to 250, 21 with 47.6 percent of the workers had 251 to 500, and 10 with 31.9 percent of the wage earners had over 500 employees.

Relatively few plants in the industry were found in the largest metropolitan areas. Of the 49 establishments covered in the Northern States, 11 plants, with 20.1 percent of the employees scheduled in that territory, were located in metropolitan centers having a population of about 750,000 and over. The southern sample showed 6 establishments, with 56.2 percent of the workers scheduled in that area, located in places of 75,000 to 175,000, while 6 plants, with 43.8 percent of the wage earners, were found in communities of under 25,000.

Although the practice of collective bargaining between employers and employees was found in only 6 of the 61 establishments included, the number of workers affected amounted to about one-sixth of the total scheduled. All of the union plants in the sample were located in Northern States.

Most of the knitted underwear produced in the United States is made by first knitting a flat or tubular cloth, which is then marked according to a pattern and cut up into the garment parts. The parts are assembled, hemmed, and trimmed to form the completed article. These are largely sewing-machine operations.

Four-fifths (80.3 percent) of the employees were classed as semiskilled, one-eighth (11.9 percent) as skilled, and only 7.8 percent as unskilled. Over four-fifths (86.5 percent) of the semiskilled workers were women. On the other hand, males predominated in the skilled occupations, amounting to more than two-thirds (69.6 percent) of the total in this group. The proportions of males and females were about equal among the unskilled workers.

Average Hourly Earnings

A large majority of the workers are paid on a straight piece-rate basis. Of the 12,545 workers included, 3,139 (25.0 percent) were paid on a time basis, 6,750 (53.8 percent) received straight piece rates, and 2,656 (21.2 percent) were subject to production-bonus systems.

Few establishments followed a policy of paying extra rates for overtime work. In 10 establishments, workers on extra shifts received higher rates than those employed on regular daytime operation.[4] These additional payments for extra-shift operation had virtually no effect on the averages, however, as the number of employees affected amounted to less than 1 percent of the total scheduled.

According to table 1, the hourly earnings of all workers averaged 39.9 cents in August and September 1938.

[4] There were 21 additional plants with extra-shift operation that did not pay higher rates to the workers on the extra shifts

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TABLE 1.—*Average hourly earnings in knitted-underwear industry, August and September 1938, by wage area, skill, and sex*

Wage area	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
United States	$0.399	$0.489	$0.368	$0.549	$0.603	$0.417	$0.383	$0.449	$0.371	$0.320	$0.366	$0.266
Northern wage area	.422	.528	.386	.581	.642	.437	.404	.488	.390	.337	.395	.274
New England States [1] and New York [2]	.423	.520	.383	.594	.660	.431	.402	.481	.384	.348	.378	.298
Pennsylvania	.379	.503	.352	.515	.548	.396	.372	.475	.363	.262	.371	.233
Middle Western States [3]	.475	.582	.442	.613	.723	.470	.454	.523	.442	.430	.467	.348
Southern wage area [4]	.330	.381	.309	.445	.481	.327	.319	.350	.313	.271	.293	.239
	Number of workers											
United States	12,545	2,902	9,643	1,499	1,043	456	10,067	1,356	8,711	979	503	476
Northern wage area	9,548	2,141	7,407	1,160	789	371	7,655	990	6,665	733	362	371
New England States [1] and New York [2]	5,403	1,377	4,026	657	457	200	4,334	677	3,657	412	243	169
Pennsylvania	2,182	352	1,830	244	189	55	1,737	124	1,613	201	39	162
Middle Western States [3]	1,963	412	1,551	259	143	116	1,584	189	1,395	120	80	40
Southern wage area [4]	2,997	761	2,236	339	254	85	2,412	366	2,046	246	141	105

[1] Includes Connecticut, Massachusetts, Rhode Island, and Vermont.
[2] Includes New Jersey.
[3] Includes Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.
[4] Includes Alabama, Georgia, North Carolina, Tennessee, and Virginia.

The distribution for all workers shows a well-defined central tendency. In terms of 5-cent class intervals, the greatest concentration (22.0 percent) occurs between 35 and 40 cents an hour. (See table 2.)

TABLE 2.—*Percentage distribution of workers in knitted-underwear industry by average hourly earnings, skill, and sex, August and September 1938*

Average hourly earnings (in cents)	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 17.5	0.8	0.8	0.8	0.3	0.3	0.2	0.7	1.0	0.7	2.8	1.4	4.2
17.5 and under 20.0	1.2	.2	1.5	.1	.1	------	.9	.1	1.0	6.3	.6	12.4
20.0 and under 22.5	2.3	1.0	2.7	.7	.4	1.3	1.9	.6	2.1	9.4	3.4	15.8
22.5 and under 25.0	2.4	.7	2.9	.4	.1	1.1	2.5	.7	2.8	4.3	1.8	6.9
25.0 and under 27.5	5.4	2.2	6.3	1.4	.5	3.5	5.3	2.0	5.8	12.5	6.4	18.8
27.5 and under 30.0	6.8	1.9	8.2	1.4	.6	3.3	7.7	2.1	8.5	5.7	3.8	7.8
30.0 and under 32.5	9.2	6.5	10.0	2.1	1.2	4.4	10.0	8.3	10.3	11.4	12.9	9.9
32.5 and under 35.0	7.5	4.9	8.3	4.0	2.4	7.7	8.0	5.6	8.4	7.2	8.2	6.1
35.0 and under 37.5	12.2	8.6	13.3	5.6	3.3	11.0	13.0	9.7	13.5	13.3	16.5	9.9
37.5 and under 40.0	9.8	6.2	11.0	7.4	3.0	17.5	10.3	6.7	10.9	8.0	11.7	4.0
40.0 and under 42.5	8.6	8.8	8.6	7.9	6.7	10.5	9.0	9.9	8.9	6.0	10.1	1.7
42.5 and under 47.5	12.8	12.5	13.1	12.0	10.9	14.8	13.8	15.4	13.5	5.6	8.9	2.1
47.5 and under 52.5	8.5	10.5	7.9	10.6	9.9	12.5	8.6	11.8	8.1	4.5	8.5	.2
52.5 and under 57.5	4.8	9.8	3.3	9.8	11.9	5.0	4.3	10.6	3.4	1.5	3.0	------
57.5 and under 62.5	2.4	5.8	1.3	7.1	8.2	4.4	1.8	5.4	1.3	.8	1.6	------
62.5 and under 67.5	1.6	5.2	.5	7.2	9.9	1.1	.9	3.2	.5	.4	.6	.2
67.5 and under 72.5	1.0	3.7	.2	4.6	6.2	.9	.6	2.9	.2	.3	.6	------
72.5 and under 77.5	.8	3.3	.1	4.9	6.8	.4	.3	1.8	.1	------	------	------
77.5 and under 82.5	.5	2.0	(1)	2.8	3.9	.2	.2	1.3	(1)	------	------	------
82.5 and under 87.5	.3	1.2	(1)	2.1	2.9	.2	.1	.4	(1)	------	------	------
87.5 and under 92.5	.4	1.7	(1)	2.9	4.1	------	.1	.4	(1)	------	------	------
92.5 and under 100.0	.2	.6	(1)	1.1	1.6	------	(1)	.1	(1)	------	------	------
100.0 and under 110.0	.2	.8	------	1.5	2.1	------	------	------	------	------	------	------
110.0 and under 120.0	.2	.6	(1)	1.2	1.7	------	(1)	------	(1)	------	------	------
120.0 and over	.1	.5	------	.9	1.3	------	------	------	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	12,545	2,902	9,643	1,499	1,043	456	10,067	1,356	8,711	979	503	476

[1] Less than a tenth of 1 percent.

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Substantially higher hourly earnings are found in the northern than in the southern wage region for every skill and sex group. Differences in hourly earnings are also found within the northern wage area, although the variations are less pronounced than shown between the northern and southern wage regions as a whole. The average hourly earnings of all workers in the New England States and New York amounted to 42.3 cents, which is 4.4 cents higher than the average (37.9 cents) for Pennsylvania and 5.2 cents lower than the average (47.5 cents) for the Middle Western States. The same order prevails for each of the skill and sex groups.

In the northern wage area, the average hourly earnings of males exceeded those of females by 14.2 cents. The difference amounted to 20.5 cents for skilled, 9.8 cents for semiskilled, and 12.1 cents for unskilled workers. Semiskilled females, who constituted over two-thirds of the total labor force, averaged 39.0 cents. The hourly earnings of males in the southern wage region averaged 38.1 cents, which is 7.2 cents higher than the average for females.

Occupational differences.—According to table 3, which presents occupational averages for the country as a whole, working foremen had the highest hourly earnings in the knitted-underwear industry, amounting to 79.0 cents.

TABLE 3.—*Average earnings and hours in knitted-underwear industry, by skill, sex, and occupation, August and September 1938*

Skill, sex, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers				
Males:				
Cutters, hand [2]	61	$0.484	40.4	$19.52
Cutters, machine [3]	172	.525	39.7	20.83
Foremen, working [4]	102	.790	44.6	35.22
Knitters, circular [3]	349	.514	37.5	19.31
Knitters, flat [3]	43	.547	37.7	20.61
Machine fixers [4]	166	.715	42.3	30.23
Miscellaneous skilled workers, knitting department	19	.750	36.0	26.98
Miscellaneous skilled workers, direct, other	21	.681	44.8	30.51
Miscellaneous skilled workers, indirect	110	.654	45.0	29.41
Females:				
Cutters, hand [2]	162	.365	35.6	12.99
Cutters, machine [2]	38	.400	35.9	14.39
Forewomen, working [4]	41	.526	41.9	22.02
Knitters, circular [3]	114	.415	37.2	15.45
Knitters, flat [3]	10	(1)	(1)	(1)
Loopers [2]	48	.408	37.2	15.20
Miscellaneous skilled workers, knitting department	41	.473	38.2	18.08
Miscellaneous skilled workers, direct, other	2	(1)	(1)	(1)
Semiskilled workers				
Males:				
Brush-machine operators [2]	39	.376	40.3	15.15
Clerks, factory [4]	144	.480	43.3	20.80
Dye-machine operators [4]	51	.427	41.7	17.80
Firemen	64	.434	52.9	22.99
Layers-up [2]	112	.509	38.2	19.44
Machine operators, miscellaneous [4]	138	.427	39.9	17.06
Markers, stampers, and labelers [2]	33	.428	35.0	14.98
Packers [4]	199	.420	41.1	17.28
Steamers and pressers [4]	154	.434	39.5	17.13
Stock handlers [4]	43	.420	42.6	17.91
Subforemen, working [4]	87	.558	42.9	23.95
Washer and bleacher tenders [2]	57	.432	39.8	17.20
Winders	34	.442	30.2	13.37
Miscellaneous semiskilled workers, knitting department	41	.460	39.2	18.01
Miscellaneous semiskilled workers, direct, other	70	.415	36.0	14.97
Miscellaneous semiskilled workers, indirect	90	.441	43.9	19.32

See footnotes at end of table.

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TABLE 3.—*Average earnings and hours in knitted-underwear industry, by skill, sex, and occupation, August and September 1938*—Continued

Skill, sex, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued				
Females:				
Buttonhole-machine operators [2]	208	$0.372	31.3	$11.64
Button sewing-machine operators [2]	226	.353	32.9	11.60
Clerks, factory [4]	74	.367	40.7	14.93
Edgers [2]	599	.370	34.9	12.92
Finishers, miscellaneous [3]	237	.387	35.3	13.67
Folders, wrappers, and boxers [2]	874	.361	36.5	13.18
Hemmers [2]	265	.364	35.9	13.06
Inspectors and examiners [4]	720	.345	33.3	11.49
Ironers, hand [2]	57	.379	31.4	11.92
Layers-up [2]	133	.379	40.5	15.37
Machine operators, miscellaneous [4]	77	.357	35.8	12.78
Markers, stampers, and labelers [2]	128	.372	33.3	12.41
Menders, hand [2]	144	.358	36.3	13.00
Reinforcers [2]	434	.393	31.0	12.18
Seamers [2]	3,617	.371	35.4	13.14
Steamers and pressers [4]	130	.379	34.9	13.24
Subforewomen, working [4]	78	.436	41.5	18.09
Tape stringers [2]	66	.361	30.2	10.91
Trimmers, hand [2]	180	.348	33.7	11.72
Winders [3]	236	.430	29.6	12.73
Miscellaneous semiskilled workers, knitting department	24	.387	38.6	14.96
Miscellaneous semiskilled workers, direct, other	204	.363	34.6	12.56
Unskilled workers				
Males:				
Janitors and cleaners	75	.341	42.8	14.59
Learners and apprentices	26	.282	38.2	10.77
Watchmen	85	.362	49.0	17.74
Work distributors [4]	204	.370	38.6	14.26
Miscellaneous unskilled workers, direct	48	.418	43.7	18.28
Miscellaneous unskilled workers, indirect	65	.381	43.2	16.44
Females:				
Janitresses and cleaners	27	.294	40.0	11.77
Learners and apprentices [4]	314	.237	37.9	8.96
Work distributors [4]	131	.329	38.1	12.53
Miscellaneous unskilled workers, indirect	4	(1)	(1)	(1)

[1] Not a sufficient number of workers to permit the presentation of an average.
[2] Sewing-department occupation.
[3] Knitting-department occupation.
[4] Employees in this group may work in both sewing and knitting departments.

Annual Earnings, 1937

Table 4 presents data on average annual earnings of 8,572 workers in 50 establishments in the knitted-underwear industry, classified according to region, skill, and sex. This table reveals that the average annual earnings of males were substantially higher than those of females. The difference in favor of the males was greatest for the skilled and least for the unskilled employees. For example, among the full-time workers in the country as a whole, the average annual earnings of males exceeded those of females by $621 in the skilled, $434 in the semiskilled, and $257 in the unskilled group. For each skill group, moreover, the difference was greater in the North than in the South.

It should be pointed out that the annual figures cover only the total earnings received and number of pay-roll periods worked in 1937 by each wage earner in the plant in which he was employed during September 1938, when the survey was made. The annual data, therefore, do not include any earnings received by an individual from other establishments in which he may have worked during 1937. Moreover, the report includes data covering only those wage

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earners who were employed during 1937 by the establishments surveyed and were still on the pay rolls of the same plant in 1938. If all employees working in 1937 had been included, however, the results probably would not differ materially from those shown in this report.

TABLE 4.—*Average annual earnings of knitted-underwear workers, 1937, by wage area, skill, and sex*

Skill and region	Average annual earnings of employees whose work extended over—											
	52 weeks			39 weeks and over			26 weeks and over			Any part of the year		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
United States	$888	$1,234	$681	$760	$1,082	$659	$731	$1,049	$635	$701	$1,015	$607
Skilled	1,348	1,464	843	1,109	1,267	752	1,077	1,234	731	1,046	1,208	699
Semiskilled	768	1,105	671	702	999	655	675	966	630	646	933	603
Unskilled	869	944	687	757	837	615	731	808	595	685	770	545
Northern wage area	966	1,320	722	787	1,150	679	756	1,111	653	721	1,069	621
Skilled	1,423	1,551	891	1,144	1,333	774	1,111	1,292	756	1,072	1,260	717
Semiskilled	833	1,202	709	725	1,065	674	696	1,027	648	664	985	617
Unskilled	935	1,003	717	795	895	625	763	862	600	701	809	536
Southern wage area	731	1,005	611	680	908	599	658	887	579	640	871	561
Skilled	1,143	1,233	683	993	1,085	632	965	1,070	601	957	1,058	601
Semiskilled	651	858	607	633	832	598	611	810	578	593	793	559
Unskilled	708	755	645	671	712	590	657	692	584	645	679	574

Knitted Outerwear

As defined by the Census of Manufactures, the knitted-outerwear industry in 1937 included 669 plants having a product valued at $5,000 or more. The average number of wage earners for the year was 26,139. The sample in this survey covered 105 establishments and 7,230 wage earners. Although the manufacture of knitted outerwear is heavily concentrated in the Middle Atlantic States, significant portions of the industry are found in other parts of the country. In terms of the survey's coverage, New York is the leading State, including 20.2 percent of the total workers. Pennsylvania ranks second with 15.4 percent of all wage earners, and Massachusetts is next with 15.1 percent. Other important States are Ohio, Wisconsin, and California. Less than 10 percent of the employees were found in the South.[a]

Most of the establishments in the knitted-outerwear industry are small, with very few employing over 500 workers. Another outstanding feature of the industry is the marked concentration of establishments in the large metropolitan centers, particularly in New York City.

Judged on the basis of the survey's coverage, labor organization is important, although not dominant, in the industry.

Industrial home work is found in the knitted-outerwear industry. Because of the almost complete absence of records as to the hours of work and production of individual home workers, however, it was not possible to include these employees within the scope of the survey.

[a] Among the other States included in the survey are Connecticut, Illinois, Michigan, Mississippi, New Jersey, North Carolina, Oregon, Rhode Island, Utah, Virginia, and Washington.

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The equipment used in the manufacture of knitted outerwear includes circular and flat knitting machines, ribbers, brushers, calenders, pressers, cutters, and several types of sewing machines, some of which are highly specialized. In general, two methods of production are employed. Certain garments, such as heavy sweaters and bathing suits, are usually made on flat knitting machines, which shape the articles during the knitting process by means of various controlling devices. Polo shirts, light sweaters, and suits and dresses, on the other hand, are commonly made of tubular or flat knit cloth, which is marked and cut according to a pattern, the parts thus produced being sewed together to form a garment.

These manufacturing processes require a large number of skilled workers. According to table 5, 62.9 percent of the 7,230 wage earners included in the survey were classed as skilled. On the other hand, the number of unskilled workers amounted to only 4.8 percent of the total.

TABLE 5.—*Average hourly earnings in knitted-outerwear industry, August and September 1938, by skill and sex*

Skill and sex	Workers		Average hourly earnings
	Number	Percent	
All workers	7,230	100.0	$0.458
Males	1,778	24.6	.622
Females	5,452	75.4	.398
Skilled workers	4,549	62.9	.502
Males	1,098	15.2	.741
Females	3,451	47.7	.418
Semiskilled and unskilled workers	2,681	37.1	.382
Males	680	9.4	.435
Females	2,001	27.7	.362

Average Hourly Earnings

The straight piece-rate method of wage payment is used extensively in the knitted-outerwear industry. Only 3 establishments had production-bonus systems, which covered 390 workers, or 5.4 percent of the total included in the survey. Piece rates and production-bonus plans commonly apply to the important direct occupations, such as the knitters, cutters, and various sewing-machine operators.

At the time of the survey, a majority of the establishments covered paid only the regular rates for overtime work.[5] Of the 72 nonunion plants, 58 paid the regular rates for overtime. Among the remaining 14 nonunion establishments, 3 paid time and a half and 4 time and a third for overtime. Among the 33 trade-union establishments, 8 paid the regular rates, 6 time and a half, 7 time and a third, and 2 time and a fourth for overtime. In nine plants, hourly workers received overtime rates of time and a third, while the piece workers were paid only the regular rate. Overtime rates for both hourly and piece-rate employees in one establishment varied from time and a third to time and a half, depending upon the amount of overtime worked.

[5] Three establishments paid higher rates for extra-shift operation, but the number of workers involved was negligible.

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The hourly earnings of all workers included in the survey averaged 45.8 cents in August and September 1938. (See table 5.) The hourly earnings of the individual employees, however, varied considerably, according to the distribution in table 6. For example, the earnings of all but 3.1 percent of the wage earners covered a spread from 17.5 cents to $1.20 an hour.

Variations by sex and skill.—The average hourly earnings for all male employees was 62.2 cents, which may be compared with only 39.8 cents for all females, a difference of 22.4 cents.

Nearly two-thirds (65.2 percent) of the males, as compared with one-fourth (24.5 percent) of the females, received 47.5 cents or more an hour.

TABLE 6.—*Percentage distribution of workers in knitted-outerwear industry by average hourly earnings, skill, and sex, August and September 1938*

Average hourly earnings	All workers			Skilled workers			Semiskilled and unskilled workers		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Under 17.5 cents	1.8	0.3	2.3	1.3	.....	1.7	2.6	0.9	3.2
17.5 and under 20.0 cents	2.3	.6	2.9	1.8	0.1	2.4	3.1	1.3	3.7
20.0 and under 22.5 cents	2.8	1.8	3.2	2.0	.5	2.5	4.2	3.8	4.3
22.5 and under 25.0 cents	2.7	1.4	3.1	1.9	.5	2.4	4.0	2.9	4.4
25.0 and under 27.5 cents	5.3	2.6	6.2	4.0	.6	5.1	7.5	5.9	8.1
27.5 and under 30.0 cents	5.9	1.7	7.3	5.5	.5	7.1	6.7	3.7	7.8
30.0 and under 32.5 cents	6.5	3.1	7.6	5.6	1.4	7.0	8.1	6.0	8.8
32.5 and under 35.0 cents	5.4	3.4	6.1	4.5	1.5	5.5	7.0	6.5	7.2
35.0 and under 37.5 cents	7.7	4.6	8.6	6.6	2.0	8.1	9.4	8.8	9.7
37.5 and under 40.0 cents	6.2	2.8	7.3	6.0	1.6	7.4	6.5	4.7	7.0
40.0 and under 42.5 cents	6.7	3.3	7.9	6.4	1.5	7.9	7.3	6.0	7.8
42.5 and under 47.5 cents	12.2	9.2	13.0	12.3	6.1	14.1	12.0	14.4	11.2
47.5 and under 52.5 cents	8.5	8.5	8.3	8.9	8.3	9.1	7.4	9.1	6.9
52.5 and under 57.5 cents	5.8	7.1	5.4	6.4	7.5	6.0	4.8	6.5	4.3
57.5 and under 62.5 cents	3.9	6.4	3.1	4.6	6.6	3.9	2.9	5.9	1.8
62.5 and under 67.5 cents	2.9	4.9	2.3	3.4	5.6	2.7	2.2	3.8	1.6
67.5 and under 72.5 cents	2.7	4.9	2.0	3.4	6.3	2.4	1.7	2.6	1.3
72.5 and under 77.5 cents	2.3	6.0	1.2	3.1	8.1	1.5	1.0	2.5	.5
77.5 and under 82.5 cents	1.5	4.7	.5	1.9	5.9	.7	.7	2.6	.1
82.5 and under 87.5 cents	1.5	3.9	.6	2.1	6.0	.9	.3	.6	.2
87.5 and under 92.5 cents	.8	2.5	.3	1.2	3.7	.4	.2	.6	.1
92.5 and under 100.0 cents	1.1	3.7	.3	1.7	5.6	.4	.2	.6	(1)
100.0 and under 110.0 cents	1.4	5.1	.2	2.2	8.1	.3	.1	.1	(1)
110.0 and under 120.0 cents	.8	2.7	.2	1.2	4.3	.3	.1	.1	(1)
120.0 cents and over	1.3	4.8	.1	2.0	7.7	.2	(1)	.1	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	7,230	1,778	5,452	4,549	1,098	3,451	2,681	680	2,001

[1] Less than a tenth of 1 percent.

Occupational differences.—Table 7 shows average hourly earnings in the knitted-outerwear industry for the principal occupational classes.

The most important occupations numerically among the skilled males were the circular and flat knitters, who averaged 64.1 and 65.9 cents an hour, respectively. With one important exception, namely, hand cutters, these were the lowest occupational averages shown for skilled males. Among skilled women, seamers were by far the most important occupation numerically, comprising over one-half of all skilled females and over one-fourth of the total labor force. The average for this class was 41.8 cents an hour.

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TABLE 7.—*Average earnings and hours in knitted-outerwear industry, August and September 1938, by skill, sex, and occupation*

Skill, sex, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers				
Males:				
Cutters, hand [1]	51	$0.565	42.6	$24.09
Cutters, machine [2]	113	.714	40.0	28.55
Foremen, working [4]	87	.971	42.2	40.94
Knitters, circular [3]	237	.641	44.7	28.66
Knitters, flat [3]	219	.659	42.6	28.06
Machine fixers [4]	89	.904	43.5	39.36
Pressers, garment [2]	119	.765	39.9	30.56
Seamers [2]	88	.964	39.2	37.85
Miscellaneous skilled workers, knitting department	48	.717	33.9	24.30
Miscellaneous skilled workers, direct	25	.849	39.5	33.57
Miscellaneous skilled workers, indirect	22	.639	43.3	27.66
Females:				
Buttonhole-machine operators [2]	76	.400	40.7	16.28
Cutters, hand [2]	224	.395	40.4	15.98
Cutters, machine [2]	50	.440	40.3	17.71
Finishers, miscellaneous [2]	143	.423	38.7	16.38
Forewomen, working [4]	80	.515	43.2	22.24
Hemmers [2]	151	.441	34.8	15.35
Inspectors and examiners [4]	338	.368	37.6	13.84
Knitters, circular [3]	92	.363	40.9	14.85
Knitters, flat [3]	14	(1)	(1)	(1)
Loopers [2]	112	.518	36.9	19.10
Menders, hand [2]	186	.413	38.5	15.87
Seamers [2]	1,943	.418	37.3	15.60
Miscellaneous skilled workers, knitting department	18	(1)	(1)	(1)
Miscellaneous skilled workers, direct	24	.588	42.5	24.97
Semiskilled workers				
Males:				
Clerks, factory [4]	77	.557	43.3	24.12
Machine operators, miscellaneous [4]	59	.460	41.9	19.27
Packers [4]	77	.395	45.9	18.14
Steamers and pressers [4]	155	.467	41.0	19.11
Winders [3]	18	(1)	(1)	(1)
Miscellaneous semiskilled workers, knitting department	32	.409	43.4	17.76
Miscellaneous semiskilled workers, direct	62	.486	40.6	19.71
Miscellaneous semiskilled workers, indirect	23	.455	48.0	21.84
Females:				
Button sewing-machine operators [2]	51	.378	37.0	13.99
Clerks, factory [4]	35	.403	40.1	16.16
Edgers [2]	68	.421	35.6	14.99
Folders, wrappers, and boxers [2]	304	.355	38.8	13.80
Machine operators, miscellaneous [4]	42	.362	38.0	13.74
Markers [2]	54	.314	40.0	12.57
Sewers, hand [2]	475	.363	36.3	13.15
Steamers and pressers [2]	57	.346	42.2	14.58
Trimmers, hand [2]	209	.328	35.8	11.74
Winders [3]	216	.426	37.1	15.82
Miscellaneous semiskilled workers, knitting department	36	.413	41.1	17.00
Miscellaneous semiskilled workers, direct	284	.378	39.0	14.75
Unskilled workers				
Males:				
Learners and apprentices [4]	37	.344	43.3	14.89
Miscellaneous unskilled workers, direct	52	.358	41.1	14.74
Miscellaneous unskilled workers, indirect	88	.349	46.0	16.05
Females:				
Learners and apprentices [4]	115	.233	37.5	8.74
Miscellaneous unskilled workers, direct	48	.361	34.9	12.59
Miscellaneous unskilled workers, indirect	7	(1)	(1)	(1)

[1] Not a sufficient number of workers to permit the presentation of an average.
[2] Sewing-department occupation.
[3] Knitting-department occupation.
[4] Employees in this group may work in both sewing and knitting departments.

An examination of the data reveals little evidence of geographical differences in average hourly earnings in this industry. On the other hand, an analysis of the data shows that hourly earnings vary in accordance with size of community. The average hourly earnings of all employees in establishments located in places of about 50,000

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population and under amounted to 34 cents. This group of plants includes the 3 southern establishments but even with the latter excluded the average is only 40 cents. By contrast, the hourly earnings of workers in plants found in communities between 175,000 and 500,000 averaged 45 cents. Practically the same average was found in metropolitan areas with 750,000 and over, excluding Philadelphia and New York City, which averaged, respectively, 55 and 61 cents.

An examination of the figures also shows the relationship between unionization and hourly earnings. On the basis of the sample, union plants in this industry were confined entirely to the larger communities, as none of the establishments covered in places of about 50,000 population and under were found to have agreements with unions. With the exception of New York City, there appears to be little difference between wage levels in the union and nonunion plants located in the same communities. If a comparison is made between the union and nonunion establishments in the larger cities, other than New York and Philadelphia, it is found that the averages in both cases are about 45 cents an hour. Philadelphia, however, in which all but 4 of the 13 plants covered are union plants, had an average of 55 cents an hour; there was little, if any, difference in the earnings in union and nonunion plants. In the New York metropolitan area, however, average hourly earnings were substantially higher in the 16 union than in the 24 nonunion plants, the figures being 75 and 55 cents, respectively.

A comparison of the averages for plants of various sizes fails to reveal any significant relationship between size of establishment and hourly earnings.

Whether or not there is any relationship between type of product made and average hourly earnings cannot be determined on the basis of data secured in this survey, due to the thinness of the sample with respect to plants making products other than sweaters.

Annual Earnings, 1937

Average annual earnings of workers in the knitted-outerwear industry, by sex and skill, are shown in table 8.

In knitted-outerwear plants, as in the knitted-underwear industry, the average annual earnings of males were substantially greater than those of females. Among the employees whose work extended over 52 weeks, the annual earnings of males averaged $1,526, as compared with $858 for females. For the skilled workers in this group, the average for males amounted to $1,717, or nearly twice as much as the average ($888) for females. Among the semiskilled and unskilled full-time employees, the average annual earnings of males exceeded those for females by $394. A similar picture is shown for the averages when extended to cover the earnings of all workers employed during shorter periods of time.

It should be stated that the annual data for 1937 cover only total earnings of each employee in the plant where he was employed in September 1938, and do not include any earnings by him in other plants. Moreover, the data cover only those wage earners who were employed during 1937 by the establishments surveyed and were still on the pay rolls of the same plant in 1938.

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TABLE 8.—*Average annual earnings of knitted-outerwear workers, 1937, by skill and sex*

Skill	Average annual earnings of employees whose work extended over—											
	52 weeks			39 weeks and over			26 weeks and over			Any part of the year		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
All workers	$1,122	$1,526	$858	$897	$1,345	$737	$824	$1,259	$681	$754	$1,169	$622
Skilled	1,217	1,717	888	962	1,501	762	885	1,419	705	810	1,332	644
Semiskilled and unskilled	961	1,199	805	779	1,039	691	714	957	637	653	873	583

Knitted Cloth

The Bureau's survey of the knitted-cloth industry was confined to 22 establishments, in which 1,715 wage earners were scheduled.[6]

A classification of the mills according to size (as measured by total employment) shows that a majority are relatively small. One-half of the establishments studied had less than 100 employees, 6 between 100 and 250, and 5 over 250 workers.

In view of the fact that the cloth-knitting mills sell most of their products to the garment cutting and sewing establishments, it is not surprising that the knitted-cloth industry should be concentrated in or near New York City, which is the center for that type of production. The survey included 10 plants in New York and 3 in New Jersey, all but 1 of which were in the New York metropolitan area. Of the remaining establishments, 4 were in Massachusetts and 1 each in Michigan, North Carolina, Pennsylvania, Rhode Island, and Virginia.

Labor organization is important in this industry.

Average Earnings

A large majority of the wage earners included in the survey were paid on a time-rate basis. None of the establishments reported the use of production-bonus plans.

Only 9 of the plants surveyed paid extra rates for overtime work ranging from time and one-fourth to time and one-half. The extra rates usually took effect after from 40 to 45 hours a week.

The hourly earnings of all workers in the knitted-cloth industry averaged 56.0 cents in August and September 1938. (See table 9.) Although the distribution, which is shown in table 10, extends from under 17.5 cents to over $1.20 an hour, it will be observed that over one-half (53.6 percent) of the total labor force averaged between 35 and 52.5 cents.

[6] As defined by the Census of Manufactures, the industry in 1937 included 213 establishments (having an annual product valued at $5,000 or more) and 11,360 wage earners (average for year). A substantial number of these plants, however, had less than 10 employees, which were excluded from the scope of this survey.

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TABLE 9.—*Average hourly earnings, actual weekly hours, and weekly earnings in knitted-cloth industry, August and September 1938, by sex and skill*

Sex and skill	Workers		Average hourly earnings	Average actual weekly hours	Average weekly earnings
	Number	Percent			
Total	1,715	100.0	$0.560	44.2	$24.74
Males	1,298	75.7	.601	45.2	27.18
Skilled	582	33.9	.779	43.7	34.05
Semiskilled and unskilled	716	41.8	.465	46.4	21.59
Females	417	24.3	.418	41.0	17.16

TABLE 10.—*Percentage distribution of workers in knitted-cloth industry according to average hourly earnings, by sex and skill, August and September 1938*

Average hourly earnings	All workers	Males			Females
		Total	Skilled	Semiskilled and unskilled	
Under 17.5 cents	0.1				0.2
17.5 and under 20.0 cents	.1				.2
20.0 and under 22.5 cents	.4	0.5		1.0	
22.5 and under 25.0 cents	.4	.2		.3	1.2
25.0 and under 27.5 cents	2.9	1.3		2.4	7.7
27.5 and under 30.0 cents	1.6	1.8	0.2	3.2	.7
30.0 and under 32.5 cents	3.3	2.4	.2	4.2	6.0
32.5 and under 35.0 cents	1.3	.5		1.0	3.8
35.0 and under 37.5 cents	6.4	5.3	.9	8.9	9.8
37.5 and under 40.0 cents	4.1	3.2	1.4	4.6	7.0
40.0 and under 42.5 cents	8.5	7.8	2.7	11.9	10.7
42.5 and under 47.5 cents	22.6	19.3	14.3	23.3	33.4
47.5 and under 52.5 cents	12.0	13.0	2.4	21.6	8.6
52.5 and under 57.5 cents	5.2	5.5	5.3	5.6	4.3
57.5 and under 62.5 cents	1.7	1.8	1.5	2.1	1.4
62.5 and under 67.5 cents	4.1	4.7	6.0	3.6	2.2
67.5 and under 72.5 cents	2.0	2.4	2.7	2.1	1.0
72.5 and under 77.5 cents	4.4	5.3	10.3	1.3	1.4
77.5 and under 82.5 cents	6.0	7.9	16.1	1.3	
82.5 and under 87.5 cents	1.5	2.0	4.0	.4	
87.5 and under 92.5 cents	3.1	4.2	8.6	.6	
92.5 and under 100.0 cents	1.8	2.3	5.0	.1	.2
100.0 and under 110.0 cents	3.9	5.1	11.2	.1	.2
110.0 and under 120.0 cents	.9	1.2	2.4	.1	
120.0 cents and over	1.7	2.3	4.8	.3	
Total	100.0	100.0	100.0	100.0	100.0
Number of workers	1,715	1,298	582	716	417

The hourly earnings of all males averaged 60.1 cents. The average for the skilled males was 77.9 cents which was 31.4 cents more than the average (46.5 cents) for the group of semiskilled and unskilled males. The females received 41.8 cents or 4.7 cents less than the average for semiskilled and unskilled males.

Occupational differences.—Because of the small size of the industry separate figures can be presented for only a few of the occupations commonly recognized in knitted-cloth mills. (See table 11.)

Male machine fixers received the highest earnings, amounting to $1.026 an hour on the average. This was substantially higher than the earnings of working foremen, who averaged 95.4 cents. The knitters, who made up three-fifths (58.9 percent) of the skilled males, received 74.7 cents.

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TABLE 11.—*Average hourly earnings, weekly hours, and weekly earnings in knitted-cloth industry, August and September 1938, by sex, skill, and occupation*

Sex, skill, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Males				
Skilled workers:				
Foremen, working	45	$0.954	44.9	$42.85
Knitters	343	.747	43.1	32.22
Machine fixers	45	1.026	45.0	46.12
Miscellaneous skilled, knitting department	94	.749	43.6	32.68
Miscellaneous skilled, direct	15	(1)	(1)	(1)
Miscellaneous skilled, indirect	40	.634	45.1	28.56
Semiskilled workers:				
Brush-machine operators	57	.513	51.0	26.19
Clerks, factory	49	.554	47.0	26.04
Dye-machine operators	121	.496	47.2	23.43
Machine operators, miscellaneous	37	.453	47.5	21.53
Packers	52	.395	48.5	19.16
Steamers and pressers	105	.462	44.1	20.36
Miscellaneous semiskilled, knitting department	70	.450	47.2	21.26
Miscellaneous semiskilled, direct	64	.512	48.1	24.60
Miscellaneous semiskilled, indirect	16	(1)	(1)	(1)
Unskilled workers:				
Watchmen	20	.442	41.7	18.41
Work distributors	46	.374	45.6	17.06
Miscellaneous unskilled, direct	57	.416	40.8	16.97
Miscellaneous unskilled, indirect	22	.404	41.8	16.87
Females				
Knitting department	273	.431	40.2	17.36
Other departments	144	.394	42.5	16.77

[1] Not a sufficient number of workers to permit the presentation of an average.

The number of employees in knitted-cloth mills for whom annual earnings were obtained was too small to permit a detailed analysis. Annual earnings for all workers who were continuously employed during the year ranged from $2,621 in one plant to $1,076 in another establishment. In both of these plants, it should be noted, the annual data covered only male employees. Plant average annual earnings of employees who were on the pay roll during 39 weeks and over ranged from $1,699 to $945.

Wide differences in the annual earnings of males and females were found in every plant for which such a comparison could be made.

Knitted Gloves and Mittens

The survey of the knitted gloves and mittens industry covered only 6 establishments, with 805 wage earners.[7] Of these, 4 were located in New York State.

Nearly four-fifths (78.6 percent) of the workers in the industry were females. About two-thirds (65.6 percent) of the females and less than one-half (47.7 percent) of the males were classed as skilled. The number of unskilled workers in each sex group was too limited to permit a separate analysis; hence, the figures are shown for the semiskilled and unskilled combined (table 12).

All of the plants included in the survey employed a considerable number of piece workers, although some employees on a time basis were found in each establishment.

[7] According to the Census of Manufactures, in 1937 this industry included 15 establishments (having an annual product valued at $5,000 or more) and 3,182 wage earners (average for the year).

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TABLE 12.—*Average hourly earnings, actual weekly hours, and weekly earnings in knitted gloves and mittens industry, August and September 1938, by sex and skill*

Sex and skill	Workers		Average hourly earnings	Average actual weekly hours	Average weekly earnings
	Number	Percent			
Total	805	100.0	$0.409	33.3	$13.62
Skilled	497	61.8	.432	30.6	13.23
Semiskilled and unskilled	308	38.2	.379	37.6	14.25
Males	172	21.4	.585	41.6	24.32
Skilled	82	10.2	.719	39.4	28.35
Semiskilled and unskilled	90	11.2	.474	43.5	20.64
Females	633	78.6	.345	31.0	10.71
Skilled	415	51.6	.355	28.9	10.24
Semiskilled and unskilled	218	27.0	.330	35.2	11.62

The average hourly earnings in 3 establishments amounted to about 40 cents. One plant had an average of about 35 cents, while the remaining establishments averaged over 40 and less than 45 cents.

The hourly earnings of all workers averaged 40.9 cents in August and September 1938. The total distribution of individual earnings, according to table 13, covers a relatively wide range, with significant limits at 20.0 and 82.5 cents, within which are included 97.5 percent of all employees. Over two-fifths (43.3 percent) averaged between 32.5 and 42.5 cents. The number paid under 32.5 cents amounted to 27.5 percent. Three-tenths (29.2 percent) averaged 42.5 cents or over but only 9.1 percent received as much as 62.5 cents or more.

The number of employees in mills making knitted gloves and mittens for whom annual earnings were obtained was too small to permit a detailed analysis. Wide differences in the annual earnings of males and females were found in every plant for which such a comparison could be made.

TABLE 13.—*Percentage distribution of workers in knitted gloves and mittens industry according to average hourly earnings, by skill and sex, August and September 1938*

Average hourly earnings	All workers			Skilled workers			Semiskilled and unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 17.5 cents	0.9	-------	1.1	0.8	-------	1.0	1.0	-------	1.4
17.5 and under 20.0 cents	.7	-------	.9	.4	-------	.5	1.3	-------	1.8
20.0 and under 22.5 cents	7.6	3.5	8.7	3.2	-------	3.9	14.6	6.7	18.0
22.5 and under 25.0 cents	2.7	-------	3.5	2.6	-------	3.1	2.9	-------	4.1
25.0 and under 27.5 cents	4.5	1.7	5.2	4.8	1.2	5.5	3.9	2.2	4.6
27.5 and under 30.0 cents	4.8	.6	6.0	5.8	-------	7.0	3.2	1.1	4.1
30.0 and under 32.5 cents	6.3	-------	8.1	7.9	-------	8.4	5.2	-------	7.3
32.5 and under 35.0 cents	10.9	2.3	13.0	12.7	1.2	15.0	7.8	3.3	9.6
35.0 and under 37.5 cents	13.3	1.7	16.2	14.3	-------	17.2	11.4	3.3	14.7
37.5 and under 40.0 cents	9.9	4.7	11.4	8.5	1.2	9.9	12.3	7.8	14.2
40.0 and under 42.5 cents	9.2	4.7	10.4	9.5	-------	11.3	8.8	8.9	8.7
42.5 and under 47.5 cents	8.4	9.3	8.2	8.7	2.4	9.9	8.1	15.6	5.0
47.5 and under 52.5 cents	6.5	13.4	4.6	5.8	8.5	5.3	7.5	17.8	3.2
52.5 and under 57.5 cents	2.7	6.4	1.7	2.0	4.9	1.4	3.9	7.8	2.3
57.5 and under 62.5 cents	2.5	11.6	-------	.8	4.9	-------	5.2	17.8	-------
62.5 and under 67.5 cents	1.4	5.8	.2	1.4	8.5	-------	1.3	3.3	.5
67.5 and under 72.5 cents	.9	3.5	.2	.8	4.9	-------	1.0	2.2	.5
72.5 and under 77.5 cents	.7	2.9	.2	1.0	4.9	.2	.3	1.1	-------
77.5 and under 82.5 cents	5.2	23.8	.2	8.5	50.2	.2	-------	-------	-------
82.5 cents and over	.9	4.1	.2	1.4	7.2	.2	.3	1.1	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	805	172	633	497	82	415	308	90	218

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Leather Belting and Packing Industry—Earnings and Hours, 1939[1]

The leather belting and packing industry, as defined by the Census of Manufactures, embraces establishments engaged primarily in the making of the following: Leather belting, chiefly for use in the transmission of power; leather packing, such as cup, U-valve, oil-retainer-seal, etc.; and "textile leathers," such as aprons, picker leathers, mill strapping, etc. In general, the Bureau of Labor Statistics survey conformed to the definition of the leather belting and packing industry as stated by the Census of Manufactures. The survey covered all establishments in the industry except those with fewer than 3 employees. Thus defined, it included 108 plants with 1,956 wage earners.

Taken as a whole, the industry is not large. In 1937, the latest year for which figures are available, the number of belting and packing establishments totaled 182. During the year, these plants employed an average of 2,829 wage earners, and their total wage bill amounted to $3,354,946.

Not only is the leather belting and packing industry comparatively small, but, as a rule, its operations are carried on in very small establishments. Only about 15 to 16 wage earners were employed by the average leather belting and packing plant, according to the Census of Manufactures in 1937.

Geographically, the industry is widely scattered. In 1937, approximately two-fifths of its plants with over one-third of the wage earners were found in three important industrial States, namely, Massachusetts, Pennsylvania, and New York. The remainder of the industry, however, was broadly distributed over the country. Operations in the leather belting and packing industry are largely free from seasonal fluctuations.

Average Hourly Earnings

Of the total workers covered in the survey, 9.8 percent were paid on a straight piece-work basis, 6.1 percent worked under production-bonus plans, and 84.1 percent were paid on a straight time-rate basis.

Extra rates for overtime work were general throughout the industry. Most of these plants allowed time and one-half after 40 hours of work. About one-fifth of the plants also paid double time for work on Sundays and holidays.

During the pay-roll period scheduled, a number of employees worked overtime. If the earnings due to the extra rates allowed for this overtime are considered, the average hourly earnings for all workers in the industry are increased from 56.5 to 57.8 cents, a gain of 1.3 cents. The subsequent analysis of both hourly and weekly earnings is on the basis of regular rates only.

In September 1939, earnings of all workers in the belting and packing industry averaged 56.5 cents an hour. Individual hourly earnings, however, varied widely, ranging from about 25 cents to above $1, according to the distribution in table 1.

[1] Abstract from Part II of Bulletin No. 679: Earnings and Hours in the Leather and Leather Belting and Packing Industries, 1939. Prepared by J. Perlman, P. L. Jones, H. O. Rogers, and O. R. Witmer, of the Bureau of Labor Statistics.

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Although the spread of individual earnings was wide, the hourly earnings of a fairly large proportion of the labor force were restricted to comparatively narrow limits. Almost one-third (31.8 percent) of the wage earners were concentrated within the 15-cent range of 42.5 and under 57.5 cents. Moreover, the range for more than three-fifths (63.4 percent) was between 40.0 and 72.5 cents.

As in the leather industry, women form a minor proportion (14.6 percent) of the total labor force in leather belting and packing. The dominant groups are the skilled and semiskilled males; each of these groups accounted for 38 percent of the total. Only one-tenth (9.9 percent) of all workers were unskilled males.[2]

Sharply contrasting levels of hourly earnings are shown for each of these groups of employees in the industry. Compared with an average of 68.2 cents an hour for skilled males, semiskilled males averaged 54.4 cents, and unskilled males had an average of 42.2 cents. The female employees, most of whom are semiskilled workers, averaged 40.5 cents.

TABLE 1.—*Percentage distribution of leather belting and packing workers by average hourly earnings, sex, and skill, September 1939*

Average hourly earnings	All workers	Males				Females
		Total	Skilled	Semi-skilled	Un-skilled	
Under 25.0 cents	0.1	0.1			1.0	
Exactly 25.0 cents	1.3	1.2		0.5	8.2	2.1
25.1 and under 27.5 cents	.2	.2		.3	.5	
27.5 and under 30.0 cents	.2	.1	0.1	.1		.7
30.0 and under 32.5 cents	2.2	1.6	.4	2.2	4.1	5.6
32.5 and under 35.0 cents	1.6	1.9	.8	2.0	5.2	.4
35.0 and under 37.5 cents	8.5	3.8	.7	4.9	11.3	36.5
37.5 and under 40.0 cents	3.2	2.1	.8	2.7	4.6	9.8
40.0 and under 42.5 cents	7.0	6.1	2.3	8.7	10.8	12.3
42.5 and under 47.5 cents	10.0	9.4	4.2	12.1	19.2	13.3
47.5 and under 52.5 cents	10.6	10.7	5.4	12.9	23.3	9.8
52.5 and under 57.5 cents	11.2	12.2	11.7	14.3	7.2	4.2
57.5 and under 62.5 cents	7.8	8.4	9.2	9.1	3.1	4.2
62.5 and under 67.5 cents	8.5	9.8	11.9	10.3		1.1
67.5 and under 72.5 cents	8.3	9.8	13.9	7.7	1.5	
72.5 and under 77.5 cents	6.4	7.5	11.8	5.3		
77.5 and under 82.5 cents	5.1	5.9	9.9	3.5		
82.5 and under 87.5 cents	2.6	3.1	4.2	2.7		
87.5 and under 92.5 cents	2.1	2.5	5.0	.5		
92.5 and under 100.0 cents	.7	.8	1.8	.1		
100.0 and under 110.0 cents	1.3	1.5	3.2	.1		
110.0 and under 125.0 cents	.6	.7	1.5			
125.0 and under 150.0 cents	.4	.5	1.1			
150.0 cents and over	.1	.1	.1			
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	1,956	1,671	739	738	194	285
Average hourly earnings	$0.565	$0.592	$0.682	$0.544	$0.422	$0.405

Geographical Differences

In analyzing the data on a geographical basis, the same break-down was used in leather belting and packing as in the leather industry, which consisted of the New England, Middle Atlantic, Middle Western (including California), and Southern States.

The Southern States employed only about one-eighth of the total workers in the industry. Generally speaking, hourly earnings were

[2] The number of colored workers (1.5 percent) in the establishments covered was not sufficiently large to justify separate analysis.

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lower here than in other parts of the country. All but one of the southern establishments averaged below 60 cents, while two-thirds of the northern plants showed averages above that figure. This does not mean, however, that the low-wage establishments were all located in the South. As a matter of fact, there were as many establishments averaging less than 45 cents in the North as in the South.

Since there were no female workers found in the southern establishments, any comparison between the northern and southern regions should be confined to male employees. For all males the average hourly earnings were 62.1 cents in the Northern and 43.9 cents in the Southern States, a difference of 18.2 cents.

Each district showed a substantial number of employees in the higher-wage classes, namely, above 72.5 cents, the figures being 28.2 percent in the Middle Atlantic, 21.5 percent in the New England, and 16.2 percent in the Middle Western States (including California).

Variations by Size of Community, Unionization, and Product

As in the leather industry, plants making leather belting and packing are, for the most part, located in large industrial centers. Of the total employees in the industry, as many as 44.4 percent were found in metropolitan areas with a population of 1,000,000 and over, and one-fourth (24.4 percent) were located in communities between 250,000 and 1,000,000. There were 13.6 percent in places between 50,000 and 250,000, and 17.6 percent were found in towns between 5,000 and 50,000.

Due to the fact that the coverage in the Southern States is relatively small, any analysis of hourly earnings by size of community in this industry must be confined to the northern region. For all workers, average hourly earnings in this area amounted to 51.7 cents in towns with a population between 5,000 and 50,000, 55.8 cents in places between 50,000 and 250,000, 63.9 cents in communities between 250,000 and 1,000,000, and 58.1 cents in metropolitan areas with 1,000,000 and over.

Unionization has not made much headway in the leather belting and packing industry. Of the 108 establishments covered in the survey, only 4 were operating under union agreements. These plants were all located in metropolitan areas with a population of 1,000,000 and over in the Northern States. With one exception, they averaged over 65 cents, which places them in the upper half of the distribution of establishments by average hourly earnings.

Despite the fact that all of the union plants were located in metropolitan areas with a population of 1,000,000 and over, the average hourly earnings here were lower than those found in communities between 250,000 and 1,000,000. This is due to the fact that the proportion of employees working in leather-packing establishments, which generally had a lower wage level than plants making other products, was higher in metropolitan areas of 1,000,000 and over as compared with other classes of communities.

For all wage earners, the average hourly earnings amounted to 58.1 cents in plants making primarily leather belting, 52.6 cents in those engaged principally in making leather packing, and 58.2 cents in establishments producing other products that come within the definition of the industry.

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The chief reason for the higher wage level in leather belting is the fact that the plants engaged chiefly in making this product employed relatively few women, namely, 2.3 percent of the total labor force.

Occupational Differences

The average hourly earnings for the various occupations in the leather belting and packing industry for the country as a whole appear in table 2. By far the highest average, 82.6 cents, is shown for working foremen. For the remaining occupational groups among skilled males, the averages covered a narrow range—from 59.8 cents to 67.3 cents. The lowest average was for pressmen. The important occupation of all-around belt makers averaged 65.1 cents.

The occupational averages of females ranged from 36.2 cents for packers to 44.4 cents for cup-forming press operators. In four occupations, figures are shown for both males and females, and in each the females averaged considerably less than the males.

Weekly Hours and Earnings

With very few exceptions, the full-time weekly hours in the leather belting and packing industry amounted to 44 or less in September 1939. Moreover, about one-half of the plants had a full-time workweek of 44 hours, with the great majority of the remainder operating under a 40-hour week.

As in the leather industry, employees in the maintenance, powerhouse, and service departments in many of the leather belting and packing plants had scheduled hours that were different from those of the majority of the wage earners.

The average actual weekly hours worked by all wage earners in the leather belting and packing industry amounted to 43.4 in September 1939. The male workers averaged 43.5 hours, as against 42.9 for female employees.

One-fifth (20.3 percent) of all wage earners worked exactly 40 hours during the pay-roll period scheduled. Three-tenths (30.2 percent) worked exactly 44 hours, which was the maximum allowed under the Fair Labor Standards Act at the time of the survey without the payment of extra rates for time worked beyond this number of hours.

For all wage earners in the leather belting and packing industry, the average weekly earnings in September 1939 amounted to $24.51.[3] During the week scheduled, 65.4 percent of the total earned between $15 and $30. One-tenth (10.1 percent) received less than $15. The remaining one-fourth (24.5 percent) earned $30 and over, but only 4.7 percent were paid as much as $40.

As with hourly earnings, weekly earnings varied considerably among the several skill-sex groups. Male employees averaged $25.73, as compared with $17.37 for female workers. Among the males, the averages amounted to $30.02 for skilled, $23.48 for semiskilled, and $17.96 for unskilled employees.

[3] If the earnings due to the extra rates for overtime work were included, it would increase the average weekly earnings of all workers in the industry by 56 cents.

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TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of leather belting and packing workers, September 1939, by sex, skill, and occupation*

Sex, skill, and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	1,956	$0.565	43.4	$24.51
Males	1,671	.592	43.5	25.73
Skilled	739	.682	44.0	30.02
Belt makers, all around	197	.651	44.9	29.22
Cutters, belting strips	28	.652	44.3	28.87
Foremen, working	170	.826	44.3	36.59
Pressmen, belts	137	.598	42.9	25.69
Shaving-machine operators, belting and packing	26	.639	41.6	26.60
Sorters and matchers, belting	32	.616	45.2	27.83
Miscellaneous workers, maintenance, skilled	82	.648	45.7	29.59
Miscellaneous workers, other, skilled	67	.673	41.5	27.94
Semiskilled	738	.544	43.1	23.48
Clerks, plant	71	.600	43.3	25.95
Cup-edge trimmers, lathe	56	.604	42.7	25.78
Cup-forming press operators	82	.565	41.5	23.43
Cutters, packing, punch press	37	.593	46.3	27.46
Inspectors and testers, belts and packing	20	.563	43.6	24.54
Packers, shipping	39	.478	43.4	20.73
Picker-making workers, semiskilled	71	.457	41.8	19.08
Round-belt-making workers, semiskilled	40	.524	43.8	22.93
Scarfing machine operators, belts and aprons	32	.595	43.7	26.01
Trimmers and polishers, belt edges	30	.555	44.6	24.76
Miscellaneous workers, maintenance, semiskilled	45	.504	45.2	22.80
Miscellaneous workers, leather finishing, machine	18	.534	38.3	20.46
Miscellaneous workers, other, semiskilled	197	.536	43.2	23.15
Unskilled	194	.422	42.5	17.96
Apprentices	14	.471	42.9	20.21
Learners	12	.370	36.8	13.59
Material handlers and general helpers	86	.412	40.9	16.85
Watchmen	27	.410	50.4	20.65
Miscellaneous workers, maintenance, unskilled	35	.461	43.2	19.88
Miscellaneous workers, other, unskilled	20	.413	40.6	16.76
Females	285	.405	42.9	17.37
Cup-edge trimmers, lathe	32	.399	46.4	18.50
Cup-forming press operators	44	.444	42.9	19.05
Cutters, packing, punch press	54	.420	42.4	17.80
Packers, shipping	34	.362	44.0	15.92
Sorters	35	.380	45.4	17.27
Miscellaneous workers	86	.407	40.4	16.42

Leather Industry—Earnings and Hours, September 1939[1]

The manufacture of leather from hides and skins includes two principal processes, namely tanning and finishing.[2] Most establishments are integrated, thus performing all processes. A few plants do tanning only, but a substantial number engage in finishing only. The Bureau's survey included integrated establishments employing 20 or more wage earners, as well as those confining their operations to either tanning or finishing and which employed 10 or more workers. The data collected cover a period prior to October 24, 1939, the effective date of the 30-cent minimum and 42-hour maximum under the Fair Labor Standards Act.

In the aggregate, the 402 establishments[3] in the industry, according to the Census of Manufactures, provided work for 50,687 wage

[1] Abstract of article in the Monthly Labor Review for April 1940, prepared by P. L. Jones, H. O. Rogers, and O. R. Witmer, of the Bureau of Labor Statistics.
[2] Includes currying, a secondary process of finishing leather after tanning.
[3] Includes only plants with an annual production valued at $5,000 and over.

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earners in 1937, with the total wage bill amounting to $61,288,375. Leather manufacturing is widely scattered geographically. The New England States, which constituted the early center of the industry, still remain an important producing region. In the Southern States by contrast, establishments making leather are scattered throughout the Appalachian belt, but their combined employment constitutes only a minor portion of the industry's total.

At first glance, the leather industry appears reasonably homogeneous in terms of product. Actually, however, it is an industry of extreme diversity. The factors that contribute to the complexity of the industry are the variations in the kinds of animal skins or hides employed for conversion into leather and the specific uses for which the finished leather is intended. These factors, in turn, determine the tanning and finishing methods employed in the manufacturing process.

In the present survey, no attempt was made to cover all of the leather plants. Instead, the survey was restricted to a carefully selected sample of 152 establishments, including both regular and contract plants, from which wages and hours data were obtained for 25,617 wage earners.

Average Hourly Earnings

A majority of the wage earners in the leather industry are paid on a straight time-rate basis. Production-bonus systems of wage payment were reported by a few of the larger establishments, affecting approximately one-tenth of the total wage earners in the industry.

TABLE 1.—*Percentage distribution of leather workers by average hourly earnings, sex, and skill, September 1939*

Average hourly earnings	All workers	Males				Females
		Total	Skilled	Semi-skilled	Unskilled	
Under 25.0 cents	(1)	(1)			0.1	
Exactly 25.0 cents	0.6	0.5	0.1	0.1	1.6	1.7
25.1 and under 27.5 cents	.3	.2	(1)	.2	.3	1.0
27.5 and under 30.0 cents	.3	.2	(1)	.2	.4	1.8
30.0 and under 32.5 cents	.7	.6	.2	.4	1.1	2.1
32.5 and under 35.0 cents	.8	.6	.2	.5	.9	2.4
35.0 and under 37.5 cents	1.9	.6	.2	.4	1.3	15.2
37.5 and under 40.0 cents	1.2	.9	.3	.6	1.8	4.5
40.0 and under 42.5 cents	5.5	4.0	.7	2.7	7.9	22.8
42.5 and under 47.5 cents	7.4	6.5	1.8	5.2	11.2	17.4
47.5 and under 52.5 cents	11.5	11.4	3.8	8.9	19.7	12.1
52.5 and under 57.5 cents	12.5	12.7	5.9	11.3	18.5	9.8
57.5 and under 62.5 cents	13.9	14.7	8.9	15.5	15.7	4.7
62.5 and under 67.5 cents	10.8	11.7	11.7	13.7	8.1	1.4
67.5 and under 72.5 cents	8.2	8.7	11.4	10.7	3.8	2.4
72.5 and under 77.5 cents	6.1	6.7	9.1	8.1	2.9	.3
77.5 and under 82.5 cents	5.1	5.5	8.6	6.8	1.8	.2
82.5 and under 87.5 cents	3.2	3.5	6.2	3.9	1.3	(1)
87.5 and under 92.5 cents	2.7	3.0	8.0	2.8	.8	.1
92.5 and under 100.0 cents	3.1	3.3	10.1	3.1	.5	
100.0 and under 110.0 cents	2.3	2.5	7.4	2.4	.2	.1
110.0 and under 125.0 cents	1.0	1.1	2.6	1.3	.1	
125.0 and under 150.0 cents	.7	.8	2.0	.9	(1)	
150.0 cents and over	.2	.3	.8	.3	(1)	
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	47,904	43,895	6,439	24,280	13,176	4,009
Average hourly earnings	$0.623	$0.638	$0.773	$0.656	$0.592	$0.445

[1] Less than a tenth of 1 percent.

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Considering the hourly earnings of individual workers, which are shown in table 1, the largest proportion (13.9 percent) in any 5-cent interval was found between 57.5 and 62.5 cents. Approximately one-half (48.7 percent) received between 47.5 and 67.5 cents, and over four-fifths (81.0 percent) were paid between 40.0 and 82.5 cents.

For all wage earners in the leather industry, earnings in September 1939 averaged 62.3 cents an hour, but varied considerably among establishments.

Geographical Differences

With hourly earnings in the northern region differing considerably in most instances within a single State, it is obviously difficult to conceive here of homogeneous wage districts that are composed of more than one State. The three districts that are shown in this report represent more or less arbitrary groupings of States that correspond to areas that the trade frequently regards as competing producing areas. These groupings include plants surveyed in the New England, Middle Atlantic, and Middle Western States, respectively. The New England States covered in the survey included Massachusetts, New Hampshire, and Connecticut. Delaware was added to the Middle Atlantic States which, under the Bureau of the Census classification, include New York, New Jersey, and Pennsylvania. The Middle Western States, as used in the present survey include not only the East North Central States (Ohio, Michigan, Indiana, Illinois, and Wisconsin), as defined by the Bureau of the Census, but also Minnesota, Missouri, and California. Each of these groups of States is important, accounting respectively for 23.2, 38.0, and 31.9 percent of the total workers in the industry.

The differences in the wage structure of these three districts are not sufficient for them to be regarded as distinctive wage areas. The most concentrated distribution of hourly earnings is found in the Middle Western States (including California). Only 2.9 percent of the workers received less than 40 cents, and 2.6 percent were paid more than 92.5 cents. On the other hand, more than two-thirds (67.7 percent) earned 47.5 to 72.5 cents. The average for all workers was 62.0 cents, while most establishments averaged less than 65 cents. (See table 2.)

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TABLE 2.—*Percentage distribution of leather workers by average hourly earnings, sex, and district, September 1939*

Average hourly earnings (in cents)	All workers				Males				Females [1]		
	New England	Middle Atlantic	Middle Western (including California)	Southern	New England	Middle Atlantic	Middle Western (including California)	Southern	New England	Middle Atlantic	Middle Western (including California)
Under 25.0	0.1	[2]	[2]	-------	0.1	[2]	0.1	-------	-------	-------	-------
Exactly 25.0	.4	0.1	0.4	5.0	.4	0.1	-------	5.0	0.2	-------	4.7
25.1 and under 27.5	.3	[2]	.2	2.4	.2	[2]	-------	2.4	.8	-------	2.2
27.5 and under 30.0	.3	.1	.4	1.8	.2	.1	[2]	1.8	1.0	0.5	3.6
30.0 and under 32.5	.5	.6	.3	4.1	.4	.4	.1	4.1	1.1	2.3	2.9
32.5 and under 35.0	.2	.5	.2	6.5	.1	.2	.1	6.5	1.1	5.0	1.2
35.0 and under 37.5	1.9	2.7	.8	1.6	.8	.7	.3	1.6	10.6	29.4	6.4
37.5 and under 40.0	.9	1.0	.6	6.5	.5	.5	.4	6.5	3.5	7.4	2.8
40.0 and under 42.5	7.8	5.1	3.6	9.6	4.6	3.5	2.7	9.6	32.5	25.1	12.2
42.5 and under 47.5	6.6	6.6	6.7	18.2	4.8	6.0	5.7	18.2	20.7	14.6	16.9
47.5 and under 52.5	9.9	12.4	11.0	12.5	9.9	12.9	10.2	12.5	10.5	6.6	18.4
52.5 and under 57.5	10.4	12.5	13.5	13.1	10.2	13.5	13.3	13.1	12.2	1.5	14.9
57.5 and under 62.5	12.2	12.0	18.1	9.8	13.2	12.6	19.1	9.8	3.5	3.8	6.6
62.5 and under 67.5	10.1	10.2	13.7	3.9	11.4	10.9	14.7	3.9	.3	.9	2.8
67.5 and under 72.5	7.0	7.1	11.4	3.6	7.7	7.5	12.3	3.6	1.8	2.0	3.2
72.5 and under 77.5	6.2	6.9	6.4	.5	7.0	7.4	7.0	.5	-------	-------	.8
77.5 and under 82.5	5.6	5.8	4.9	.2	6.4	6.2	5.4	.2	.2	-------	.3
82.5 and under 87.5	3.8	3.5	3.0	.2	4.2	3.8	3.3	.2	-------	-------	.1
87.5 and under 92.5	4.2	2.8	2.2	.2	4.8	2.9	2.4	.2	-------	.4	-------
92.5 and under 100.0	4.6	4.1	1.3	.1	5.2	4.4	1.5	.1	-------	-------	-------
100.0 and under 110.0	4.4	2.7	.8	.1	5.0	2.8	.9	.1	-------	.5	-------
110.0 and under 125.0	1.8	1.4	.2	.1	2.0	1.5	.2	.1	-------	-------	-------
125.0 and under 150.0	.7	1.4	.2	-------	.8	1.5	.2	-------	-------	-------	-------
150.0 and over	.1	.5	.1	-------	.1	.6	.1	-------	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	11,098	18,227	15,277	3,302	9,823	16,939	13,831	3,302	1,275	1,288	1,446
Average hourly earnings	$0.645	$0.642	$0.620	$0.461	$0.670	$0.658	$0.635	$0.461	$0.447	$0.417	$0.467

[1] No females were employed in plants covered in survey in Southern States.
[2] Less than a tenth of 1 percent.

Differences Between Union and Nonunion Plants

Unionism has existed in the leather industry for many years. At the time of the survey, approximately one-fourth of the workers were employed in union [4] establishments. As may be seen from table 3, the average hourly earnings of all workers were higher in union than nonunion establishments in each case, the difference amounting to 14.2 cents in communities between 20,000 and 100,000, but only 2.4 cents in metropolitan areas with 1,000,000 and over. Differences also appear for each skill group among the males. The only comparison for females is in metropolitan areas of 1,000,000 and over, where the hourly earnings in both union and nonunion plants averaged approximately the same.

[4] As defined in this survey, a union establishment is one in which the majority of employees are covered by either a written or oral agreement with an affiliated union. Plants with an employee organization confined to only one company are included with the nonunion establishments. There were relatively few such plants, although they covered a substantial number of workers in the industry.

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TABLE 3.—*Average hourly earnings of leather workers in the northern region, September 1939, by size of community, unionization, sex, and skill*

Population of community and unionization	Number of workers (weighted)						Average hourly earnings					
	All workers	Males				Females	All workers	Males				Females
		Total	Skilled	Semi-skilled	Unskilled			Total	Skilled	Semi-skilled	Unskilled	
20,000 and under 100,000:												
Union plants	1,252	1,216	111	796	309	36	$0.774	$0.785	$0.818	$0.862	$0.590	(1)
Nonunion plants	4,698	4,456	571	2,860	1,025	242	.632	.640	.694	.658	.560	$0.471
1,000,000 and over:												
Union plants	9,099	8,019	1,345	4,545	2,129	1,080	.691	.722	.872	.746	.572	.462
Nonunion plants	10,554	9,734	1,915	5,169	2,650	820	.667	.683	.853	.684	.558	.463

[1] Not a sufficient coverage to permit the presentation of an average.

Variations by Size of Community [5]

The leather industry is concentrated to a marked extent in the large industrial communities. There was no consistent relationship between hourly earnings and size of community.

Product Differences

Thus far, the analysis has been on the basis of leather manufacturing as a whole, in order to determine the part played in shaping the industry's wage structure by various factors, such as the composition of the labor force as to sex and skill, geographical location, unionization, and size of community. From the competitive standpoint, however, it is important to view differences in wages on the basis of either individual products or groups of products which are manufactured by the various plants in the industry. (See table 4.)

TABLE 4.—*Average hourly earnings of leather workers, September 1939, by product, sex, and skill*

Product	All workers	Males				Females
		Total	Skilled	Semi-skilled	Unskilled	
All products	$0.623	$0.638	$0.773	$0.656	$0.538	$0.445
Side upper leather [1]	.632	.647	.744	.662	.566	.442
Sole, including belting, leather	.567	.567	.649	.584	.528	(3)
Kid upper leather	.632	.680	.865	.649	.523	.411
Calf upper leather	.723	.766	.884	.766	.638	.507
Glove leather [2]	.827	.827	.831	.927	.598	
Other sheepskin leather	.596	.615	.702	.642	.512	.453
Miscellaneous leather	.608	.616	.780	.640	.489	.432

[1] Includes integrated plants engaged in both tanning and finishing of patent leather.
[2] Includes sheep, kid, "cabretta," and cape glove leather.
[3] Not a sufficient number of workers to permit the presentation of an average.

[5] By size of community is meant the size of the metropolitan area within which the plant is located. For places with a population of 100,000 or more, the Bureau utilized the metropolitan districts as defined by the U. S. Bureau of the Census. On the other hand, for communities with less than 100,000, similar metropolitan centers were set up, including not only the population within a particular political subdivision but also that of the nearby areas. Roughly speaking, the metropolitan districts correspond to labor-market areas, within which there is competition among workers for jobs as well as among employers for workers.

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Variations by Occupation and Race

Within each of the broad skill-sex groups, hourly earnings varied conspicuously by occupation. Among the skilled males, average hourly earnings by occupation ranged from 86.2 cents for daubers (final coat, patent leather) to 65.8 cents for miscellaneous maintenance workers.

The highest hourly earnings for any occupation regarded by employers as semiskilled are shown for wet wheelers (emery grinding), whose average amounted to 90.9 cents. At the other extreme among the semiskilled male occupations are the stretching-machine operators, oiling-off machine operators, and hand leather stuffers, spongers, and oilers, whose averages were respectively 52.3, 49.5, and 48.9 cents.

The highest-paid unskilled males are the beam-house haulers, cleaners of equipment, and stampers of hides and leather, who averaged 61–62 cents an hour. For the remaining occupations, the averages ranged from 57.6 cents for tan-house haulers to 45.6 cents for watchmen. The small group of learners averaged 48.8 cents, which was higher than the averages shown for miscellaneous laborers, strippers of leather (other than patent), janitors, and watchmen.

In contrast with the wide range of hourly earnings among the male occupations, those of female workers were confined to rather restricted limits.

Of the total wage earners in the leather industry, 4.1 percent were Negroes. The proportion of colored workers, however, varied from one region to another. The great majority of the Negroes were in semiskilled and unskilled occupations. Thus, the colored workers constituted 4.1 percent of the semiskilled and 7.0 percent of the unskilled males, as against less than 1 percent of the skilled males. Virtually all of the Negroes employed in the industry were males, the number of females amounting to only 2.3 percent.

A careful check of the basic data indicates that, in all plants where whites and Negroes were employed side by side on the same work, there was no difference in their rates of pay. In some establishments, especially in the Southern States, Negro workers were employed exclusively in certain occupations. Owing to the other factors that play a part in the wage structure, however, it is impossible to determine whether or not the Negroes received lower rates of pay than white employees in the same occupations in other plants.

On the other hand, there is no doubt that the colored employees occupied the lower rungs in the wage ladder of the leather industry. As a result, the average hourly earnings of Negroes were lower than those of other workers in the industry. For all colored employees, the average amounted to 52.4 cents, which may be compared with 62.9 cents for all other workers. Taking the two groups in which most of the Negroes were found, the respective averages were 55.7 and 66.1 cents for semiskilled males and 49.5 and 54.6 cents for unskilled males.

Extra Rates for Overtime Work

Extra rates were provided for overtime work in practically all establishments covered in the survey. The practices followed by the different plants, however, varied considerably. In the majority of establishments, the practice conformed with the provisions of the

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Fair Labor Standards Act, and time and one-half was provided for all work in excess of 44 hours per week.

The figures herein presented for the leather industry have been based on regular rates only. A substantial number of employees in the industry, however, worked overtime during the pay-roll period covered by the survey, for which they were paid extra rates. The latter no doubt increased considerably the hourly earnings of some individual employees. On the other hand, if the earnings due to the extra rates paid for overtime work are distributed among all workers in the industry, the average is raised by only one-half of a cent.

Weekly Hours and Earnings

About two-thirds of the establishments in the leather industry were operating on an 8-hour day and 40-hour week schedule in September 1939. A substantial number of plants, however, had a full-time work-week of 44 hours. Very few establishments deviated from either the 40- or 44-hour week.

It should be noted that the full-time hours indicated above are those that applied to the majority of employees in a given plant. Maintenance, powerhouse, and service workers frequently had different scheduled hours from those of the main body of wage earners.

For all wage earners, the actual weekly hours worked in the leather industry averaged 39.1 in September 1939. According to the distribution in table 5, three-tenths (30.2 percent) of the total labor force worked less than 40 hours during the week scheduled, most of these employees being on short time due to absence from work, labor turn-over, and other causes.

The average weekly hours varied little geographically, the averages for all workers amounting to 39.1 in the Northern and 39.5 in the Southern States.

TABLE 5.—*Percentage distribution of leather workers,*[1] *by actual weekly hours, sex, and skill, September 1939*

Weekly hours	All workers	Males				Females
		Total	Skilled	Semi-skilled	Un-skilled	
Under 24 hours	4.4	4.3	1.9	4.3	5.3	5.9
24 and under 32 hours	6.1	5.9	4.0	6.4	5.8	8.1
32 and under 36 hours	10.1	10.2	7.4	11.4	9.2	9.1
36 and under 40 hours	9.6	9.3	7.3	10.5	8.2	12.0
Exactly 40 hours	36.1	35.5	40.5	33.4	36.7	43.6
Over 40 and under 44 hours	11.9	12.3	8.7	12.5	13.5	8.5
Exactly 44 hours	11.6	12.0	17.9	11.2	10.8	6.3
Over 44 and under 48 hours	4.0	3.9	4.6	3.9	3.7	4.8
48 and under 52 hours	2.7	2.8	3.9	2.5	2.8	1.6
52 and under 56 hours	1.4	1.5	1.8	1.5	1.5	
56 hours and over	2.1	2.3	2.0	2.4	2.5	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly hours	39.1	39.2	40.5	39.0	39.1	37.4

[1] Exclusive of 232 workers for whom hours were not reported.

Average weekly earnings of all workers in the leather industry, exclusive of earnings due to the extra rates for overtime work,[6]

[6] If the earnings due to the extra rates for overtime work were included, it would increase the average weekly earnings of all workers in the industry by only 20 cents.

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amounted to $24.42 in September 1939. Like hourly earnings, however, weekly earnings varied conspicuously among the different skill-sex groups. For male employees, the averages were $31.33 for skilled, $25.62 for semiskilled, and $21.18 for unskilled workers. The weekly earnings of all male workers averaged $25.14, compared with only $16.64 for female employees. (See table 6.)

In the Northern States the average weekly earnings of all workers were $24.82. The averages varied little among the several districts in the Northern States, being, respectively, $25 for the New England, $24.84 for the Middle Atlantic, and $24.67 for the Middle Western States (including California). The weekly earnings in the Southern States averaged only $18.20.

TABLE 6.—*Percentage distribution of leather workers,*[1] *by average weekly earnings, sex, and skill, September 1939*

Weekly earnings [2]	All workers	Males				Females
		Total	Skilled	Semi-skilled	Un-skilled	
Under $5	1.1	0.9	0.2	0.8	1.7	2.2
$5 and under $10	2.3	1.8	.9	1.3	3.0	7.6
$10 and under $15	6.3	4.8	1.4	4.3	7.6	21.6
$15 and under $20	17.6	15.0	5.2	12.3	25.0	44.3
$20 and under $25	27.7	28.6	10.7	27.4	39.5	20.2
$25 and under $30	23.8	25.7	26.9	29.9	17.0	3.6
$30 and under $35	12.5	13.7	23.3	15.9	4.9	.3
$35 and under $40	5.7	6.2	18.0	5.6	1.3	.1
$40 and under $45	1.7	1.8	7.3	1.4	[3]	.1
$45 and under $50	.7	.7	2.6	.6	[3]	----
$50 and over	.6	.8	3.5	.5	[3]	----
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly earnings	$24.42	$25.14	$31.33	$25.62	$21.18	$16.64

[1] Exclusive of 232 workers for whom weekly earnings were not reported.
[2] Excludes earnings at extra rates for overtime.
[3] Less than a tenth of 1 percent.

Luggage and Miscellaneous Leather Products Industries—Hourly Earnings, 1939[1]

This report covers luggage (trunks, suitcases, and brief cases) and certain miscellaneous leather products included by the Census of Manufactures under "leather goods—small articles" and "leather goods not elsewhere classified." The information presented is based on a period subsequent to October 24, 1939, when the hourly minimum of 30 cents and the maximum workweek of 42 hours became effective under the provisions of the Fair Labor Standards Act of 1938. Under these provisions, all workers employed in establishments engaged in interstate commerce who work in excess of 42 hours a week were entitled to time and one-half for overtime. Unless otherwise indicated, the hourly earnings shown in this article are based on regular rates. In other words, they do not reflect the earnings from the extra rates paid for overtime work.

[1] Abstract of article in the Monthly Labor Review for October 1940, prepared by J. Perlman, H. O. Rogers, P. L. Jones, and John F. Laciskey, of the Bureau of Labor Statistics.

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Luggage Industry

The luggage manufacturing industry, as defined by the Census of Manufactures, embraces establishments engaged wholly or principally "in the manufacture of trunks, suitcases, brief cases, sample cases, traveling bags, satchels, Boston bags, hat boxes, and related products, regardless of the materials from which they are made." Thus defined, the industry accounts for a wide variety of products, and even for the same product there are considerable differences in appearance, quality, and price.

Luggage manufacturing is an industry composed of a relatively large number of small concerns. The Census of Manufactures shows that in 1937 there were 277[2] establishments engaged primarily in the making of luggage. During the year, these plants employed an average of 8,708 wage earners, or approximately 31 workers per establishment. In fact, virtually two-thirds of the plants employed not more than 20 workers and over one-fourth had not more than 5 wage earners. By contrast, only 15 establishments reported over 100 workers.

One of the distinctive features of the industry is its marked concentration in the Northern States. Luggage manufacturing is also heavily concentrated in the large metropolitan areas with a population of 1,000,000 and over. New York and Chicago are particularly important centers, each accounting for a major fraction of the industry. Other centers of importance are Philadelphia, St. Louis, and Detroit. On the Pacific Coast, most of the plants are located in San Francisco and Los Angeles. Proximity to the principal labor and consumer markets has been the chief factor determining the location of the industry.

Largely due to the small size of the average luggage manufacturing establishment, owner management is quite prevalent in the industry. Not only is corporate ownership much less common than in other industries, but the great bulk of the industry's output is accounted for by single-plant companies. Multiunit concerns are exceptional.

The manufacture of luggage is essentially an industry of semiskilled workers. Taking the industry as a whole, more than three-fifths (61.7 percent) of the labor force were classed as semiskilled. Women constitute a substantial proportion of the industry's working force. Of the total wage earners employed by the plants included in this survey, 34.2 percent were females. For the most part, women were employed in the lining and finishing departments. The overwhelming majority of the women were semiskilled and hardly any were classed as skilled.

In recent years, considerable progress has been made by unions in organizing the employees in the luggage industry. At the time of this survey, approximately three-fifths of the workers were employed in union establishments.[3] The unions are particularly strong in certain of the more important producing centers. In the New York metropolitan area, for example, more than two-thirds of the establish-

[2] Includes only plants with an annual production valued at $5,000 and over.

[3] A union establishment, as defined in this survey, is one in which the majority of the employees are covered by either a written or oral agreement with an affiliated union. Plants with employee-representation plans were included with the nonunion establishments. Of the plants covered in the present survey, however, only one reported an employee-representation plan.

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ments included in the survey were unionized. The unions were likewise strong in Chicago, Philadelphia, and San Francisco. In many other localities, on the other hand, very little headway has been made by the unions.

Employment in the luggage industry is influenced by the seasonal character of demand. Ordinarily, the high point of production is reached in the late summer or early fall, and the slack period occurs in the winter and early spring.

Average Hourly Earnings

The material presented in this report is based on a study of a carefully selected sample of 152 plants, each of which employed 3 or more wage earners. All of the larger plants in the industry were included—i. e., those employing approximately 100 workers or more—and about half of the smaller ones. In order to avoid underrepresentation of the smaller plants, they have been given a weight of 2 in all tabulations.

Although time workers predominated by a wide margin, straight piece rates were reported for more than one-fourth of the wage earners. Piece-rate workers were most frequently found among the skilled and semiskilled occupations. Hardly any of the unskilled workers were paid piece rates.

A production-bonus system of wage payment was reported by only a single plant.

Hourly earnings of all wage earners in the luggage industry averaged 52.4 cents in November and December 1939. Between individual establishments, however, the earnings varied conspicuously. In fact, the extreme spread was from 13.8 cents to $1.018 an hour. Despite this wide diversity, the average hourly earnings in almost two-thirds of the plants were restricted to the relatively narrow limits of 35 and 60 cents. These employed virtually three-fourths of the workers in the industry. The plants averaging under 35 cents employed less than 6 percent of the wage earners, and those averaging 60 cents and over accounted for more than one-fifth of the employees.

The broad dispersion of wages in the luggage industry is further emphasized by table 1, which presents the percentage distribution of the labor force according to average hourly earnings.

A large part of the dispersion of hourly earnings in the luggage industry may be explained by the sharply contrasting wage levels of the different groups of employees. Compared with an average of 70.9 cents for skilled males, semiskilled males averaged 55.6 cents and the unskilled males 38.8 cents. The hourly earnings of the female workers, by contrast, averaged 40.5 cents for semiskilled and 34.2 cents for unskilled. The extreme spread between the highest- and lowest-paid groups was thus 36.7 cents.

Influence of plant location and unionization.—In contrast with many other industries, there are no well-defined geographical differences in hourly earnings in the luggage industry. It is true that all establishments averaging 55 cents and over were located in the Northern States, but this region likewise accounted for all plants that averaged under 37.5 cents. Both the highest- and lowest-paid concerns were distributed widely on a geographical basis.

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TABLE 1.—*Percentage distribution of luggage workers by average hourly earnings, sex, and skill, November and December 1939*

Average hourly earnings (in cents)	All workers				Males				Females		
	Total	Skilled	Semi-skilled [1]	Un-skilled	Total	Skilled	Semi-skilled	Un-skilled	Total	Semi-skilled [1]	Un-skilled
Under 25.0	0.1	0.2	0.1	0.1	0.1	0.2	-------	0.2	0.1	0.1	-------
25.0 and under 27.5	.4	.1	(2)	2.5	.4	.1	0.1	1.9	.5	-------	4.1
27.5 and under 30.0	.4	.1	.2	2.0	.6	.1	.3	2.5	.2	.2	.5
Exactly 30.0	10.6	.8	10.6	26.5	6.6	.8	5.2	23.4	18.4	16.3	34.9
30.1 and under 32.5	2.5	.5	2.9	4.0	1.1	.5	.7	3.9	5.1	5.2	4.3
32.5 and under 35.0	3.6	.8	4.2	5.5	1.9	.8	1.9	4.5	6.8	6.6	7.8
35.0 and under 37.5	9.1	1.8	10.3	15.9	5.7	1.8	5.6	14.7	15.6	15.4	19.0
37.5 and under 40.0	7.5	1.1	8.6	13.3	4.7	1.1	5.2	11.3	13.0	12.2	18.5
40.0 and under 42.5	7.7	2.8	9.3	8.7	5.9	2.8	6.8	10.1	11.0	11.9	4.8
42.5 and under 47.5	11.7	6.8	13.9	9.3	11.0	6.8	13.9	10.9	12.8	13.8	5.1
47.5 and under 52.5	8.0	8.7	8.4	5.3	9.1	8.7	10.2	6.9	5.9	6.5	1.0
52.5 and under 57.5	7.5	9.0	8.0	3.0	9.2	9.0	10.8	4.2	4.4	5.0	-------
57.5 and under 62.5	5.5	7.4	5.7	2.0	7.4	7.4	8.9	2.7	2.1	2.3	-------
62.5 and under 67.5	5.7	10.2	5.1	.9	7.8	10.2	8.2	1.3	1.7	1.9	-------
67.5 and under 72.5	3.7	7.0	3.2	.7	5.3	7.0	5.6	1.0	.7	.8	-------
72.5 and under 77.5	3.1	6.6	2.4	.3	4.4	6.6	4.1	.5	.5	.6	-------
77.5 and under 82.5	2.0	4.9	1.4	-------	2.9	4.9	2.3	-------	.4	.4	-------
82.5 and under 87.5	2.5	6.5	1.6	-------	3.6	6.5	2.6	-------	.4	.4	-------
87.5 and under 92.5	2.2	5.5	1.5	-------	3.3	5.5	2.7	-------	.2	.2	-------
92.5 and under 100.0	2.5	6.6	1.5	-------	3.6	6.6	2.7	-------	.2	.2	-------
100.0 and under 110.0	2.3	7.9	.7	-------	3.4	7.9	1.3	-------	(2)	(2)	-------
110.0 and under 120.0	.6	2.0	.1	-------	.8	2.0	.3	-------	-------	-------	-------
120.0 and under 130.0	.4	1.2	.2	-------	.6	1.2	.4	-------	-------	-------	-------
130.0 and over	.4	1.5	.1	-------	.6	1.5	.2	-------	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	9,709	2,285	5,993	1,431	6,393	2,285	3,072	1,036	3,316	2,921	395
Average hourly earnings	$0.524	$0.709	$0.485	$0.376	$0.584	$0.709	$0.556	$0.388	$0.398	$0.405	$0.342

[1] Includes 126 females who were reported as skilled. [2] Less than a tenth of 1 percent.

Furthermore, most of the highest-paid establishments were union,[4] while all but one of the lowest-paid plants were nonunion, thus indicating the unionization is more important than geographical location as a factor in the wage structure. The southern establishments included in the survey (both union and nonunion) were in the intermediate wage classes, averaging more than 37.5 cents but less than 55 cents.

Average hourly earnings of wage earners employed in plants that were operating under union agreements were considerably higher than those of workers employed in nonunion establishments. (See table 2.)

TABLE 2.—*Average hourly earnings of luggage workers, November and December 1939, by sex, skill, and unionization*

Sex and skill	Average hourly earnings			Number of workers (weighted)		
	All plants	Union plants	Non-union plants	All plants	Union plants	Non-union plants
All workers	$0.524	$0.579	$0.458	9,709	5,368	4,341
Skilled	.709	.781	.603	2,285	1,382	903
Semiskilled [1]	.485	.537	.430	5,993	3,178	2,815
Unskilled	.376	.388	.361	1,431	808	623
Males	.584	.634	.514	6,393	3,818	2,575
Skilled	.709	.781	.603	2,285	1,382	903
Semiskilled	.556	.606	.492	3,072	1,787	1,285
Unskilled	.388	.395	.377	1,036	649	387
Females	.398	.433	.368	3,316	1,550	1,766
Semiskilled [1]	.405	.442	.373	2,921	1,391	1,530
Unskilled	.342	.358	.332	395	159	236

[1] Includes 126 females who were reported as skilled.

[4] In fact, all except 1 of the establishments averaging 65 cents and over were union.

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Even within restricted areas hourly earnings varied sharply. In the New York metropolitan district, for example, average hourly earnings of the union plants ranged from 35.8 cents to over $1, and in the nonunion establishments the range was from 33.7 to 67.4 cents. Similarly, in the Chicago metropolitan area the spread for union plants was from 42.8 to 81.7 cents, and for nonunion establishments it was from 30.4 to 56.9 cents.

The difference in hourly earnings in favor of communities of 1,000,000 and over is largely a reflection of the high-wage level in the New York metropolitan area, especially in union plants. A similarly high wage level was found in the Philadelphia metropolitan district, where most of the establishments included in the survey were also unionized.[5] In the Chicago metropolitan area, on the other hand, the average hourly earnings were below those found in communities of less than 1,000,000, especially for union establishments.

Virtually all of the plants covered by the survey in San Francisco were union, and all of the plants included in Los Angeles were nonunion. This is reflected in the average hourly earnings of the two metropolitan areas, the respective figures being 58.7 and 44.8 cents.

Product differences.—As already indicated, a wide variety of products are manufactured by the luggage industry. Of the total number of workers included in the survey, almost three-fifths (59.0 percent) were found making suitcases. There were 10.8 percent working on trunks, 9.8 percent on brief cases, 3.0 percent on sample cases, and 17.4 percent on various other luggage.[6]

TABLE 3.—*Average hourly earnings of luggage workers, November and December 1939, by product, sex, and skill*

Product	All workers				Males				Females		
	Total	Skilled	Semi-skilled [1]	Unskilled	Total	Skilled	Semi-skilled	Unskilled	Total	Semi-skilled [1]	Unskilled
Average hourly earnings											
All products	$0.524	$0.709	$0.485	$0.376	$0.584	$0.709	$0.556	$0.388	$0.398	$0.405	$0.342
Trunks	.530	.582	.525	.433	.540	.582	.546	.433	.417	.417	------
Suitcases	.547	.744	.500	.369	.609	.744	.576	.374	.417	.420	.343
Brief cases	.493	.709	.460	.382	.536	.709	.503	.393	.384	.393	.355
Sample cases	.561	.679	.505	[2]	.625	.679	.597	[2]	.406	.399	[2]
Other luggage	.457	.685	.437	.352	.549	.685	.527	.385	.359	.367	.326
Number of workers											
All products	9,709	2,285	5,993	1,431	6,393	2,285	3,072	1,036	3,316	2,921	395
Trunks	1,048	382	504	162	959	382	415	162	89	89	------
Suitcases	5,722	1,385	3,623	714	3,773	1,385	1,797	591	1,949	1,826	123
Brief cases	953	184	552	217	661	184	326	151	292	226	66
Sample cases	292	112	136	44	202	112	70	20	90	66	24
Other luggage	1,694	222	1,178	294	798	222	464	112	896	714	182

[1] Includes 126 females (1 trunk worker, 46 suitcase workers, 13 brief-case workers, 6 sample-case workers, and 60 workers employed in the manufacture of other luggage) reported as skilled.
[2] Coverage not sufficient to permit the presentation of an average.

[5] The average for all establishments in Philadelphia amounted to 63.6 cents, as compared with 64.6 cents in New York. Due to the fact that only 2 of the plants covered in the Philadelphia area were nonunion, no separate figures can be given for union and nonunion establishments.
[6] Other luggage includes Boston bags, zipper bags, radio cases, hat boxes, physician's bags, instrument cases, etc.

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Occupational differences.—An analysis of hourly earnings by occupations brings to light pronounced differences within each of the skill-sex groups. Of the skilled males, working foremen with an average of 80.4 cents an hour were the highest-paid employees. Ranking next were the suitcase assemblers, with an average of 76.1 cents. Other skilled males with relatively high earnings include heavy-sewing-machine operators (75.9 cents) and bag assemblers (73.7 cents). Trunk assemblers (trimming and finishing), with an average of 54.0 cents, had the lowest average of any of the skilled males.

The highest hourly earnings for the semiskilled males are shown for sewing-machine operators (not specified), who averaged 67.8 cents. For the unskilled males, the range of average hourly earnings was from 32.2 cents for errand boys to 42.6 cents for wrappers and packers. The great majority of the unskilled occupations, however, averaged between 37 and 40 cents an hour.

The maximum spread in the occupational averages of females was only 13.2 cents, the highest average (45.6 cents) being shown for light-sewing-machine operators, a semiskilled occupation, and the lowest average (32.4 cents) for trimmers, an unskilled occupation.

Extra Rates for Overtime Work

The great majority of the establishments covered in the survey of the luggage industry paid extra rates for overtime work, but the practices followed differed among the various plants.

The figures presented thus far have been based on regular rates only. However, if the earnings due to the extra rates paid for overtime work were distributed among all wage earners in the industry, they would affect the averages only to a limited extent. Including the extra rates paid for overtime work, the average hourly earnings amounted to 53.6 cents for all workers, 60.1 cents for males, and 40.2 cents for females, which may be compared respectively with 52.4, 58.4, and 39.8 cents, as based on regular rates only.

Miscellaneous Leather Products

Among the products included in the survey are billfolds and wallets, key cases, cigar and cigarette cases, coin cases, calling-card cases, etc., which the Census of Manufactures classified under "leather goods—small articles." The survey also covered vanity sets, desk sets, dog furnishings, handles, corners, and straps for luggage, burnt and embossed leather, etc., which are classified by the Census of Manufactures under "leather goods not elsewhere classified." The above articles were included in the survey whether they were made of leather or materials other than leather.

Establishments that were engaged wholly or principally in the manufacture of belts for personal wear, which are classified by the Census of Manufactures under "leather goods not elsewhere classified," were not included in the survey. The survey also omitted the women's handbags and purses industry, which is a separate classification in the Census of Manufactures. On the other hand, the survey included in the miscellaneous products industry, camera cases, which are classified by the Census of Manufactures with the luggage industry.

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With the plants manufacturing belts for personal use excluded, the miscellaneous leather products industry is somewhat smaller than the luggage industry. Although precise figures are not available, the industry probably provides employment for over 7,000 wage earners.

The miscellaneous leather products industry resembles the luggage industry in several respects. Like the luggage industry, the establishments making miscellaneous leather articles are comparatively small, with very few of the plants employing as many as 100 wage earners. Moreover, the geographical distribution of the two industries is similar.

Operations in the miscellaneous leather products industry are subject to sharp seasonal changes. Generally speaking, the busiest season occurs in the early fall in anticipation of the holiday trade.

Semiskilled workers accounted for a substantial majority of the operatives (approximately two-thirds) employed in the industry. More than three-fifths of the workers were women. The predominance of females is explained largely by the high production of light sewing-machine operations. Moreover, female workers accounted for more than three-fourths of the unskilled occupations. By contrast, virtually all of the skilled occupations were held by males.

Unionism has made less headway in the miscellaneous leather products industry than in the luggage industry. At the time of the survey, only about one-seventh of the workers in miscellaneous leather products were employed in plants operating under union agreements. All of the union establishments, moreover, were located in the metropolitan areas with a population of 1,000,000 and over.

Average Hourly Earnings

Despite the predominance of time workers, most of the plants included in the survey employed some wage earners on a piece-rate basis. The piece-rate workers constituted approximately one-fifth of the total labor force. Among the occupations that had a substantial number of workers who were paid piece rates were handle makers, clicking-machine cutters, hand creasers, creasing- and embossing-machine operators, riveting-machine operators, spray-gun operators, sewing-machine operators, hand lacers, and pasters. Most of these occupations are classed as semiskilled.

Production-bonus systems of wage payment were reported by only a few establishments. The workers employed under this system of remuneration accounted for less than 2 percent of the total labor force.

In the miscellaneous leather products industry,[7] hourly earnings averaged 41.9 cents in the latter part of 1939. As in the luggage industry, however, hourly earnings varied considerably among plants, the averages ranging from 29.0 to 86.5 cents. Between these extremes the heaviest concentration was found in the 10-cent range of 32.5 and under 42.5 cents.

Although, roughly, 2 out of every 5 wage earners in the miscellaneous leather products industry were paid 40 cents an hour and over, only about 1 out of every 10 earned 62.5 cents and over, and no more than a small fraction (1.6 percent) received $1.00 and over.

[7] In this industry, as in the luggage industry, all of the larger plants and about half of the smaller plants were studied. Figures for the smaller plants were then weighted upward. The sample studied included 103 plants, each of which employed 3 or more wage earners.

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TABLE 4.—*Percentage distribution of miscellaneous leather-products workers by average hourly earnings, sex, and skill, November and December 1939*

Average hourly earnings (in cents)	All workers				Males				Females		
	Total	Skilled	Semi-skilled[1]	Un-skilled	Total	Skilled	Semi-skilled	Un-skilled	Total	Semi-skilled[1]	Un-skilled
Under 25.0	0.7	0.2	0.1	2.8	0.5	0.2	0.1	2.7	0.8	0.1	2.8
25.0 and under 27.5	1.2	-------	.7	3.2	.3	-------	-------	2.4	1.8	1.1	3.5
27.5 and under 30.0	.8	.6	.6	1.7	.4	.6	.1	1.1	1.1	.9	1.8
Exactly 30.0	29.3	2.7	27.7	50.0	16.5	2.7	20.0	38.2	37.6	31.6	53.6
30.0 and under 32.5	3.3	1.0	3.9	2.9	2.0	1.0	2.0	4.3	4.2	4.8	2.5
32.5 and under 35.0	5.1	1.5	5.6	5.9	3.3	1.5	4.1	4.3	6.4	6.3	6.4
35.0 and under 37.5	16.2	2.8	18.3	17.8	6.4	2.8	7.2	12.1	22.5	23.5	19.5
37.5 and under 40.0	6.4	4.0	7.4	4.8	7.0	4.0	8.4	8.8	6.0	6.9	3.6
40.0 and under 42.5	6.7	3.6	8.3	3.6	6.3	3.6	7.7	6.7	7.0	8.5	2.6
42.5 and under 47.5	7.5	7.3	9.0	3.3	9.3	7.3	10.7	8.3	6.4	8.1	1.8
47.5 and under 52.5	5.7	9.3	6.1	2.4	9.8	9.3	11.1	5.4	3.1	3.7	1.4
52.5 and under 57.5	3.5	8.7	3.4	.8	6.5	8.7	6.2	2.4	1.6	2.1	.3
57.5 and under 62.5	2.4	6.4	2.2	.4	4.5	6.4	4.1	1.3	1.0	1.3	.2
62.5 and under 67.5	2.8	10.6	2.1	.1	6.4	10.6	5.1	.5	.4	.6	-------
67.5 and under 72.5	1.4	6.2	.9	.1	3.5	6.2	2.7	.5	[2]	[2]	-------
72.5 and under 77.5	1.7	8.0	1.0	.1	4.2	8.0	2.9	.5	.1	.2	-------
77.5 and under 82.5	.8	2.9	.7	-------	2.0	2.9	1.9	-------	[2]	.1	-------
82.5 and under 87.5	1.2	5.8	.6	.1	2.9	5.8	1.7	.5	[2]	.1	-------
87.5 and under 92.5	1.0	6.4	.3	-------	2.5	6.4	.7	-------	[2]	.1	-------
92.5 and under 100.0	.7	3.8	.4	-------	1.8	3.8	1.0	-------	[2]	[2]	-------
100.0 and under 110.0	.8	3.9	.5	-------	2.1	3.9	1.6	-------	-------	-------	-------
110.0 and under 120.0	.3	1.5	.1	-------	.7	1.5	.3	-------	-------	-------	-------
120.0 and under 130.0	.3	1.7	.1	-------	.7	1.7	.3	-------	-------	-------	-------
130.0 and over	.2	1.1	[2]	-------	.4	1.1	.1	-------	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	7,341	943	4,826	1,572	2,891	943	1,575	373	4,450	3,251	1,199
Average hourly earnings	$0.419	$0.652	$0.401	$0.329	$0.520	$0.652	$0.478	$0.360	$0.351	$0.363	$0.319

[1] Includes 131 females who were reported as skilled.
[2] Less than a tenth of 1 percent.

As in the luggage industry, a large part of the dispersion of hourly earnings in the miscellaneous leather products industry is explained by the variations in the wage levels of the different groups of workers. For the male employees, the averages were 65.2 cents for skilled, 47.8 cents for semiskilled, and 36.0 cents for unskilled. Earnings of female workers averaged 36.3 cents for semiskilled and 31.9 cents for unskilled.

Hourly earnings of 62.5 cents and over were confined almost exclusively to the skilled and semiskilled males. Only 6.0 percent of the skilled males earned below 35 cents an hour, and 12.8 percent received less than 40 cents. For semiskilled males, the respective figures were 26.3 and 41.9 percent.

All of the union establishments covered in the survey were located in the New York, Chicago, and Philadelphia metropolitan districts. Consequently, any comparison in hourly earnings between union and nonunion plants must be confined to these areas.

Restricted in this way, the hourly earnings in union establishments were higher than those in nonunion plants. Against an average of 50.0 cents for all wage earners in union establishments in New York, Chicago, and Philadelphia, the average for all workers in nonunion plants in the same communities was 41.3 cents.

In the New York metropolitan area, furthermore, there was a sufficient number of union and nonunion plants to make a comparison, and the advantage was with the union establishments. Thus, the

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average hourly earnings for all workers was 50.0 cents in union plants, as against 41.4 cents for nonunion concerns.

As in the luggage industry, there are no well-defined geographical differences in hourly earnings in the miscellaneous leather products industry. In each of the regions where the industry is located, there is considerable scattering of the average hourly earnings in the various plants. Both the high- and low-paid establishments are widely dispersed geographically. Moreover, even within restricted areas, hourly earnings vary conspicuously.

Unlike the luggage industry, there is no evidence of any relationship between size of community and hourly earnings in the miscellaneous leather products industry.

Occupational differences.—In the miscellaneous leather products industry the highest average—82.0 cents—was for working foremen. Hourly earnings of the other occupational groups among males lagged far behind.

The occupational averages for the semiskilled males ranged from 39.4 to 62.1 cents an hour, the highest average being reported for sewing-machine operators and the lowest for handle makers' helpers. For most of the occupations, however, the spread was from 40 to 50 cents.

With the single exception of edge colorers, who averaged 45.3 cents an hour, all of the unskilled male occupations averaged under 40 cents. Hourly earnings of less than 35 cents were likewise reported for floor workers (including general helpers), hand pasters' helpers, and the miscellaneous unskilled males.

The occupational averages of females ranged from 26.3 cents an hour for learners to 45.4 cents for working foreladies. Hourly earnings above the 40-cent level, however, were restricted exclusively to the few females who were classed as skilled.

Extra Rates for Overtime Work

By far the great majority of the plants included in the survey of the miscellaneous leather products industry paid time and one-half for all work in excess of 42 hours a week, which conforms with the provisions of the Fair Labor Standards Act. Several establishments, however, were more liberal in their overtime provisions. Some plants paid for overtime work on a pro rata basis, and a few establishments prohibited overtime work altogether.

The figures presented are based on regular rates only, the averages amounting to 41.9 cents for all workers in the industry, 52.0 cents for males, and 35.1 cents for females. Including the extra rates paid for overtime work, the respective averages are 42.8, 53.3, and 35.7 cents.

Lumber and Timber Products Industry—Hourly Earnings, 1939-40[1]

In the winter of 1939–40, workers in the lumber and timber products industry earned an average of 50.1 cents per hour. As a result

[1] Abstract of an article by Harry Ober, Bureau of Labor Statistics, in the Monthly Labor Review for July 1941.

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of the 30-cent minimum wage, which became effective on October 24, 1939, nearly one-third of all workers averaged from 30 to 32.5 cents. Three percent earned less than 30 cents, and the remainder were widely scattered among various higher wage classes. Only about 1 worker out of 10 received as much as 77.5 cents per hour.

The scope of the industry covered by the Bureau's survey is reliably indicated by the definition adopted in the code of fair competition under the N. R. A., which included "logs, poles, and piling; sawn lumber and products of planing mills operated in conjunction with sawmills; shingles; woodwork (millwork) including products of planing mills operated in conjunction with retail lumber yards; hardwood flooring; veneers; plywood; kiln-dried hardwood dimensions; lath; sawed boxes, shooks and crates; plywood, veneer, and wirebound packages and containers." As thus defined, the industry involves considerably more than the mere conversion of timber into lumber and other basic products. A narrower definition than the above, however, would be unrealistic, in view of the marked tendency for sawmills in recent years to perform certain wood-reworking processes, such as the manufacture of millwork, flooring, and dimension stock. The manufacture of finished furniture, it should be noted, is not included in this industry.

Method and Scope of Study

The material on which the Bureau's study is based was transcribed from actual pay-roll records by the Bureau's trained field representatives. The plants included in the sample were selected with great care, in order that they might faithfully represent this complex industry. Particular pains were taken to include an appropriate number of remote and isolated logging camps and sawmills, as well as those most easily accessible.

It was impracticable, however, to include numerous very small plants in the sample, and, for the most part, the survey was limited to establishments employing 20 or more workers.[2] In the case of custom-millwork plants and single mills, establishments having as few as 10 workers were included, since a large part of the product of these branches is manufactured in small plants. On the other hand, an excessive proportion of the largest plants were covered, but only a sample of the workers in each such plant was selected. In making such selection within individual establishments special effort was taken to obtain a balanced cross section of the labor force.

Information was obtained for a total of 116,833 workers in 1,387 establishments. The sample constituted over one-fourth of the workers in the three principal census classifications, three-eighths of the workers in the veneer-basket industry, and somewhat more than two-fifths of the workers in the plywood industry. Of the total number of establishments in the sample, 20.4 percent were in the West, 35.2 percent were in the North, and 44.4 percent in the South; while of the workers 31.5 percent were in the West, 22.6 percent were in the North, and 45.9 percent in the South.

[2] The results of a check survey help to indicate the level of wages among small sawmills. These results are presented briefly in a later part of this article.

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Production Units and Branches

To discuss the various branches of this industry in terms of "establishments" is not entirely satisfactory, since many establishments engage in two or more distinct and important stages of production. Thus a very substantial proportion of all planing-mill products are produced in establishments usually classified not as planing mills but as sawmills. In order to indicate the scope of the various processes more accurately and to group together the workers engaged in similar types of work, the present study has distinguished separate "production units" within establishments. The employees of a small planing mill operated in connection with a large sawmill are thus classified as planing-mill employees.

Because of the special character of the labor force and the distinct processes involved in the manufacture of veneer products, the production of such articles has been excluded from the major industry. The three branches of the veneer and veneer-products group are discussed separately at the end of this article. This survey covered 119 production units in the three branches combined.

The "lumber and timber-products industry," excluding veneer and veneer products, is represented by 2,129 production units in 10 distinct branches. In the largest of these branches—sawmilling—625 production units and 34,159 workers were studied; in the smallest—shingle manufacture—the survey covered only 27 production units and 1,175 workers.

Nature of Data Obtained

As is customary in the Bureau's studies of this type, full information was secured regarding the sex, color, and occupation of each worker studied, and his hours of work and earnings during a representative pay-roll period. The hours referred to in the present report consist of hours actually worked, whether paid for at straight time or punitive overtime rates. Although information regarding overtime was secured in the study of this industry, it was found through a spot check that the amount of overtime involved at the time of the survey was extremely minor and did not warrant separate analysis. Total earnings include the payment of bonuses, payments for overtime at penalty rates, and the estimated value of board and lodging wherever they were provided. In general, few workers were on piece rates, and still fewer received bonuses or other incentives; the bulk of the workers were on a straight time-payment basis.

Period covered.—The survey of the lumber and timber products industry was started early in September 1939 and continued until April 1940. Practically all of the plants scheduled in the West and North provided data for a pay-roll period prior to October 24, 1939, when the minimum wage under the Fair Labor Standards Act was 25 cents an hour and the maximum hours of work were 44 per week. The field work in the South, however, was not started until late in 1939, and most of the schedules for the South were for a pay-roll period after October 24, 1939; they therefore reflect the influence of the minimum hourly wage of 30 cents and the maximum weekly hours of 42 per week, which became effective on this date. Because of this fact, the

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data for the West and the North are not entirely comparable with those for the South, and in the presentation of summaries for the country as a whole have required minor adjustments. These adjustments have involved the assumption that all workers in the West and the North who earned under 30 cents when the survey was made were raised to the wage class "30 cents and under 32.5 cents per hour" soon afterward.[3] Although it has been impracticable to extend the adjustments to subregions and other minor divisions of the industry, care has been taken to avoid misleading comparisons of data representing different periods.

Hourly Earnings

The United States as a Whole

In the 10 branches which are considered in the present report to constitute the lumber and timber products industry hourly earnings in the winter of 1939–40 averaged 50.1 cents. This average is based on schedules covering 105,362 workers in 1,297 establishments. In the summary figures for the country as a whole, presented in table 1, data for the West and North have been adjusted to make allowance for changes in subminimum rates following the establishment of the 30-cent minimum on October 24, 1939. This adjustment has involved raising to the wage class "30 and under 32.5 cents" the 0.1 percent of the western workers and the 10.9 percent of the northern workers originally reported as receiving less than 30 cents an hour. It has had the effect of raising the over-all average for the West by only 0.1 cent and that for the North by only 1 cent.

It will be observed that nearly one-third (32.7 percent) of the workers in the industry had earnings of 30 and under 32.5 cents per hour; of these the great majority received exactly 30 cents.[4] Only 3 percent of the workers received less than the minimum.[5] Of the remainder of the workers, about one-sixth earned from 32.5 to 42.5 cents per hour; nearly one-fifth earned from 42.5 to 62.5 cents per hour; nearly another fifth earned from 62.5 to 82.5 cents per hour; and one-tenth had earnings of 82.5 cents per hour or more.

Average hourly earnings in individual branches of the industry in the winter of 1939–40 varied from a low of 36.6 cents in cooperage-stock production to a high of 94.8 cents in the manufacture of shingles. These extremely low and extremely high earnings, however, involved only small proportions of the total number of workers in the industry. The two branches, logging and sawmilling, which together account for

[3] That this assumption is fairly reasonable is indicated by a spot check made by the Bureau in the latter part of 1940. On the basis of the returns of a mailed inquiry it appears that relatively few workers in the lumber industry in the North were then receiving less than 30 cents an hour. Replies were received from 103 firms which in 1939 paid some of their workers less than 30 cents an hour. Only 11 of the reporting firms were still paying any of their workers less than 30 cents, and 10 of these 11 were engaged exclusively in intrastate commerce. Only 1 worker in the remaining plant was reported to be earning less than 30 cents an hour at the time of the spot check.

[4] Of the 34,357 workers appearing in table 1 as receiving 30 and under 32.5 cents per hour, 29,710 were actually reported in this wage class by southern plants, 2,125 were so reported by western and northern plants, and only 2,522 were so classified as a result of the adjustment described above.

[5] All of the workers classified as receiving less than 30 cents an hour were actually reported at such wages by southern plants. Presumably a very small additional number of western and northern employees also received less than 30 cents per hour, but, as a result of the method of adjustment employed, these are here included in the 30 and under 32.5 cents class.

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about half the workers in the sample, paid average wages of 59.7 cents and 47.5 cents per hour, respectively. The next largest branch, surfacing, which accounts for nearly a sixth of all the workers in the sample, showed average hourly earnings of 44.8 cents per hour. Workers in custom-millwork production earned on the average 60 cents per hour, while workers in wooden-box production, who comprised one-eighth of the workers in the sample, had average hourly earnings of 42.5 cents. As is indicated later, regional factors are of paramount importance in their influence on average hourly earnings among the branches of the industry.

TABLE 1.—*Distribution of workers in the lumber and timber products industry by average hourly earnings and by branch of the industry, 1939–40*

[Adjusted to reflect changes caused by 30-cent minimum wage [1]]

Average hourly earnings (in cents)	Total			Branch (percentage distribution)									
	Number of workers	Simple percentage	Cumulative percentage	Logging	Sawmilling	Surfacing	Custom millwork manufacture	Stock millwork manufacture	Hardwood flooring manufacture	Hardwood dimension stock manufacture	Cooperage stock manufacture	Shingle manufacture	Wooden-box manufacture
Under 30.0	3,160	3.0	3.0	1.7	3.9	6.0	4.8	1.6	0.1	0.2	1.2	------	0.4
30.0 and under 32.5	34,357	32.7	35.6	22.8	37.4	42.6	7.9	8.3	36.2	39.3	60.6	------	43.2
32.5 and under 35.0	4,867	4.6	40.2	4.9	4.5	4.0	1.4	1.7	12.4	8.5	8.1	0.1	5.7
35.0 and under 37.5	5,004	4.7	45.0	4.4	4.5	3.7	4.6	4.8	10.1	8.3	4.3	------	6.2
37.5 and under 40.0	2,864	2.7	47.7	2.8	2.7	1.9	1.6	2.6	7.8	4.8	2.4	------	3.2
40.0 and under 42.5	4,651	4.4	52.1	3.1	4.0	3.1	6.7	9.6	9.5	8.9	3.5	------	4.7
42.5 and under 47.5	5,286	5.0	57.1	4.0	4.6	2.9	6.6	11.8	8.3	8.6	4.0	------	5.9
47.5 and under 52.5	5,399	5.1	62.3	3.8	4.2	3.6	9.0	11.6	4.4	7.4	5.8	------	6.8
52.5 and under 57.5	4,232	4.0	66.3	2.8	2.9	3.1	7.3	10.0	3.1	3.7	3.3	------	6.4
57.5 and under 62.5	5,349	5.1	71.3	4.2	4.6	5.1	8.8	8.1	3.2	3.7	2.1	.2	6.0
62.5 and under 67.5	7,518	7.1	78.5	7.0	8.2	9.0	7.6	9.5	2.5	2.0	1.1	2.2	4.1
67.5 and under 72.5	5,194	4.9	83.4	5.1	5.3	5.1	6.3	6.8	.7	1.2	2.0	17.4	2.4
72.5 and under 77.5	4,073	3.9	87.3	6.3	3.6	3.0	7.0	4.1	.9	.7	.8	11.0	1.3
77.5 and under 82.5	3,066	2.9	90.2	6.0	2.5	2.2	3.8	1.8	.3	.4	.4	7.3	1.1
82.5 and under 87.5	2,149	2.0	92.2	3.7	1.6	1.4	3.6	2.4	.1	.3	.2	9.1	.9
87.5 and under 92.5	2,055	2.0	94.2	4.0	1.7	1.1	3.5	1.2	.2	.8	.1	6.6	.6
92.5 and under 100.0	1,950	1.9	96.0	4.3	1.4	1.3	1.9	.7	(2)	.7	.1	8.5	.5
100.0 and under 110.0	1,973	1.9	97.9	4.4	.9	.6	4.8	2.2	.2	.4	------	11.9	.3
110.0 and under 120.0	1,013	1.0	98.9	2.3	.5	.2	2.0	1.1	------	------	------	9.0	.1
120.0 and under 130.0	528	.5	99.4	1.2	.3	.1	.4	.1	------	.1	(2)	7.7	.1
130.0 and under 140.0	335	.3	99.7	.7	.3	(2)	.4	(2)	------	------	------	4.4	(2)
140.0 and under 150.0	134	.1	99.8	.2	.1	(2)	(2)	(2)	------	------	------	2.7	(2)
150.0 and over	205	.2	100.0	.3	.3	(2)	(2)	------	------	------	------	1.9	.1
Total	------	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of production units		2,129		409	625	443	242	89	38	34	47	27	175
Number of workers		105,362		21,011	34,159	16,434	6,258	6,279	2,649	1,818	2,325	1,175	13,254
Average hourly earnings		$0.501		$0.597	$0.475	$0.448	$0.600	$0.547	$0.390	$0.403	$0.366	$0.948	$0.425

[1] In this table data for the West and North, which were collected prior to October 24, 1939, the effective date of the 30-cent minimum wage, have been adjusted to reflect the changes resulting from the 30-cent minimum. Data for the South were collected subsequent to October 24, 1939, and consequently reflect without adjustment the changes resulting from the 30-cent minimum.

[2] Less than a tenth of 1 percent.

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Regional Variations

In view of the profound differences in the timber stand in various parts of the country, the scale and character of logging and other operations, and the level of wages which workers in the industry receive, it is essential to examine the wage structure of the industry by separate regions.

The broad areas of the West, the North and the South [6] present many contrasts. In the West, for example, the available stand of saw timber is heavily concentrated, and permits the establishment of large, highly mechanized, and relatively permanent logging camps and sawmills; in the North and South, on the other hand, the saw timber ready for cutting is scattered, and small and shifting operations are typical. In 1939, the active lumber mills of the West produced an average of 5,065 M. B. F. of lumber per mill as against 607 M. B. F. per mill in the North and 997 M. B. F. per mill in the South. Thus, on the average, the West produced more than 8 times as much lumber per mill as the North and five times as much as the South. Timber in the West is of larger diameter, as a rule, than timber in the North or South, and there are, of course, differences in the labor supply and in other important factors.

Hourly earnings at the time of the study averaged 72.7 cents in the West, 46.4 cents in the North and 34.6 cents in the South.[7] The figures here given for the West and the North—and all those presented in the remainder of this section of the article—are unadjusted, and consequently do not reflect changes due to the 30-cent minimum wage. In view of the fact that data for the South were collected subsequent to the effective date of the 30-cent minimum, the figures probably understate slightly the difference between hourly earnings in the South and those in the West and North. As is noted below, hourly earnings vary substantially by branch and by region, even within these separate areas.

Earnings in the West.—Workers in the West are by far the highest paid in the industry. The distribution by average hourly earnings of the 34,655 western workers studied shows that although the range of earnings was from under 25 cents to over $1.50, nearly half (45.9 percent) were concentrated in the range from 62.5 to 82.5 cents per hour, and one-fourth had earnings of 82.5 cents and over (table 2). Only 2.8 percent earned less than 40 cents per hour.

[6] The West includes Montana, Wyoming, Colorado, New Mexico, and all States west of these. The North is composed of Kansas, Missouri, Illinois, Indiana, Ohio, West Virginia, Maryland, Delaware, and all States north of these. The South includes Oklahoma, Arkansas, Kentucky, Virginia, and all States south of these.

[7] As a supplement to its main survey in the lumber and timber products industry, in which it was impracticable to include a representative sample of the thousands of establishments employing fewer than 20 wage earners, the Bureau conducted a spot-check survey of hourly earnings in a few very small logging camps and sawmills. Although the scope of this supplementary study was limited, the establishments surveyed were chosen on a random basis, and the results of the survey are believed to be significant.

In the spot-check survey wage and hour data were secured for 5,323 workers in 382 widely scattered establishments. Of these about two-thirds were in the South, one-fifth in the West, and roughly one-tenth in the North. Due to a lack of adequate time records, logging was represented less fully than sawmilling.

The data obtained indicate that hourly earnings in small logging averaged 64 cents in the West, 36 cents in the North, and 25.9 cents in the South. No workers in the West, but 14.5 percent in the North and 45.7 percent in the South earned less than 30 cents. Employees in small sawmills averaged 52.3 cents in the West, 37.5 cents in the North, and 25.6 cents in the South; workers earning less than 30 cents amounted to 2.4 percent of the total in the West, 18.9 percent in the North, and 47.5 percent in the South. In the case of each branch of the industry data for the West and North refer to a period prior to the effective date of the 30-cent minimum wage and data for the South to a period subsequent to that date.

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TABLE 2.—*Percentage distribution of workers in the lumber and timber products industry in the West, by average hourly earnings and region, 1939* [1]

Average hourly earnings (in cents)	Total	Douglas fir			Western pine					Redwood
		Total	Western Washington	Western Oregon	Total	Eastern Washington	Eastern Oregon	California	Mountain States	California
Under 25.0	(2)	(2)	(2)	------	0.1	------	0.1	0.1	(2)	------
25.0 and under 27.5	0.1	(2)	(2)	0.1	.1	------	(2)	.1	0.2	------
27.5 and under 30.0	(2)	(2)	(2)	(2)	(2)	(2)	------	------	.1	0.1
30.0 and under 32.5	.4	0.2	(2)	.5	.7	0.3	.1	.3	1.8	------
32.5 and under 35.0	.5	.1	(2)	.3	1.0	.2	(2)	.1	3.3	.2
35.0 and under 37.5	1.3	.2	0.1	.5	2.7	2.1	.4	.3	7.3	.1
37.5 and under 40.0	.5	.2	(2)	.4	.9	.3	.1	.3	2.7	.2
40.0 and under 42.5	1.3	.4	(2)	1.1	2.4	6.1	.2	.9	3.6	.2
42.5 and under 47.5	2.5	1.5	.2	3.9	3.8	9.3	1.3	2.5	4.2	1.7
47.5 and under 52.5	6.0	2.7	.9	6.1	7.5	12.4	5.7	6.7	7.2	23.8
52.5 and under 57.5	5.7	1.8	1.1	3.3	8.5	8.1	6.8	11.7	6.9	19.1
57.5 and under 62.5	10.0	4.1	1.3	9.4	16.5	18.0	17.1	13.4	17.8	12.6
62.5 and under 67.5	17.6	22.9	23.0	22.7	12.8	13.8	11.3	13.5	12.8	8.7
67.5 and under 72.5	11.7	14.4	15.4	12.4	9.0	6.8	13.0	8.8	7.1	9.2
72.5 and under 77.5	9.2	11.0	11.8	9.4	7.4	5.8	9.5	6.6	7.4	7.6
77.5 and under 82.5	7.4	8.7	9.3	7.6	6.2	5.0	6.4	7.5	5.3	5.4
82.5 and under 87.5	5.0	6.1	6.5	5.4	3.9	2.9	5.7	4.2	2.7	2.8
87.5 and under 92.5	5.1	6.6	7.2	5.5	3.7	2.2	4.6	4.5	3.0	2.6
92.5 and under 100.0	5.2	6.1	7.4	3.7	4.4	2.6	5.9	6.0	2.4	2.6
100.0 and under 110.0	4.8	6.2	7.6	3.7	3.5	1.8	3.6	6.3	1.7	1.5
110.0 and under 120.0	2.4	3.1	3.8	1.8	1.9	.9	2.7	2.4	1.2	.5
120.0 and under 130.0	1.4	1.7	2.1	.9	1.3	.7	2.4	1.3	.6	.3
130.0 and under 140.0	.9	1.0	1.2	.5	.8	.2	1.4	1.3	.3	.5
140.0 and under 150.0	.4	.5	.6	.3	.2	.1	.5	.3	.1	.1
150.0 and over	.6	.5	.5	.5	.7	.4	1.2	.9	.3	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of production units	514	218	121	97	273	56	57	78	82	23
Number of workers	34,655	17,432	11,377	6,055	15,363	2,444	3,799	4,533	4,587	1,860
Average hourly earnings	$0.727	$0.773	$0.808	$0.715	$0.689	$0.627	$0.754	$0.731	$0.623	$0.637

[1] The data presented in this table have not been adjusted, and do not reflect the influence of the 30-cent minimum wage.
[2] Less than one-tenth of 1 percent.

Average hourly earnings by branches of the industry in the West ranged from 63.1 cents in stock millwork production to as high as 94.8 cents per hour in shingle manufacturing. These two branches, however, included a very small proportion of all workers. Most of the workers were employed in logging, sawmilling, and surfacing; average hourly earnings in these three branches amounted to 80.1 cents, 70.2 cents, and 67.1 cents per hour, respectively.

Average hourly earnings in the Pacific Coast States were considerably higher than in the Mountain States; the 30,068 workers in the Pacific Coast States averaged 74.3 cents, while the 4,587 in the Mountain States averaged only 62.3 cents. This regional grouping, however, is probably less significant than the classification of regions on the basis of the type of lumber produced. Average hourly earnings in the Douglas-fir region were 77.3 cents per hour, in the western-pine region 68.9 cents, and in the redwood region 63.7 cents.

Earnings in the North.—The survey in the North involved 22,741 workers employed in 609 production units. In the late summer of 1939 these workers earned, on the average, 46.4 cents per hour. (See table 3.) Although average hourly earnings of individual workers ranged from under 25 cents to over $1.50, the distribution of workers shows considerable concentration around the average. Over one-

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fourth of the workers (28.1 percent) were included in the 10-cent range of 30 to 40 cents; nearly half of the workers had average hourly earnings of from 40 to 62.5 cents. Nearly one-sixth of the workers earned 62.5 cents per hour and over, and fully one-tenth earned under 30 cents.

TABLE 3.—*Percentage distribution of workers in the lumber and timber products industry in the North by average hourly earnings and region, 1939* [1]

Average hourly earnings	Total	Prairie States	Lake States	East Central States	Middle Atlantic States	New England States
Under 25.0 cents	0.6	0.4	0.4	0.3	1.4	0.5
25.0 and under 27.5 cents	7.5	13.7	1.4	4.9	6.9	15.6
27.5 and under 30.0 cents	2.8	2.4	2.2	2.2	1.8	5.9
30.0 and under 32.5 cents	8.7	5.6	5.7	14.6	5.6	12.6
32.5 and under 35.0 cents	4.8	2.4	4.6	5.4	4.1	6.9
35.0 and under 37.5 cents	8.5	4.6	11.6	8.9	5.4	9.2
37.5 and under 40.0 cents	6.1	3.2	8.6	6.8	3.1	6.6
40.0 and under 42.5 cents	11.8	10.2	18.4	9.6	6.9	9.8
42.5 and under 47.5 cents	12.2	10.5	16.2	11.9	9.4	9.7
47.5 and under 52.5 cents	9.2	12.0	10.0	8.0	9.7	6.9
52.5 and under 57.5 cents	6.4	10.3	5.0	7.0	6.7	4.6
57.5 and under 62.5 cents	5.4	8.5	4.4	5.7	6.8	3.0
62.5 and under 67.5 cents	4.2	5.8	3.4	3.6	6.4	2.6
67.5 and under 72.5 cents	3.3	3.9	3.5	2.6	4.0	2.3
72.5 and under 77.5 cents	2.7	3.7	2.6	2.0	4.1	1.4
77.5 and under 82.5 cents	1.4	1.2	.9	1.2	3.0	.9
82.5 and under 87.5 cents	1.3	.5	.7	1.5	3.9	.3
87.5 and under 92.5 cents	.8	.6	.2	.5	2.4	.5
92.5 and under 100.0 cents	.4	.2	.1	.4	1.2	.3
100.0 and under 110.0 cents	1.1	.2	.1	2.5	2.7	.3
110.0 and under 120.0 cents	.6	.1	[2]	.1	3.3	[2]
120.0 and under 130.0 cents	.1	----	----	.1	.5	.1
130.0 and under 140.0 cents	.1	----	----	[2]	.5	[2]
140.0 and under 150.0 cents	[2]	----	----	.1	.1	----
150.0 cents and over	[2]	----	----	.1	.1	----
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of production units	609	62	137	113	146	151
Number of workers	22,741	3,272	6,526	4,688	4,036	4,219
Average hourly earnings	$0.464	$0.472	$0.451	$0.463	$0.546	$0.403

[1] The data presented in this table have not been adjusted and do not reflect the influence of the 30-cent minimum wage.
[2] Less than a tenth of 1 percent.

Average hourly earnings by branch of the industry in this region showed considerable variation from the average for the industry as a whole. Cooperage-stock production provided the lowest average hourly earnings (35.1 cents) while workers in custom and stock millwork manufacturing earned 60.6 and 54.5 cents per hour, respectively. Custom- and stock-millwork production was relatively more important in the North than in the West; about one-third of all workers in the sample were employed in these two branches.

In the late summer of 1939 more than two-fifths (43.8 percent) of the workers in the small cooperage-stock branch and more than a fifth (21.7 percent) of the workers in logging camps earned less than 30 cents an hour. Fully one-fourth of the workers in custom-millwork and nearly one-fifth in stock-millwork production earned from 62.5 to 82.5 cents; nearly one-sixth in custom millwork earned 82.5 cents and over.

Average hourly earnings in the regions which comprise the North varied from a low of 40.3 cents in the New England States to a high of 54.6 cents per hour in the Middle Atlantic States; the latter region, with average hourly earnings 7.4 cents higher than the highest of

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the other regions, was in a class by itself. In the New England States over a fifth of the workers earned under 30 cents per hour. In the Middle Atlantic States about one-seventh earned 82.5 cents an hour and over.

Earnings in the South.—During late 1939 and early 1940 workers in the South earned on the average 34.6 cents per hour. The distribution of individual earnings shows that about half of the workers received exactly 30 cents per hour. In practically all cases the wage and hour data for the South were for a pay-roll period after October 24, 1939, and for that reason reflect the wage adjustments to the 30-cent minimum hourly rate which became effective on that date for concerns engaged in interstate commerce. Nevertheless, 6.6 percent of the workers were earning less than 30 cents an hour. Presumably most of these were employed in plants not engaged in interstate commerce, or for some other reason not subject to the Fair Labor Standards Act. Another one-eighth of the southern workers earned over 30 and under 32.5 cents an hour. Over one-fourth of the workers (27.8 percent) earned from 32.5 to 62.5 cents and only 3.5 percent had earnings of 62.5 cents an hour and over. (See table 4.)

TABLE 4.—*Percentage distribution of workers in the lumber and timber products industry in the South, by average hourly earnings and State, 1939–40*

Average hourly earnings (in cents)	Total	Virginia	Kentucky	Tennessee	North Carolina	South Carolina	Georgia	Florida	Alabama	Mississippi	Louisiana	Texas	Arkansas and Oklahoma
Under 15.0	0.5	(1)	0.1	0.1	0.4	1.6	4.1	0.4	0.4	0.1	0.1	(1)	------
15.0 and under 17.5	1.4	0.1	.1	.7	2.6	3.5	5.6	2.9	.8	.5	1.0	1.0	(1)
17.5 and under 20.0	.7	.2	.2	.3	.8	1.0	3.3	.8	.3	.5	.7	.6	0.5
20.0 and under 22.5	.9	.1	------	.1	.4	.6	4.0	1.8	.7	.6	1.0	1.8	.3
22.5 and under 25.0	.4	.2	------	.1	.3	.3	1.1	.3	.2	.3	.6	.6	.2
25.0 and under 27.5	2.1	1.4	.2	.5	4.7	1.6	1.7	1.0	.7	.8	2.1	7.6	1.2
27.5 and under 30.0	.6	.2	------	.5	.7	.3	.8	.3	.4	1.4	.6	.8	.4
Exactly 30.0	49.7	47.3	24.4	29.7	59.6	57.9	56.7	57.0	63.2	55.2	42.3	38.1	42.6
Over 30.0 and under 32.5	12.4	14.0	11.3	17.7	9.8	11.5	5.8	7.8	11.4	11.2	14.1	13.0	17.9
32.5 and under 35.0	7.5	7.1	3.7	8.7	5.0	4.2	3.8	5.9	4.7	7.1	11.9	10.3	10.4
35.0 and under 37.5	5.5	6.0	14.0	7.6	4.1	3.2	2.7	4.4	5.4	4.5	6.0	6.0	6.8
37.5 and under 40.0	2.7	1.9	4.8	3.6	1.6	1.7	1.7	2.4	2.0	2.7	3.0	3.7	3.8
40.0 and under 42.5	3.2	3.7	4.6	6.1	2.1	2.2	1.2	3.3	2.3	2.7	3.8	4.0	3.6
42.5 and under 47.5	3.4	2.9	6.9	6.6	2.3	2.9	1.7	3.1	2.4	3.1	4.2	4.0	3.8
47.5 and under 52.5	2.6	2.8	6.9	5.6	1.7	1.9	1.5	2.1	2.1	2.7	2.0	2.8	2.7
52.5 and under 57.5	1.6	1.7	4.3	3.0	1.4	1.4	1.0	1.7	.8	1.6	1.6	1.7	1.8
57.5 and under 62.5	1.3	2.5	3.9	3.1	.7	1.1	1.0	1.1	.6	1.5	1.2	.9	1.4
62.5 and under 67.5	.9	1.4	2.6	1.9	.5	.9	.9	1.1	.3	.8	1.2	.7	.8
67.5 and under 72.5	.8	2.2	4.1	.9	.6	.8	.7	.8	.4	.9	.6	.7	.3
72.5 and under 77.5	.6	1.4	4.7	1.2	.3	.3	.2	.5	.1	.4	.4	.5	.5
77.5 and under 82.5	.4	1.5	1.0	.4	.1	.2	(1)	.3	.2	.4	.6	.5	.2
82.5 and under 87.5	.3	.7	1.0	.3	.2	.2	.2	.2	.2	.2	.3	.2	.2
87.5 and under 92.5	.2	.2	.6	.6	(1)	.1	.2	.2	.2	.2	.2	.3	.4
92.5 and under 100.0	.1	.2	.2	.2	.1	.2	.1	.1	.1	.2	.2	.1	(1)
100.0 and under 110.0	.1	.2	.2	.3	(1)	.2	------	.2	.1	.2	.1	.1	.2
110.0 and under 120.0	.1	(1)	.1	.1	------	.1	------	.2	------	.1	.1	(1)	(1)
120.0 and over	(1)	.1	.1	.1	------	.1	------	.1	------	.1	.1	------	(1)
Total	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
Number of production units	1,006	65	31	47	114	65	75	80	119	102	107	90	111
Number of workers	47,966	2,563	1,225	2,638	4,535	3,162	2,409	4,550	4,613	6,138	5,453	4,402	6,278
Average hourly earnings	$0.346	$0.376	$0.435	$0.383	$0.322	$0.329	$0.305	$0.339	$0.330	$0.348	$0.350	$0.342	$0.352

[1] Less than a tenth of 1 percent.

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Average hourly earnings by branch of the lumber and timber products industry in the South varied from a low of 32.4 cents in surfacing to a high of 43.6 cents in custom-millwork production. Three of the nine branches in the South, logging, sawmilling, and surfacing, which had average hourly earnings of 34.4 cents, 33.9 cents, and 32.4 cents, respectively, accounted for seven-tenths of the workers in the sample for this region. Of the other three-tenths about half were in the wooden-box branch, which provided average hourly earnings of 34 cents per hour.

On the whole, geographic variations in average hourly earnings were not very pronounced in the South. Average earnings varied from a low of 30.5 cents in Georgia to a high of 43.5 cents in Kentucky. In general, earnings were somewhat higher in the border States than in the "deep South." Only about a fourth of the workers in Kentucky but nearly two-thirds of the workers in Alabama earned exactly 30 cents. In Georgia a high proportion of all workers (20.6 percent) earned under 30 cents. Relatively few workers in any State had earnings of 62.5 cents and over.

Earnings in the Manufacture of Veneer and Veneer Products

While veneer and plywood are timber products in the strict sense, they are mainly manufactured in independent mills or in sawmills. In recognition of the special character of the mills producing veneer, plywood, and veneer baskets, such mills have been excluded from the "lumber and timber products industry," as defined for the purpose of the general survey.

Hourly earnings in the manufacture of veneer, plywood, and veneer baskets in the United States as a whole averaged 37.3 cents, 49 cents, and 34.2 cents, respectively. (See table 5.) The figures for northern workers included in these totals have been adjusted to take account of changes due to the 30-cent minimum wage; the western workers included in the sample consist almost exclusively of plywood workers, none of whom earned less than 30 cents, and data for the southern workers were collected after the 30-cent minimum came into effect, and consequently did not require adjustment.

The distributions of individual earnings indicate a decided concentration (from over a third of the workers in the plywood branch to over two-thirds in the veneer-basket branch) in the class interval 30.0 and under 32.5 cents per hour. Although this concentration results in part from the adjustment mentioned above, there is little doubt that the adjusted figures depict with reasonable accuracy the wage distributions after the effective date of the 30-cent minimum wage. In the 10-cent range from 32.5 to 42.5 cents were included over a sixth of the workers in the plywood branch, nearly one-fourth of the workers in veneer manufacture, and one-fifth of the workers engaged in the production of baskets. Over one-fourth of the workers in the plywood branch, but few workers in the veneer and veneer-basket branches, had average hourly earnings of 62.5 cents and over.

Hourly earnings in these branches, as in the larger industry, were highest in the West and lowest in the South.

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TABLE 5.—*Distribution of workers in the veneer, plywood, and veneer baskets branches, by average hourly earnings, 1939–40*

[Adjusted to reflect changes due to 30-cent minimum wage [1]]

Average hourly earnings	Veneer		Plywood		Veneer baskets	
	Number of workers	Percentage	Number of workers	Percentage	Number of workers	Percentage
Under 30.0 cents	3	0.1	5	0.1	20	0.6
30.0 and under 32.5 cents	1,233	55.4	2,207	35.8	2,132	69.3
32.5 and under 35.0 cents	159	7.1	246	4.0	241	7.8
35.0 and under 37.5 cents	112	5.0	337	5.5	217	7.0
37.5 and under 40.0 cents	99	4.4	285	4.6	86	2.8
40.0 and under 42.5 cents	157	7.1	209	3.4	102	3.3
42.5 and under 47.5 cents	176	7.9	336	5.4	77	2.5
47.5 and under 52.5 cents	117	5.3	175	2.8	61	2.0
52.5 and under 57.5 cents	53	2.4	168	2.7	65	2.1
57.5 and under 62.5 cents	35	1.6	135	2.2	36	1.2
62.5 and under 67.5 cents	20	.9	735	11.9	15	.5
67.5 and under 72.5 cents	20	.9	584	9.5	7	.2
72.5 and under 77.5 cents	11	.5	178	2.9	7	.2
77.5 and under 82.5 cents	13	.6	184	3.0	5	.2
82.5 and under 87.5 cents	6	.3	81	1.3	2	.1
87.5 and under 92.5 cents	1	[2]	94	1.5	3	.1
92.5 and under 100.0 cents	5	.2	115	1.9	2	.1
100.0 cents and over	6	.3	92	1.5	1	[2]
Number of production units	39		47		33	
Number of workers	2,226	100.0	6,166	100.0	3,079	100.0
Average hourly earnings	$0.373		$0.490		$0.342	

[1] In this table data for the West and North, which were collected prior to October 24, 1939, the effective date of the 30-cent minimum wage, have been adjusted to reflect the changes resulting from the 30-cent minimum. Data for the South were collected subsequent to October 24, 1939, and consequently reflect without adjustment the changes resulting from the 30-cent minimum.

[2] Less than a tenth of 1 percent.

Machine-Shop Industries—Earnings, 1938-39 [1]

A study of wages and hours of labor in the machine-shop industries was made by the Bureau of Labor Statistics, covering the latter part of 1938 and the early months of 1939.

The machine-shop industries are predominantly man-employing industries, with males forming 99 percent of the labor force.

Average Hourly Earnings

Table 1 reveals the relatively small proportion of workers in low-wage brackets. Taking all divisions of machine shops together, only 2.7 percent of the workers earned less than 40 cents an hour, and fewer than a quarter (23 percent) of the labor force averaged less than 57½ cents. In contrast, there was a fairly substantial scattering of employees in the higher-earnings classes, 29.8 percent averaging 82.5 cents or over and 9.1 percent averaging $1 or more an hour.

In the machine-shop industries, as in many other branches of manufacturing, there are pronounced geographical differences in hourly earnings. Against an average of 88.3 cents for all machine-shop employees in Washington, those in Florida, Georgia, and South Carolina averaged 44.6 cents. Generally speaking, a relatively high level of wages likewise prevailed in the Middle Atlantic region and in most States of the Midwest.

[1] Abstract of article in the Monthly Labor Review for November 1940, prepared by O. R. Mann and D. L. Helm of the Bureau of Labor Statistics.

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TABLE 1.—*Percentage distribution of machine-shop workers by average hourly earnings and product, 1938 and 1939*

Average hourly earnings (in cents)	All divisions	Agricultural implements	Tractors	Cranes, dredging machinery, etc.	Machine tools	Engines, turbines, and water wheels	Printers' machinery and equipment	Pumps and pumping equipment	Textile machinery and parts	Machine shops
Under 30.0	0.5	0.9	------	0.3	0.1	0.1	0.2	0.3	1.3	1.2
30.0 and under 32.5	.4	.2	0.1	.2	.2	.1	.3	.2	1.1	.9
32.5 and under 35.0	.3	.3	(1)	.1	.1	.2	.5	.2	.5	.7
35.0 and under 37.5	.9	.9	.1	.4	.6	.5	.3	.7	1.1	1.8
37.5 and under 40.0	.6	.5	.2	.1	.4	.4	.8	.5	1.2	1.0
40.0 and under 42.5	1.9	1.2	.2	1.1	1.4	1.2	1.3	2.2	2.5	5.1
42.5 and under 47.5	3.9	3.6	.6	2.1	3.0	3.2	2.1	4.9	7.1	6.9
47.5 and under 52.5	6.8	6.6	1.0	5.5	6.4	7.2	6.0	8.3	11.0	9.9
52.5 and under 57.5	7.7	8.4	1.7	7.9	6.6	7.7	7.5	11.6	10.4	8.3
57.5 and under 62.5	9.4	11.2	5.0	9.8	9.5	8.5	8.3	12.6	11.5	9.6
62.5 and under 67.5	10.1	10.5	7.9	13.9	10.0	10.8	7.1	12.4	11.4	8.0
67.5 and under 72.5	10.0	11.1	8.9	11.1	10.8	10.0	7.8	11.3	10.1	8.5
72.5 and under 77.5	9.3	10.0	8.2	11.1	9.7	10.4	8.3	9.6	9.1	8.2
77.5 and under 82.5	8.4	9.0	8.4	10.4	9.8	10.1	6.8	7.4	6.3	6.3
82.5 and under 87.5	7.5	8.8	11.4	8.3	7.6	9.0	5.8	6.2	5.1	6.3
87.5 and under 92.5	6.6	6.3	12.0	6.8	6.5	7.0	6.1	5.0	3.8	6.0
92.5 and under 100.0	6.6	6.7	15.5	4.9	6.7	6.2	8.3	3.1	3.4	4.8
100.0 and under 110.0	5.5	3.2	14.7	3.8	5.5	4.7	6.8	2.2	1.7	4.6
110.0 and under 120.0	2.4	.6	3.2	1.3	2.8	1.9	12.0	.9	.7	1.3
120.0 and under 130.0	.8	(1)	.6	.5	1.5	.5	2.5	.3	.3	.4
130.0 and under 140.0	.3	(1)	.2	.3	.7	.2	.8	.1	.3	.2
140.0 and over	.1	------	.1	.1	.1	.1	.4	(1)	.1	(1)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of establishments	685	41	14	41	91	41	19	46	44	96
Number of workers	90,419	7,268	9,205	5,943	17,249	6,309	3,332	5,975	6,372	5,512
Average hourly earnings	$0.724	$0.702	$0.842	$0.726	$0.751	$0.728	$0.797	$0.673	$0.649	$0.667

Average hourly earnings (in cents)	Paper mill and pulp machinery	Metal working machinery	Oil well and refinery machinery	Conveying and elevating machinery	Mining machinery and equipment	Sawmill and woodworking machinery	Packing wrapping, etc., manufacturing machinery	Food, beverage and drug preparation machinery	Machinery not elsewhere classified
Under 30.0	2.1	(1)	0.3	0.1	0.6	0.7	1.3	0.6	0.7
30.0 and under 32.5	.8	0.2	.6	.1	.5	1.5	.9	.6	.6
32.5 and under 35.0	.6	------	.2	.4	.3	.5	.7	.5	.3
35.0 and under 37.5	1.1	1.4	1.4	.7	2.9	1.4	1.9	2.4	.8
37.5 and under 40.0	.7	.5	.9	.3	.8	.5	.4	1.8	.4
40.0 and under 42.5	1.8	.8	2.8	2.1	5.6	4.8	2.2	3.8	1.8
42.5 and under 47.5	5.3	3.0	4.3	6.5	5.0	5.1	4.4	8.5	4.7
47.5 and under 52.5	7.3	5.1	4.9	10.2	9.2	11.4	5.9	10.6	6.6
52.5 and under 57.5	8.9	5.6	4.8	9.9	12.6	17.6	6.1	10.8	7.9
57.5 and under 62.5	10.4	6.6	7.6	10.1	12.8	16.8	8.1	9.8	8.9
62.5 and under 67.5	12.2	10.6	10.4	11.5	10.4	13.1	10.6	10.9	8.8
67.5 and under 72.5	9.8	10.7	9.7	9.4	9.8	9.5	9.1	9.6	9.5
72.5 and under 77.5	9.5	11.3	12.4	8.5	8.1	8.9	8.3	8.0	7.8
77.5 and under 82.5	11.6	9.7	7.7	7.0	6.4	3.6	7.2	6.2	7.9
82.5 and under 87.5	6.2	7.4	5.9	5.9	4.6	2.0	8.6	4.1	7.7
87.5 and under 92.5	3.7	5.2	5.7	5.2	4.2	1.3	8.7	3.3	7.7
92.5 and under 100.0	2.9	6.4	6.3	4.7	2.4	.8	7.2	4.0	7.4
100.0 and under 110.0	4.0	7.7	8.4	4.9	2.2	.5	5.9	2.4	6.4
110.0 and under 120.0	1.0	5.4	4.2	1.7	1.1	------	1.7	1.3	2.4
120.0 and under 130.0	------	1.3	1.2	.4	.1	------	.5	.5	1.2
130.0 and under 140.0	------	.8	.2	.2	.4	------	.2	.2	.4
140.0 and over	.1	.3	.1	.2	------	------	.1	.1	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of establishments	20	27	21	20	29	16	14	36	69
Number of workers	1,082	2,425	2,685	1,817	2,784	1,097	1,122	2,242	8,000
Average hourly earnings	$0.671	$0.765	$0.745	$0.685	$0.646	$0.601	$0.722	$0.645	$0.723

[1] Less than one-tenth of 1 percent.

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Variations by Occupation and Skill

Hourly earnings in machine shops are dependent largely on the specific occupations of the individual employees. Broadly speaking, the highest hourly earnings are paid to working foremen. For this occupation, hourly earnings in the latter part of 1938 and the early months of 1939 averaged 95.2 cents (table 2). Other occupational groups with high hourly earnings were boring-mill operators and wood-pattern makers; these are highly skilled occupations, averaging 90 cents or more an hour.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of male machine-shop workers, 1938 and 1939, by occupation and skill*

Occupation and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All occupations	89,240	$0.727	37.6	$27.34
Skilled workers	34,094	.864	38.2	32.97
Assemblers and erectors, floor, skilled	2,844	.842	38.8	32.64
Assemblers and fitters, bench, skilled	1,979	.838	38.5	32.22
Assemblers, miscellaneous, skilled	247	.872	35.5	31.00
Blacksmiths, production	438	.780	35.7	27.81
Boring-mill operators, skilled	1,511	.904	37.8	34.21
Carpenters, maintenance, skilled	242	.777	38.9	30.25
Drill-press operators, multiple, skilled	296	.881	35.7	31.50
Drill-press operators, radial, skilled	571	.850	37.9	32.24
Drill-press operators, single, skilled	338	.804	36.8	29.58
Electricians, maintenance	523	.833	40.4	33.64
Electricians, production	202	.814	40.2	32.72
Engineers, boiler and powerhouse	242	.793	42.9	33.99
Foremen, working, skilled	2,878	.952	40.6	38.67
Gear cutters, skilled	342	.891	37.5	33.38
Grinding-machine operators, skilled	1,442	.906	36.8	33.37
Hammersmiths, skilled	168	.939	35.1	32.95
Hardeners and heat treaters, skilled	269	.843	38.0	32.08
Inspectors, skilled	1,179	.854	37.9	32.34
Lathe hands, engine, skilled	2,970	.848	37.3	31.60
Lathe hands, turret, skilled	1,834	.861	37.1	31.91
Lathe and screw-machine operators, automatic, skilled	479	.903	36.8	33.25
Lathe and screw-machine operators, semiautomatic, skilled	135	.938	31.7	29.70
Layout men	534	.848	37.2	31.52
Machinists	1,397	.811	40.1	32.51
Maintenance and repairmen, skilled	758	.842	38.5	32.41
Milling-machine operators, skilled	1,678	.877	37.4	32.82
Millwrights	485	.782	39.2	30.68
Miscellaneous machine operators, skilled	229	.907	37.6	34.13
Miscellaneous skilled workers, direct	164	.918	34.5	31.66
Miscellaneous skilled workers, indirect	65	.801	38.7	30.99
Pattern makers, wood	488	.916	39.1	35.82
Pipefitters and plumbers	223	.802	38.4	30.79
Planer operators, skilled	972	.885	38.2	33.82
Screw-machine operators, hand, skilled	297	.889	38.2	33.96
Set-up men	446	.861	37.9	32.66
Shaper operators, skilled	237	.852	37.5	31.99
Sheet-metal workers, skilled	335	.817	39.0	31.83
Testers, skilled	240	.815	39.0	31.82
Tool and die makers	2,194	.899	38.3	34.43
Tool grinders	763	.802	38.0	30.44
Welders and braziers, hand	1,460	.822	37.4	30.71
Semiskilled workers	39,576	.675	37.1	25.00
Apprentices	2,385	.481	38.0	18.30
Assemblers and erectors, floor, semiskilled	3,781	.698	37.2	25.98
Assemblers and fitters, bench, semiskilled	3,213	.696	36.4	25.33
Assemblers, miscellaneous, semiskilled	303	.669	37.6	25.15
Boring-mill operators, semiskilled	687	.705	36.9	25.99
Broachers, keyseaters and spliners	175	.735	35.6	26.17
Bulldozers and upsetters	244	.786	33.9	26.64
Burners and cutters	187	.700	38.2	26.73
Carpenters, maintenance, semiskilled	157	.611	39.1	23.91
Checkers	241	.686	37.3	25.59
Chippers	103	.712	36.7	26.12
Cold-saw operators	309	.635	38.3	24.32
Crane operators	804	.660	37.2	24.58
Craters	774	.646	38.1	24.62

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TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of male machine-shop workers, 1938 and 1939, by occupation and skill*—Continued

Occupation and skill	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.				
Drill-press operators, multiple, semiskilled	712	$0.738	36.0	$26.59
Drill-press operators, radial, semiskilled	887	.715	36.1	25.79
Drill-press operators, single, semiskilled	1,674	.680	35.8	24.34
Factory clerks	669	.646	38.6	24.97
Firemen, boiler, and powerhouse	568	.600	43.0	25.83
Foremen, working, semiskilled	375	.696	39.9	27.77
Gear cutters, semiskilled	362	.759	36.3	27.58
Grinding-machine operators, semiskilled	1,758	.727	36.2	26.30
Hammersmiths, semiskilled	231	.731	31.7	23.15
Hardeners and heat treaters, semiskilled	366	.704	37.4	26.31
Inspectors, semiskilled	1,066	.685	37.2	25.49
Lathe hands, engine, semiskilled	1,572	.671	36.9	24.72
Lathe hands, turret, semiskilled	1,379	.705	36.4	25.72
Lathe and screw-machine operators, automatic, semiskilled	363	.729	35.9	26.21
Lathe and screw-machine operators, semiautomatic, semiskilled	258	.750	35.7	26.81
Maintenance and repairmen, semiskilled	531	.644	38.7	24.94
Milling-machine operators, semiskilled	1,589	.720	36.3	26.17
Miscellaneous machine operators, semiskilled	633	.678	37.1	25.17
Miscellaneous semiskilled workers, direct	671	.689	35.9	24.75
Miscellaneous semiskilled workers, indirect	214	.694	35.9	24.91
Oilers and beltmen	232	.630	37.5	23.66
Painters, brush	667	.650	37.9	24.61
Painters, spray	578	.685	38.7	26.48
Planer operators, semiskilled	272	.668	36.9	24.67
Polishers and buffers	614	.714	34.5	24.61
Punch and press machine operators, semiskilled	990	.732	35.8	26.21
Repairmen, product	169	.740	36.1	26.68
Riveters	217	.782	35.9	28.09
Screw-machine operators, hand, semiskilled	360	.712	37.2	26.52
Shaper operators, semiskilled	160	.656	37.4	24.52
Shearmen	287	.710	35.5	25.20
Sheet-metal machine operators	117	.758	36.0	27.28
Sheet-metal workers, semiskilled	266	.632	39.3	24.85
Shipping and receiving clerks	577	.622	40.2	24.99
Stock clerks	1,185	.617	37.3	23.04
Storekeepers	466	.697	38.1	26.52
Straighteners	222	.782	34.5	26.98
Testers, semiskilled	432	.727	36.0	26.15
Threading-machine operators	145	.723	36.8	26.61
Timekeepers	271	.626	38.8	24.31
Tool-crib attendants	700	.633	37.6	23.79
Truck drivers	445	.607	41.4	25.14
Truckers, power	374	.645	37.4	24.13
Welders, machine	151	.749	36.0	26.97
Woodworkers	438	.666	36.5	24.29
Unskilled workers	15,570	.553	37.8	20.95
Assemblers and erectors, floor, unskilled	368	.601	36.6	22.02
Assemblers and fitters, bench, unskilled	464	.536	36.2	19.39
Burrers and rough grinders	657	.606	36.1	21.88
Cleaners, parts	311	.679	37.9	25.71
Crane followers	134	.663	36.8	24.39
Drill-press operators, single, unskilled	257	.512	34.9	17.90
Elevator operators	153	.553	37.0	20.45
Helpers, assemblers'	516	.546	37.2	20.30
Helpers, blacksmith and forge	476	.613	35.2	21.61
Helpers, general	900	.560	36.7	20.55
Helpers, machine-tool operators'	352	.568	37.2	21.12
Helpers, machinists'	388	.533	39.7	21.19
Helpers, maintenance	548	.596	38.5	22.93
Helpers, sheet-metal workers'	220	.564	38.4	21.64
Inspectors, unskilled	141	.543	37.5	20.38
Janitors	1,321	.535	38.1	20.35
Laborers, common	1,996	.527	37.2	19.58
Learners	861	.511	37.6	19.21
Loaders and unloaders	486	.633	36.1	22.86
Miscellaneous machine operators, unskilled	204	.543	36.6	19.87
Miscellaneous unskilled workers, direct	359	.571	37.0	21.15
Miscellaneous unskilled workers, indirect	215	.543	37.2	20.18
Packers and wrappers	482	.613	38.0	23.27
Painters, dip	168	.638	35.2	22.49
Punch and press machine operators, unskilled	177	.525	36.4	19.07
Stock and shipping-room labor	967	.539	37.5	20.20
Truckers, hand	909	.573	36.8	21.08
Watchmen	1,540	.498	44.2	22.02

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Overtime Work and Pay

A full-time week of 40 hours existed in 402 establishments, while 237 had a full-time week of 44 hours. A small number of firms observed neither of these workweeks.

The payment of time-and-one-half rates for overtime work was common in the industry, this arrangement existing in 655 of the 685 establishments studied. Only 240 establishments, however, began the payment of overtime rates after the first 40 hours; 431 began the payment of overtime rates after the first 44 hours; and 8 firms had other arrangements.

Meat-Packing Industry—Earnings and Hours, 1937[1]

This survey covered plants engaged in wholesale slaughtering and meat packing. Establishments slaughtering either largely or entirely for retail distribution were excluded.

The plant departments covered included cattle killing, hog killing, sheep and calf killing, offal, hide, casing, fresh-beef cutting, fresh-pork cutting, lard and oleo oil, sausage, cured meat, and canning.[2] In addition, there were included the shipping, service, maintenance, and power departments. Box departments and cooper, tin, and other shops, in which the products made were entirely new, were excluded from the survey, as were also all operations connected with the distribution of meat products. As far as possible, the survey excluded the manufacture of byproducts.

The survey was made in December 1937 on the basis of a sample which included 258 plants and 49,235 wage earners. According to the Census of Manufactures, the industry had 1,160 establishments and 127,476 workers in 1937. Among the principal factors considered in determining the sample were geographical distribution, size of community, corporate affiliation, size of establishment, product, and unionization.

Average Hourly Earnings

By far the great majority of workers in meat packing are paid on a time-rate basis. Production-bonus systems of wage payment were not particularly widespread. Although as many as 24.3 percent of the workers were paid under such systems, they were found only in 40 plants, nearly all of which belonged to the larger companies.

In nearly all plants of the "Big Four" companies, workers received time and one-half for overtime, this rate applying in most cases after 10 hours per day. Of the establishments belonging to the remaining companies, over one-fourth paid time and one-half and a few granted time and one-fourth or time and one-third, usually after 10 hours per day. In more than one-half of the plants, however, the regular

[1] Abstract of articles in the Monthly Labor Review for October and December 1939, prepared by J. Perlman, E. B. Morris, and H. O. Rogers, of the Bureau of Labor Statistics.
[2] Meat canning was included only if the establishment was engaged in slaughtering.

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rate applied to overtime. Salaried employees were ordinarily expected to work overtime without additional remuneration.

The average hourly earnings shown in this report are based on both regular and overtime rates. An examination of the data, however, indicates that relatively few employees were affected by the extra overtime earnings during the pay-roll period scheduled. In other words, the exclusion of extra earnings due to overtime would affect very little the average earnings per hour.

In December 1937, the earnings of the 49,235 wage earners covered in this survey averaged 64.9 cents an hour. Earnings between plants, however, varied widely, the averages ranging from 21.3 to 88.6 cents.

Despite the broad dispersion of plant averages, a substantial segment of the total working force was concentrated within a comparatively narrow range of hourly earnings (table 1). More than two-fifths (44.9 percent) of the employees were found with earnings of 57.5 and under 72.5 cents. Furthermore, seven-tenths (70.5 percent) received between 47.5 and 77.5 cents.

TABLE 1.—*Percentage distribution of meat-packing workers by average hourly earnings, sex, and skill, December 1937*

Average hourly earnings	All workers	Males				Females
		Total	Skilled	Semi-skilled	Un-skilled	
Under 17.5 cents	0.1	0.1	(1)	0.1	0.2	0.4
17.5 and under 22.5 cents	.4	.3	0.1	.3	.6	.4
22.5 and under 27.5 cents	.5	.5	.2	.4	.8	.9
27.5 and under 32.5 cents	1.2	.9	.4	.9	1.6	2.5
32.5 and under 37.5 cents	1.6	1.3	.6	1.4	1.8	4.3
37.5 and under 42.5 cents	3.4	2.3	1.0	2.1	3.6	10.7
42.5 and under 47.5 cents	3.7	2.9	1.3	3.0	4.3	9.0
47.5 and under 52.5 cents	9.6	5.2	2.7	5.0	7.7	39.9
52.5 and under 57.5 cents	7.1	6.0	3.2	6.0	8.4	14.4
57.5 and under 62.5 cents	15.4	16.2	5.0	13.5	30.8	9.4
62.5 and under 67.5 cents	18.1	20.0	8.4	23.8	23.3	4.6
67.5 and under 72.5 cents	11.4	12.8	9.8	16.2	9.2	2.2
72.5 and under 77.5 cents	8.9	10.1	11.8	12.3	4.6	.8
77.5 and under 82.5 cents	5.8	6.6	11.3	7.0	1.8	.3
82.5 and under 87.5 cents	4.0	4.6	11.2	3.7	.5	.1
87.5 and under 92.5 cents	2.5	2.9	7.9	1.9	.3	(1)
92.5 and under 100.0 cents	2.5	2.9	9.4	1.2	.2	.1
100.0 and under 110.0 cents	2.0	2.3	8.0	.7	.2	(1)
110.0 and under 120.0 cents	1.0	1.1	4.1	.3	(1)	----
120.0 cents and over	.8	1.0	3.6	.2	.1	----
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	49,235	42,986	10,313	20,799	11,874	6,249
Average hourly earnings	$0.649	$0.669	$0.798	$0.651	$0.587	$0.497

[1]Less than one-tenth of 1 percent.

Variations by Sex and Skill

As in other industries, hourly earnings in meat packing vary conspicuously according to sex and skill. Among males, the averages were 79.8 cents for skilled, 65.1 cents for semiskilled, and 58.7 cents for unskilled employees. Hence, the difference between skilled and semiskilled (14.7 cents) was more than twice as large as that (6.4 cents) between semiskilled and unskilled workers. The average hourly earnings of all males amounted to 66.9 cents. The female

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group as a whole averaged 49.7 cents. This was 9 cents less than the average for unskilled males.

Geographical Differences

Table 2 presents average hourly earnings by States. In some States, to be sure, the coverage is relatively small, which limits the significance of their averages. This table indicates that, with the exception of Texas, Oklahoma, and Arizona, there is a marked cleavage between the average hourly earnings in the Southern States and those in the northern and western areas. For all workers, the averages were 66.7 cents in the northern and 49.7 cents in the southern wage district, a difference of 17.0 cents.

The average hourly earnings in the Texas-Oklahoma-Arizona region amounted to 58.3 cents. These higher earnings, as compared with other Southern States, may be explained largely by the fact that the average for this territory is heavily weighted by wages in plants of the "Big Four" companies, where hourly earnings are on the whole higher than those paid by the other packers, as will be pointed out later.

TABLE 2.—*Average hourly earnings of meat-packing workers, by wage district and State, December 1937*

Wage district and State	Average hourly earnings	Wage district and State	Average hourly earnings
United States	$0.649	Northern wage district—Continued.	
		New Jersey	$0.672
Northern wage district	.667	New York	.666
California	.717	North Dakota and South Dakota	.655
Colorado, including Idaho, Montana, Nevada, and Utah	.642	Ohio	.600
Illinois	.704	Pennsylvania	.589
Indiana	.599	Washington and Oregon	.682
Iowa	.634	Wisconsin	.692
Kansas	.674		
Maryland, including Delaware and West Virginia	.517	Southern wage district	.497
Massachusetts, including Connecticut, Maine, New Hampshire, and Rhode Island	.699	Kentucky	.441
Michigan	.618	Louisiana, including Arkansas and Mississippi	.292
Minnesota	.722	Tennessee	.426
Missouri	.696	Texas and Oklahoma, including Arizona	.583
Nebraska	.702	Virginia, including Alabama, Florida, Georgia, North Carolina, and South Carolina	.418

There are several explanations for the lower hourly earnings of employees in the southern as compared with the northern wage district. In part, the lower hourly earnings reflect the larger representation of the small packing companies in the Southern States. In addition, the southern plants are located in smaller communities,[3] where wage rates are customarily lower. Still another factor is the lesser degree of unionization in the southern area. A fourth factor is the relatively lower wages paid to colored as compared with white workers in the southern territory.

[3] In the South, there are no metropolitan areas with a population of 500,000 and over.

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Earnings by Type of Company

For the purposes of this survey, the companies covered have been divided into three types, namely the "Big Four," intermediate, and small companies. The "Big Four" packers are well known, each of them employing a considerable number of workers and having a large number of plants scattered throughout the country. Although much smaller than the "Big Four," the intermediate companies have similar characteristics. In general, they employ a large number of employees, who are found in one or more establishments, and have a wide distribution for their products. Among the small companies, few have more than 500 workers, and most of them have only one plant. The market of the small companies is usually restricted, although sometimes it may extend to more than one State.

Sharply contrasting wage levels are shown for the three types of companies (table 3). For all workers in the United States, hourly earnings averaged 70.1 cents for the "Big Four," 63.6 cents for the intermediate, and 56.2 cents for the small companies. The respective figures in the northern wage district were 71.5, 63.6, and 59.7 cents. In the southern wage district, the "Big Four" averaged 58.0 cents, as against 41.8 cents for the other companies. Similar relationships are found in the data for each of the skills among the males and for female workers.

TABLE 3.—*Average hourly earnings of meat-packing workers, December 1937, by wage district, type of company, sex, and skill*

Wage district and type of company	Number of plants	Total workers	Males				Females
			All	Skilled	Semi-skilled	Unskilled	
United States	258	$0.649	$0.669	$0.798	$0.651	$0.587	$0.497
"Big Four"	59	.701	.724	.874	.702	.633	.539
Intermediate [1]	16	.636	.659	.781	.650	.599	.492
Small [2]	183	.562	.579	.697	.554	.491	.415
Northern wage district	218	.667	.689	.820	.670	.607	.511
"Big Four"	51	.715	.739	.887	.717	.649	.550
Intermediate	16	.636	.659	.781	.650	.599	.492
Small	151	.597	.615	.733	.590	.525	.439
Southern wage district	40	.497	.512	.638	.493	.430	.368
"Big Four"	8	.580	.598	.761	.578	.501	.422
Other [2]	32	.418	.430	.541	.405	.360	.317

[1] Excludes 1 plant belonging to an intermediate company in southern wage district.
[2] Includes 1 plant belonging to an intermediate company in the southern wage district.

Influence of Size of Community

Although the meat-packing industry is now more widely scattered geographically than formerly, it is still centralized in the largest metropolitan areas.[4] In terms of the total workers in the sample, one-third were found in metropolitan areas with a population of

[4] In this report, communities are defined in terms of metropolitan areas. For places with a population of 100,000 and over, the metropolitan districts of the Bureau of the Census were used. A similar classification, which included not only the population within political subdivisions but also that of outlying areas, was adopted for the smaller communities. Thus, an attempt was made to classify all communities according to labor-market areas.

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1,000,000 and over, while somewhat less than one-half were in communities of 500,000 and over. One-fourth of the total employees were in metropolitan centers between 100,000 and 500,000, and over one-sixth were in places between 25,000 and 100,000. Only 7 percent were in communities with a population of under 25,000.

The average hourly earnings on the whole varied directly with the size of community. In the northern wage district, if places with a population of under 25,000 are excluded, the average for all workers increased gradually with the size of community, the range being from 61.8 cents for centers between 25,000 and 50,000 to 69.9 cents for metropolitan areas of 1,000,000 and over. The relatively high average in communities under 25,000 is due largely to the high wage level in one large establishment. In the southern wage district, the average hourly earnings were higher in metropolitan areas between 100,000 and 500,000 than those in places under 100,000. Generally speaking, the tendency for average hourly earnings to vary with size of community is also borne out by the data analyzed by sex and skill.

Earnings of White and Negro Workers

It is significant to note that the occupational opportunities for Negro workers are not so restricted in the meat-packing as in many other industries; this is evident from analysis of the composition of each color group, by skill. Of the total white males in the northern wage district, 24.7 percent were skilled, 48.4 percent semiskilled, and 26.9 percent unskilled employees. The respective figures for male Negroes were 20.0, 49.5, and 30.5 percent. A more or less similar situation prevailed in the southern wage district. Of all white males in this territory, 26.4 percent were skilled, 48.9 percent semiskilled, and 24.7 percent unskilled workers. The respective figures for male Negroes were 19.8, 39.8, and 40.4 percent.[5]

In the northern wage district, as shown in table 4, the average hourly earnings of Negroes exceeded those of whites for all workers as well as for each group classified on the basis of skill and sex. This is due to the fact that the Negroes constitute a larger proportion of the labor force in the larger companies, which have higher average hourly earnings.

In the southern wage district, on the other hand, the average hourly earnings of whites exceeded those of Negroes for all as well as for each group of workers. To some extent this is due to the fact that the proportion of Negroes was smaller in the "Big Four" companies, as compared with the other packers. For males, the Negroes constituted 23.9 percent of the total in the "Big Four," as against 29.9 percent in the other companies. However, the average hourly earnings of white males exceeded those of Negro males for each type of company. In the "Big Four," the averages were 61.1 cents for whites and 54.9 cents for Negroes, while in the small companies they were 44.6 cents for whites and 39.8 cents for Negroes.[6]

[5] Of the total northern males who were Mexicans and others, 11.8 percent were skilled, 51.8 percent semiskilled, and 36.4 percent unskilled employees. The respective southern figures were 22.3, 53.9, and 23.8 percent.

[6] It will be seen that the average hourly earnings were also higher for whites than for Mexicans and others in practically all cases. This was due largely to the fact that the majority of Mexicans and others were employed by other than the "Big Four" packers.

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TABLE 4.—*Average hourly earnings of meat-packing workers, by wage district, color, sex, and skill, December 1937*

Wage district and color	Number of workers						Average hourly earnings					
	Total	Males				Females	Total	Males				Females
		All	Skilled	Semi-skilled	Unskilled			All	Skilled	Semi-skilled	Unskilled	
Northern district	43,717	38,106	9,120	18,519	10,467	5,611	$0.667	$0.689	$0.820	$0.670	$0.607	$0.511
Whites	38,540	33,188	8,191	16,070	8,927	5,352	.663	.686	.818	.665	.603	.510
Negroes	4,447	4,231	848	2,093	1,290	216	.700	.708	.837	.705	.629	.531
Mexicans and others	730	687	81	356	250	43	.687	.694	.802	.704	.639	(1)
Southern district	5,518	4,880	1,193	2,280	1,407	638	.497	.512	.638	.493	.430	.368
Whites	3,874	3,292	871	1,609	812	582	.512	.533	.671	.498	.445	.376
Negroes	1,351	1,306	259	519	528	45	.458	.464	.538	.486	.403	(1)
Mexicans and others	293	282	63	152	67	11	.473	.481	.566	.458	.454	(1)

[1] Number of workers not sufficient to justify computation of an average.

Earnings in Union and Nonunion Plants

In considering unionization, the Bureau classified as a union plant one which had an agreement with one or more unions that covered a considerable proportion of the workers in the establishment.[7] Because of lack of complete information, it was impossible to classify the plants belonging to the "Big Four" and intermediate companies on that basis at the time of the survey. Hence the analysis of unionization must be confined to the smaller companies.

Of the 151 plants belonging to small companies in the northern wage district, 62 with 52.6 percent of the total employees were union establishments.[8] As indicated in table 5, the union plants averaged 6.1 cents per hour higher for all workers than the nonunion establishments, the respective figures being 62.7 and 56.6 cents. This difference is found in each size of community, although it is considerably less pronounced in the metropolitan areas of 1,000,000 and over than in other places.

Only 2 of the 31 plants belonging to small companies in the southern wage district had agreements with a union organization.

TABLE 5.—*Average hourly earnings of meat-packing workers in small companies, Northern wage district, December 1937, by unionization and size of community*

Unionization and size of community	Number of plants	Number of workers	Average hourly earnings
Union plants	62	5,712	$0.627
Under 50,000 population	11	695	.587
50,000 and under 250,000 population	11	1,189	.577
250,000 and under 1,000,000 population	15	970	.628
1,000,000 population and over	25	2,858	.658
Nonunion plants	89	5,140	.566
Under 50,000 population	21	1,112	.513
50,000 and under 250,000 population	15	578	.528
250,000 and under 1,000,000 population	22	1,488	.519
1,000,000 population and over	31	1,962	.645

[7] A workers' organization confined to a single plant and not affiliated with a larger group was not classified as a union plant. However, there were relatively few establishments in the meat-packing industry with workers' organizations confined to a single plant.

[8] It should be noted that the average number of employees was greater in the union than in the nonunion plants.

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Weekly Hours

In December 1937, the 8-hour day and 40-hour week were quite common in the meat-packing industry. Of the 258 plants covered, 100 reported a full-time week of 40 hours. In only 1 establishment were the normal weekly hours less than 40; in that plant they were 32. In the remaining plants, hours ranged from over 40 to 60, with 2 reporting over 40 and under 44 hours, 29 establishments 44 hours, 1 plant 44.5 hours, 24 plants 45 hours, 63 plants 48 hours, 13 plants 50 hours, 2 plants over 50 and under 54 hours, 11 plants 54 hours, 5 plants 55 to 56 hours, and 7 plants 60 hours.

Full-time hours were somewhat shorter for the "Big Four" companies, as is shown by the fact that 48 of the 59 "Big Four" plants covered in the survey reported a 40-hour week. By contrast, 52 of the 199 other plants normally worked 40 hours.

It should be noted that the full-time hours indicated above are those that apply to the majority of the workers engaged directly in production. Maintenance, powerhouse, and service employees, as well as some employees in the production departments, usually have different hours from those of the main body of workers.

For all wage earners, the actual weekly hours worked averaged 42.5 in December 1937. They amounted to 42.9 for males, as compared with 40.0 hours for females. The regional difference was slight, the northern workers averaging 42.6 and the southern 41.9 hours.

A more important difference in average weekly hours was found between employees of the "Big Four" and those of other companies. Compared with an average of 40.7 hours for workers in the "Big Four," the figures were 44.2 [9] for the intermediate and 44.9 [10] hours for the small companies.

Weekly Earnings

The average weekly earnings of all employees in the meat-packing industry amounted to $27.57 in December 1937. Male workers averaged $28.69, as against $19.91 for females. Among the males, the averages were $34.41 for skilled, $28.07 for semiskilled, and $24.80 for unskilled employees. The averages for all workers were $28.43 in the northern and $20.79 in the southern wage district.

The highest average weekly earnings—$28.56—are shown for the employees of the "Big Four" companies. Workers of the intermediate and small companies averaged respectively $28.13 [9] and $25.25.[10] This spread is somewhat narrower than might be expected from the broad differences in hourly earnings and is explained by the longer hours worked per week by employees of the intermediate and small companies.

Over two-fifths (43.8 percent) of the total labor force in the industry had weekly earnings between $24 and $32, and over seven-tenths (71.3 percent) earned between $20 and $36 a week. As many as 13.4 percent were paid $36 and over, but only 1.6 percent earned $48 and over. There were 12.1 percent between $12 and $20, while 3.2 percent received under $12 a week.

[9] Excludes 1 intermediate plant in the southern wage district.
[10] Includes 1 intermediate plant in the southern wage district.

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TABLE 6.—*Average weekly hours and weekly earnings in meat-packing industry, by wage district, sex, and skill, December 1937*

Wage district	Total	Males				Females
		Total	Skilled	Semi-skilled	Unskilled	
	Average weekly hours					
United States	42.5	42.9	43.1	43.1	42.3	40.0
Northern wage district	42.6	42.9	43.1	43.1	42.5	40.3
Southern wage district	41.9	42.4	43.5	43.0	40.4	38.0
	Average weekly earnings					
United States	$27.57	$28.69	$34.41	$28.07	$24.80	$19.91
Northern wage district	28.43	29.59	35.29	28.92	25.80	20.58
Southern wage district	20.79	21.69	27.73	21.19	17.37	13.97

Annual Earnings, 1937

Wage earners who were employed throughout 1937 in the meat-packing industry averaged $1,437 in annual earnings. Such workers constituted three-fifths (59.6 percent) of the total for whom annual data were obtained. The average annual earnings of employees who worked 9 months or more amounted to $1,369. This group comprised 85.4 percent of all wage earners covered by the annual data. These averages, however, apply only to workers found on the pay roll of the plants surveyed by the Bureau of Labor Statistics in December 1937, who were employed by the same establishment for one or more pay-roll periods during that year.

The survey of hourly earnings covered 258 establishments, with 49,235 wage earners. However, annual data were obtained for 230 plants and 46,978 employees.[11]

The coverage for hourly earnings was selected with great care, in order to make it representative of the total industry, taking into consideration geographical distribution, size of community, corporate affiliation, size of establishment, product, and unionization. As regards annual data, the omission of 28 plants makes the sample less balanced, especially since all but 2[12] of these establishments belong to the small companies. On the other hand, the coverage of the small companies is still large, including as many as 157 plants with 11,638 employees.[13] Moreover, an analysis shows that the sample of the small companies is fairly well distributed from the standpoint of each of the factors considered.

Along with the data on annual earnings for each wage earner, there was obtained the number of pay-roll periods worked during the calendar year 1937. The latter information made it possible, as in other surveys, to classify the employees as follows: (1) Those

[11] There were 47,149 workers scheduled for hourly earnings in these 230 establishments. The small difference between this number of employees and that covered by the annual data is accounted for by some casual laborers and other workers for whom annual figures were not easily available.

[12] No annual earnings data were obtained in 2 establishments belonging to the "Big Four" packers.

[13] One intermediate plant in the South is included in the small companies.

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working during each pay-roll period throughout the year; (2) those working 9 months or more; (3) those working 6 months or more; and (4) those working any part of the year. Except for the figures covering employees who worked each pay-roll period in the year, the data for those working 9 months or more are the most significant from the standpoint of presenting the total annual earnings received from the industry for the year. This is due to the fact that in most instances, if one works 9 months or more in a given plant during the year, his opportunity to obtain work in other establishments is very small.

Variations by Sex and Skill

Considerable differences are found in the annual earnings of workers classified on the basis of sex and skill. (See table 7.) Males averaged $465 more than females among employees who worked throughout the year, and the difference between the two sexes for those whose work was spread over 9 months or more was almost as large, namely $456. Taking employees who worked 12 months, the difference between skilled and semiskilled males amounted to $314, which may be compared with only $125 between semiskilled and unskilled males. The respective figures for employees who worked 9 months or more were $314 and $132.

Likewise, there was considerable variation in the stability of employment among workers classified by sex and skill. Of the total employees for whom annual data were obtained, the proportion working throughout the year amounted to 61.9 percent for males and 43.6 percent for females. Among males, the percentages were 70.5 for skilled, 64.6 for semiskilled, and 49.6 for unskilled employees. If the group is enlarged to include all those who worked 9 months or more, the difference in the percentages between males and females is much less pronounced, the respective figures being 86.4 and 78.6 percent. The percentages for males were 93.1 for skilled, 89.1 for semiskilled, and 75.6 for unskilled employees.

TABLE 7.—*Average annual earnings in meat-packing industry, 1937, by sex, skill, and wage district*

Sex and skill	Average annual earnings of employees whose work extended over—											
	12 months			9 months or more			6 months or more			Any part of year		
	United States	Northern wage district	Southern wage district	United States	Northern wage district	Southern wage district	United States	Northern wage district	Southern wage district	United States	Northern wage district	Southern wage district
Total	$1,437	$1,459	$1,199	$1,369	$1,394	$1,122	$1,326	$1,353	$1,068	$1,235	$1,264	$967
Males	1,480	1,502	1,239	1,422	1,447	1,173	1,383	1,412	1,115	1,292	1,323	1,007
Skilled	1,736	1,762	1,481	1,687	1,716	1,423	1,662	1,693	1,393	1,614	1,649	1,321
Semiskilled	1,422	1,443	1,183	1,373	1,398	1,125	1,343	1,371	1,075	1,276	1,306	997
Unskilled	1,297	1,320	1,029	1,241	1,266	970	1,184	1,214	899	1,039	1,072	746
Females	1,015	1,035	785	956	989	746	919	940	713	841	859	658

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Men's Neckwear Industry—Earnings and Hours, 1939[1]

The men's neckwear industry includes the manufacture of men's and boys' four-in-hand, bow, and other neckties, scarfs, and mufflers not made in knitting mills. It is a relatively small industry, having provided employment for an average of 10,152 wage earners in 289 establishments in 1937, the last year for which Census of Manufactures data are available.

The industry is characterized by small factories, generally located in or near large cities. New York City is the largest producing area, although for a number of years it has been losing factories to the outlying commuting area. Neckwear plants, in common with the needle trades in general, are extremely mobile, since their machinery and housing needs can be supplied easily and the type of labor required can be trained in a short time.

Most manufacturers of men's neckwear make only the one product, although there are a few, generally large plants, which also produce shirts, robes, or other furnishings, such as garters, suspenders, belts, etc. The principal overlapping of product is found in the manufacture of men's scarfs, which are extensively produced in women's neckwear factories as well as in establishments where the major product is men's or boys' neckties.

The Bureau's survey of the industry included 120 establishments in 20 States, and covered 4,940 workers. The wages and hours data for most plants were taken from representative pay rolls for the first 3 months of 1939, a majority of them falling between January 15 and March 15. Female workers predominate in the industry, comprising about 86 percent of the total labor force, if one may judge from the sample covered in this survey.

There were formerly a great many home workers in the industry. At the time of the Bureau's survey, however, home work had been either prohibited or placed under regulation in all States of any importance in the industry. The survey indicated that only about 5 percent of the employees of all plants covered were home workers.[2]

Union agreements were found in 51 of the plants covered, which employed 38 percent of the workers.

Average Hourly Earnings

Nearly four-fifths (78.4 percent) of all employees surveyed were on straight piece work, with no guaranteed wage other than the 25-cent legal minimum under the Fair Labor Standards Act. The range of individual employees' earnings in the neckwear industry was unusually wide, considering the comparative simplicity of the occupational structure of the industry. This wide dispersion was due largely to extreme regional differences.

A distribution of employees according to individual hourly earnings shows almost 65 percent were paid less than the average (table 1). However, there were no very pronounced concentrations of workers in any single earnings class.

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[1] Abstract of article in the Monthly Labor Review for February 1940, prepared by Frances M. Jones and George E. Votava, of the Bureau of Labor Statistics.

[2] Wages and hours data for home workers are not included in the tabulations presented in this article, since it is not possible to obtain accurate information concerning hours of work for this class of employees.

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TABLE 1.—*Percentage distribution of men's neckwear workers by average hourly earnings and by sex, 1939*

Average hourly earnings (in cents)	All workers	Males	Females	Average hourly earnings (in cents)	All workers	Males	Females
Under 17.5	0.1	.....	0.1	67.5 and under 72.5	2.0	4.0	1.7
17.5 and under 22.5	.6	0.1	.7	72.5 and under 77.5	1.6	3.7	1.3
22.5 and under 25.0	.7	.1	.8	77.5 and under 82.5	1.5	3.6	1.2
25.0 and under 27.5	9.5	5.7	10.0	82.5 and under 87.5	1.0	3.2	.7
27.5 and under 30.0	5.6	1.7	6.2	87.5 and under 92.5	1.3	6.2	.5
30.0 and under 32.5	6.5	2.7	7.1	92.5 and under 100.0	1.0	4.3	.5
32.5 and under 35.0	7.1	2.4	7.9	100.0 and under 110.0	1.5	8.0	.4
35.0 and under 37.5	8.2	3.6	8.9	110.0 and under 120.0	.9	4.9	.2
37.5 and under 40.0	7.7	3.6	8.3	120.0 and under 130.0	.4	2.2	.1
40.0 and under 42.5	7.7	5.0	8.1	130.0 and under 140.0	.9	5.3	.1
42.5 and under 47.5	10.7	6.4	11.7	140.0 and over	.9	4.4	.3
47.5 and under 52.5	8.8	4.9	9.5	Total	100.0	100.0	100.0
52.5 and under 57.5	6.5	6.0	6.5	Number of workers	4,940	697	4,243
57.5 and under 62.5	3.8	3.0	4.0	Average hourly earnings	$0.470	$0.710	$0.427
62.5 and under 67.5	3.5	5.0	3.2				

There was a very wide difference between the average hourly earnings of male and female workers. However, as male employees constitute only a seventh of all wage earners, it was the women's earnings that influenced most the average of the industry.

New York City proper, excluding the commuting area, had by far the highest wages in the industry, the average hourly earnings of all workers being 74.2 cents. Average earnings in the remainder of the country were 43.1 cents an hour for all workers, or 31.1 cents lower than the average for New York City proper.

Hourly earnings were generally higher in union than in nonunion establishments, although there were numerous nonunion factories paying wages as high as, if not higher than, the prevailing rates in their respective labor markets. The average difference in favor of union plants in the country as a whole was 10.2 cents an hour, or 23.5 percent greater than the nonunion figure.

Table 2 presents wage and hour data for the principal occupational groups.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of men's neckwear workers, 1939, by sex and occupation*

Sex and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	4,940	$0.470	34.7	$16.32
Males	697	.710	37.6	26.70
Cutters and markers	213	.846	38.4	32.48
Sewing-machine operators	121	.935	28.4	26.54
Pressers	106	.728	35.6	25.93
Packers, boxers, and folders	44	.399	41.7	16.65
Plant clerks	113	.504	42.6	21.47
Miscellaneous skilled workers, production and maintenance departments	43	1.013	41.0	41.56
Miscellaneous semiskilled and unskilled workers, production, maintenance, and service departments	57	.328	42.2	13.84
Females	4,243	.427	34.3	14.62
Sewing-machine operators	1,158	.457	34.1	15.61
Slip stitchers, hand	1,148	.448	33.8	15.15
Slip-stitch machine operators	179	.432	34.4	14.86
Basters, hand	216	.424	31.7	13.47
Miscellaneous hand sewers	113	.419	34.6	14.50
Pressers	534	.414	34.4	14.21
Turners	253	.392	30.7	12.01
Trimmers and cleaners	181	.351	34.2	12.01
Examiners	48	.409	37.4	15.32
Packers, boxers, and folders	188	.332	38.5	12.78
Plant clerks	62	.381	40.9	15.57
Learners	40	.265	35.1	9.30
Miscellaneous skilled workers, production department	52	.544	41.0	22.27
Miscellaneous semiskilled and unskilled workers, production, maintenance, and service departments	71	.341	37.4	12.75

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Only 2.5 percent of all employees surveyed worked overtime at extra rates, and their total earnings were increased by slightly less than 2 cents an hour over their earnings at regular rates. The average of this group of employees who had some overtime pay was 39.8 cents an hour at regular rates, and 41.7 cents when overtime pay is averaged over the week's work. The inclusion of these extra earnings in the aggregate wages of all employees made a difference of only one-tenth of a cent in the average hourly earnings of all workers.

Weekly Hours and Earnings

The 5-day week predominated in the men's neckwear industry, and the full-time, or normal, hours of work per week ranged from 30 to 44 in the first half of 1939. A substantial proportion of the employees, however, were not working full time in the first half of 1939. The shortest full-time workweek of any significant number of plants was 36 hours, but about 40 percent of the wage earners worked less than 36 hours during the 1-week pay-roll period covered. The actual hours worked by another 20 percent were 36 and under 40 per week, and about 15 percent worked exactly 40 hours. Another 15 percent worked exactly 44 hours, then the legal maximum at regular rates of pay, and 2.7 percent worked longer than 44 hours. Average actual hours per week for all wage earners were 34.7.

Weekly earnings for the hours actually worked of all employees in the men's neckwear industry averaged $16.32 in the first half of 1939. About three-fifths of the wage earners earned less than the average, however, and more than three-fourths (78.0 percent) received below $20. Almost a fifth (18.9 percent) were paid under $10. The latter represents, in most cases, earnings for part-time work. The average weekly earnings of female workers were $14.62; of male, $26.70.

Men's Robe Industry—Earnings and Hours, 1938[1]

The production of men's and boys' bath, lounging, and beach robes, dressing gowns, lounge suits, house coats, and similar articles of apparel constitutes a relatively small and not well-defined industry. As a matter of fact, these products are manufactured to some extent in practically all of the apparel-industry divisions presented by the Census of Manufactures. There is, however, a small group of factories in which the manufacture of men's and boys' robes and related products constitutes the sole or major production. It is this last group of establishments that the Bureau's survey covered, and they will be referred to hereafter as the men's robe industry.

The survey covered 24 plants and 1,353 workers, which is estimated to be approximately half of the employment in firms that produced men's and boys' robes as a major product during the 1938 season. The New York City metropolitan area is represented in the sample by 33.5 percent of the workers, the remainder of the Eastern States

[1] Abstract of article in the Monthly Labor Review for March 1940, prepared by Frances M. Jones and George E. Votava, of the Bureau of Labor Statistics.

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by 55.7 percent, and the Middle Western and Pacific States by 10.8 percent.

Collective bargaining with employees is common practice in the New York City area, and it is also found to some extent in other regions.

The piece-work method of wage payment is not found in men's robe factories to the extent that it exists in most of the other divisions of the needle trades. Little more than a third of the workers in the Bureau's survey were paid straight piece rates. The bundle system of production is used in most plants making men's robes. Only two of the establishments surveyed had the line system for stitching operations, another used a progressive bundle system, and one employed the tailor system of production.

Average Hourly Earnings

The average hourly earnings of the 1,353 workers covered by the Bureau's survey in the men's robe industry were 46.2 cents in the fall of 1938. Individual hourly earnings, however, covered a wide range (table 1), owing to sex, regional, and occupational differences.

TABLE 1.—*Percentage distribution of men's robe workers according to average hourly earnings, by sex, 1938*

Average hourly earnings (in cents)	All workers	Males	Females	Average hourly earnings (in cents)	All workers	Males	Females
Under 22.5	0.4	0.6	0.4	72.5 and under 77.5	1.7	4.2	0.9
22.5 and under 25.0	.3	----	.4	77.5 and under 82.5	1.3	3.9	.4
25.0 and under 27.5	12.8	3.6	15.7	82.5 and under 87.5	.8	3.0	.1
27.5 and under 30.0	6.4	1.5	8.0	87.5 and under 92.5	1.6	5.1	.4
30.0 and under 32.5	13.4	6.4	15.6	92.5 and under 100.0	1.2	3.6	.4
32.5 and under 35.0	5.8	4.8	6.2	100.0 and under 120.0	2.2	8.3	.3
35.0 and under 37.5	13.8	5.1	16.3	120.0 and under 140.0	.7	2.4	.2
37.5 and under 40.0	5.2	3.0	6.0	140.0 and under 150.0	2.0	8.3	----
40.0 and under 42.5	3.9	3.3	4.1	150.0 and over	.1	.6	----
42.5 and under 47.5	7.3	5.1	8.0				
47.5 and under 52.5	6.1	5.7	6.2	Total	100.0	100.0	100.0
52.5 and under 57.5	5.0	3.6	5.4				
57.5 and under 62.5	3.2	6.7	2.1	Number of workers	1,353	331	1,022
62.5 and under 67.5	3.0	5.5	2.3	Average hourly earnings	$0.462	$0.704	$0.380
67.5 and under 72.5	1.8	5.7	.6				

The average hourly earnings of male workers exceeded those of females by 85.3 percent. Males earned an average of 70.4 cents, which is 24.2 cents higher than the industry average; females averaged 38.0 cents, or 8.2 cents below the average for the industry.

Regional Differences

The New York City metropolitan area showed the highest hourly earnings in the men's robe industry. The average in this region was 62.9 cents, or two-thirds more than that for the remainder of the country, and over one-third higher than the total industry average. More than one-half of the plants in the New York City metropolitan area had higher average hourly earnings than the highest-wage establishment outside of that district.

Despite the relatively high wage level, there is considerable diversity in earnings within the New York City metropolitan area. The

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lowest-wage plant had an average of 33.0 cents, the highest 81.4 cents.[2] At least two factors contribute to the wide range of plant averages in this region. One is collective bargaining, the other is the class of product manufactured.[3] All the plants with union agreements had higher averages than the highest-wage nonunion establishment. Furthermore, in union plants, wages are scaled according to class of garment, the class being determined by the wholesale price of the garment. The minimum wage paid in the manufacture of the highest-price class is approximately 75 percent greater than the minimum in the lowest-price class of garment.[4]

Occupational Differences

Table 2 presents wage and hour data for the principal occupational groups for the country as a whole.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings of men's robe workers, by sex and occupation, 1938*

Sex and occupation	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All occupations	1,353	$0.462	38.0	$17.53
Males	331	.704	39.0	27.50
Cutters, markers, and spreaders [1]	77	.957	40.0	38.24
Sewing-machine operators	73	.783	38.4	30.03
Pressers	67	.615	34.3	21.13
Plant clerks	24	.518	42.7	22.12
Miscellaneous skilled workers	27	.779	42.7	33.24
Miscellaneous semiskilled and unskilled workers	63	.437	40.8	17.83
Females	1,022	.380	37.6	14.30
Sewing-machine operators	682	.386	37.3	14.40
Hand sewers	56	.445	36.0	15.99
Trimmers and cleaners	73	.345	38.5	13.28
Pressers	14	.359	41.1	14.75
Packers, boxers, and folders	69	.323	42.9	13.86
Plant clerks	14	.333	34.6	11.51
Miscellaneous workers	114	.389	36.2	14.07

[1] These occupations were grouped, because the duties involved are often combined in one job.

Increase in Hourly Earnings From Overtime Rates

The figures thus far cited have referred only to basic hourly earnings. i. e., wages earned at regular rates of pay. The inclusion of extra earnings for overtime in the aggregate wages of all employees increased the average hourly earnings for the industry by only four-tenths of a cent. As the longer hours were worked by a larger proportion of males than females, the average for all males was increased by 1½ cents, and the average for females by a tenth of a cent.

[2] These plants are comparable with respect to operations performed, both being contract stitching establishments.

[3] Because of the lack of data concerning the class of garment manufactured, information obtained in the survey is not conclusive as to whether or not there is a material difference in the wage levels of plants making men's robes in New York City proper and the outlying commuting area, when the union factor is eliminated.

[4] Hearings to consider the recommendations of Industry Committee No. 2 for the Apparel Industry, November 27, 1939 (Official Report of Proceedings Before the Wage and Hour Division, pp. 1056–1057).

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Milk Condenseries—Wages and Hours, 1938[1]

The major product of the 161 condenseries reported as operating in the United States in 1938 was evaporated milk, though some plants also made one or both of the two other forms of preserved milk—condensed milk and dry milk. A survey made by the United States Women's Bureau in March and April 1938 covered 3,143 workers in 113 plants, all but 137 of the employees being men. The plants were located in 20 States and included the major producers in each State and some smaller plants in the more important of the States in the production of evaporated milk.

Weekly Hours

The majority of the condenseries visited operated on a schedule of more than 40 hours per week. The scheduled hours reported by 14 plants were 40 a week; by 34 plants, 44 hours; by 5 plants, between 44 and 48 hours; by 31 plants, 48 hours; and by 9 plants, between 48 and 63 hours. The other 20 plants had irregular hours. A 6-day week was reported by 74 plants and a 7-day week for some employees by 39 plants, including 6 with a 7-day week for the plant.

Hourly and Weekly Earnings

Wages were on a time-rate basis in all but three plants. Payment according to production, but with a guaranteed time-rate minimum, was in effect in these three plants.

Hourly earnings.—The median hourly earnings (midpoint) for the 2,926 workers in the 112 condenseries for which hours were reported were 50.1 cents and the mean (arithmetic average) was 48.8 cents. Over seven-tenths of the employees earned from 40 to 60 cents an hour.

A comparison by occupations reveals that the highest hourly earnings (57.3 cents) were in the can-manufacturing department, and that the operating engineers had the next highest earnings (53.6 cents). Workers in the department where the fresh milk was received and tested, and operators of the milk-processing machines averaged 49.7 and 49.3 cents an hour, respectively.

The general utility and warehouse men earned an average of 48.3 cents an hour, and workers in the can-filling and packing department had the lowest average (45.3 cents).

Weekly earnings.—The week's earnings recorded in the survey included actual earnings for all work, including overtime. Of the 113 condenseries scheduled, 52 reported pay for overtime, 30 at the rate of time and one-half and 22 at straight time. The median week's earnings ($23.50) were approximately the same as the mean ($23.25). A large majority of the workers (71.2 percent) earned $20 or more in the week, and two-fifths (40.4 percent) earned $25 or more. Among the States, California plants had the highest proportion (71 percent) of the workers earning $25 or more. This was due to higher hourly rates and also to the large proportion

[1] From the Monthly Labor Review for February 1939.

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working 48 hours or more. With the exception of a few States where the difference in the hours of work of many workers affected the week's earnings, the ranking of the States in week's earnings was the same as in hourly earnings.

Millinery Industry—Earnings and Hours, 1937-38[1]

The millinery industry is highly seasonal, and in consequence employment is extremely variable and annual earnings of the workers are low. Frequent style changes, a demand for low-priced hats, excessive competition, and inadequate resources of the manufacturers are some of the factors which have affected adversely the economic welfare of both employers and employees in the industry. In 1935 and 1936, when most manufacturing industries showed gains in employment, pay rolls, average earnings, salaries, and profits, the reverse was true in the millinery industry. There was no gain in employment, average earnings increased only slightly, and average salaries of officials and average net profits declined.

This singularly unfavorable economic condition led to a joint request by employers and employees to the United States Secretary of Labor for a comprehensive study of the industry. A Nation-wide survey of the industry was, in consequence, made by the United States Women's Bureau in the spring of 1938, but was limited to firms which had been in business at least 11 months during 1937 and the spring of 1938.[2]

Employment Conditions

The manufacture of millinery is carried on in 12 major production areas.[3] In 1937 there were over 800 manufacturers in the industry, who employed an average of 22,000 workers and did a gross business of over $91,000,000. The industry has two peaks of production in the year (the spring peak of 15 weeks, and the fall peak of 9 weeks), 14 very dull weeks, and 14 transition weeks in which preparations are being made for the busy season or production is reduced as orders fall off. The manufacturer must make enough during the peak seasons to carry him and the continuous overhead through the dull season and for some part of the transitional weeks. The worker, also, even though he may work each week in the year, must plan to make his earnings in the busy seasons spread over the dull and transitional periods.

Only a little over one-quarter (26.7 percent) of the workers on the pay rolls in 1937 worked the 46 weeks or more that may be considered as regular employment. Almost one-half of the workers worked less than 20 weeks; these obviously represent, it is said, the extras employed for short periods by individual firms.

Table 1 shows the amount of employment secured by employees in the different occupations in 1937.

[1] Abstract of an article in the Monthly Labor Review for August 1939, by Mary Anderson, Director, Women's Bureau.

[2] See U. S. Women's Bureau Bulletin No. 169: Conditions in the Millinery Industry in the United States, Washington, 1939.

[3] New York City, up-State New York and Connecticut, northern New Jersey, Philadelphia and Trenton, Massachusetts, South Atlantic area, Texas, Illinois, Cleveland, Detroit, and Milwaukee, Missouri, Los Angeles, and San Francisco.

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TABLE 1.—*Number of weeks worked by employees in the millinery industry in 1937, by occupation*

Occupation	Employees with weeks worked reported	Percent of total employees who worked—					
		Under 4 weeks	4, and under 8 weeks	8, and under 13 weeks	13 weeks	14, and under 20 weeks	20, and under 26 weeks
All occupations	26,798	22.1	10.0	8.1	1.3	7.4	6.0
Blockers	2,886	11.4	7.7	7.3	1.2	6.4	4.5
Cutters	310	18.7	11.3	5.8	1.9	4.2	4.8
Operators	5,132	16.6	10.1	10.2	1.5	10.6	9.6
Trimmers	11,501	26.0	8.7	6.3	1.1	6.3	4.9
General factory	3,508	30.0	16.1	11.1	1.7	7.6	5.1
All nonproductive	3,461	18.5	10.1	8.6	1.3	7.0	6.8

	Percent of total employees reported who worked—						
	26 weeks	27, and under 33 weeks	33, and under 39 weeks	39 weeks	40, and under 46 weeks	46, and under 52 weeks	52 weeks
All occupations	0.8	3.8	4.4	0.9	8.5	17.2	9.5
Blockers	.5	3.8	4.6	.9	10.3	23.4	18.1
Cutters	.3	1.3	1.0	.3	8.1	17.7	24.5
Operators	1.3	4.9	4.7	1.1	8.3	14.7	6.4
Trimmers	.6	3.9	4.9	1.1	10.6	19.7	5.8
General factory	.5	3.2	3.4	.6	4.2	9.7	6.8
All nonproductive	1.0	3.1	3.7	.5	4.5	14.6	20.4

Factors in the industry which are capable of improvement include oversupply of workers, excessive competition, lack of scientific business organization, and imperfect factory management. Effective cooperation and systematic effort of employers and employees, through a strong union of employees (such as already exists) and a strong association of employers, are necessary to bring about improvement in these factors. An organized effort toward lengthening seasons, through consumer aid, and assessing style trends far enough in advance to allow planning of each season's production, would, it was suggested, tend to stabilize employment and advance the economic interests of the industry.

Hourly Earnings

With some exceptions, productive workers in the millinery industry are paid on a piece-rate basis. In union shops every effort is made, in fixing rates, to insure the same returns to the worker regardless of the great variation in the work, and a minimum scale of week's wages is stated in union contracts. The productivity of the worker depends on the style and price of the hat, the amount of work involved, etc., the trimmer's output being generally larger on the cheaper hats than on the more expensive ones.

In San Francisco, because of the character and volume of the work, all workers are paid a weekly rate. In other areas, cutters and general factory workers are paid on a time basis. Blockers usually, and sewing-machine operators occasionally, work as a "corporation"; i. e., from two to four workers pool their earnings, each receiving a certain sum for the week.

Hourly earnings in the various areas are shown in table 2.

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TABLE 2.—*Average hourly earnings of millinery workers in a week of March 1938, by areas*

Area	Number of employees	Average hourly earnings	Median hourly earnings
All areas	7,525	$0.909	$0.778
New York City	4,162	1.080	.896
Up-State New York and Connecticut	71	.726	.592
Northern New Jersey	285	.718	.688
Philadelphia and Trenton	211	.783	.719
South Atlantic area	76	.524	.506
Texas	349	.368	.356
Illinois	1,232	.784	.680
Cleveland, Detroit, and Milwaukee	367	.670	.652
Missouri	570	.732	.715
San Francisco	202	.538	.485

Weekly Earnings

Average weekly earnings of millinery workers in 1937 ranged from $16.11 for general factory workers to $39.04 for cutters. In the week of maximum employment, average earnings varied from $17.32 for general factory workers to $60.14 for blockers, but in the week of minimum employment earnings had dropped so that the range was from $8.74 for trimmers to $31.12 for cutters. In all the productive occupations, average earnings were higher in New York City than in the other productive areas. The earnings of the nonproductive force did not vary much during the year, averaging a little more than $24 a week. Weekly earnings in the various occupations in 1937 are shown in table 3.

TABLE 3.—*Number of workers and weekly earnings of millinery workers in 1937*

Occupation	Number of workers			Weekly earnings		
	Average	Maximum	Minimum	Average	Maximum	Minimum
All employees [1]	14,837	17,883	9,723	$23.54	$32.55	$15.60
Blockers	2,009	2,402	1,509	36.96	60.14	16.57
Cutters	218	258	170	39.04	48.11	31.12
Operators	2,654	3,855	1,522	30.31	45.36	17.10
Trimmers	6,461	7,500	3,857	16.44	24.34	8.74
General factory workers	1,411	3,932	926	16.11	17.32	14.69
Nonproductive workers [2]	1,739	1,989	3,429	24.20	24.23	24.16

[1] Includes designers, not shown separately.
[2] Includes foremen, shipping, and office.

Annual Earnings

To only 19 percent of the workers on the pay rolls in 1937 had the firms paid as much as $1,000 in the year. Only a little more than one-third had received as much as $600. As many as 10,000 workers received less than $100 during the year, and there were 3,000 who received less than $10. Blockers had larger earnings than those in other occupations.

A percentage distribution of millinery workers in the various occupations, by annual earnings, is presented in table 4.

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TABLE 4.—*Percentage distribution of millinery workers by annual earnings in 1937 and by occupation*

Year's earnings	All occupations	Blockers	Cutters	Operators	Trimmers	General factory workers	All nonproductive occupations
Under $10	9.5	4.0	0.9	3.9	14.6	11.9	3.9
$10 and under $25	7.9	3.4	6.4	4.9	9.5	13.1	6.3
$25 and under $50	6.6	3.8	6.4	5.3	6.6	11.1	6.5
$50 and under $75	4.3	2.6	2.3	4.0	4.0	7.8	4.5
$75 and under $100	3.3	2.4	2.3	3.0	2.9	5.6	3.4
$100 and under $200	8.8	6.0	8.1	8.0	8.0	12.5	11.2
$200 and under $300	6.2	4.3	4.6	7.4	5.7	7.2	6.9
$300 and under $400	5.3	4.2	5.2	7.0	5.1	4.7	4.8
$400 and under $500	5.2	3.0	2.0	7.0	5.9	3.6	3.6
$500 and under $600	5.2	3.0	2.9	6.4	6.1	2.9	3.8
$600 and under $700	5.1	2.6	1.7	5.4	6.1	4.2	3.7
$700 and under $800	5.3	3.3	1.4	4.5	7.0	3.8	4.6
$800 and under $1,000	8.6	6.0	3.8	7.4	10.9	5.3	8.2
$1,000 and under $1,500	9.5	15.4	15.4	11.7	6.8	4.8	14.7
$1,500 and under $2,000	4.2	14.8	13.6	6.7	.6	1.3	6.4
$2,000 and under $2,500	2.8	11.9	10.4	5.1	(1)	.2	3.2
$2,500 and under $3,000	1.3	5.8	8.1	1.9	(1)	.1	1.7
$3,000 and under $3,500	.4	1.9	3.5	.2	.....	(1)	1.1
$3,500 and under $4,000	.2	.9	.9	(1)	.....	.....	1.0
$4,000 and under $4,500	.1	.7	.....	.....	.....	.....	.3
$4,500 and under $5,000	(1)	.....	.....	.....	.....	.....	.2
$5,000 and over	.1	(1)	.....	.....	.....	.....	.4
Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a twentieth of 1 percent.

Motortruck Drivers and Helpers—Union Wages and Hours, 1940[1]

The term "truck drivers" covers a heterogeneous group of occupations, such as drivers of building and excavating trucks, coal trucks, ice trucks, general hauling and transfer trucks, delivery trucks hauling various and miscellaneous commodities, and express and freight trucks. Each truck-driving occupation and each size and type of truck usually has a different wage rate. Furthermore, there is great variation in the terminology used to describe the different occupations. For these reasons it is impossible to make an intercity classification by types. The data on all truck driving in all cities studied, therefore, are treated as for one trade in this study, division being made only between drivers and helpers.

Wage payments for drivers doing local hauling, or making local deliveries which do not involve sales functions, are almost universally established on a time basis. Most frequently the agreements specify hourly rates, although daily or weekly wage scales are not uncommon. In order to achieve comparability, these daily and weekly wage scales have been converted as far as possible to an hourly basis.

Agreements covering route drivers, particularly those handling bakery products, beer, laundry, and milk, commonly classify the drivers as salesmen. Ordinarily the compensation of these drivers is specified as a weekly guaranty plus various commissions based upon

[1] Abstract of article in the Monthly Labor Review for February 1941, prepared by Frank S. McElroy, of the Bureau of Labor Statistics.

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the volume of deliveries or collections. Similarly the agreements covering road drivers commonly specify either trip or mileage rates rather than hourly wage scales. All quotations specifying such commission, trip, or mileage wage scales, which could not be converted to an hourly basis, have been excluded from the computations upon which this report is based.

The average hourly wage rate of union motortruck drivers in 71 cities [2] was 80.5 cents on June 1, 1940. The average rate for union helpers was 66.1 cents per hour and the average for drivers and helpers combined was 78.3 cents per hour. Actual rates for drivers ranged from 26.7 cents per hour for milk drivers during their first 6 months of employment as route builders in Norfolk, Va., to $1.413 per hour for drivers of 3-axle fruit trucks in Newark, N. J. Helpers' rates ranged from 30 cents per hour for beer drivers' helpers in Charleston, W. Va., and for freight-truck helpers in Dallas, Tex., to $1.125 per hour for helpers on theatrical-equipment trucks in New York City.

Hourly Wage Rates

Over 78 percent of the union motortruck drivers for whom hourly wage rates were specified in the cities studied, had rates between 65 cents and $1.05 per hour. Rates of less than 65 cents per hour applied to 13.4 percent of the drivers, but only 2.4 percent had rates of less than 50 cents per hour. Rates of $1.05 per hour and higher were specified for 8.1 percent of the drivers, but only eight-tenths of 1 percent had rates as high as $1.20 per hour.

Nearly 83 percent of the helpers had hourly rates between 50 and 85 cents. The rate of 60 cents per hour was particularly significant in the helper classifications, over 13 percent of the total membership being reported as having that specific rate. Rates of less than 50 cents per hour applied to 9.3 percent of the helpers, but only 2.1 percent had scales of under 40 cents. In the upper wage-rate brackets, 1.4 percent of the helpers had rates of $1 per hour or higher and 6.6 percent had rates between 85 cents and $1 per hour.

TABLE 1.—*Percentage distribution of union motortruck drivers and helpers by hourly rates, June 1, 1940*

Classified hourly rate	Drivers and helpers	Drivers	Helpers	Classified hourly rate	Drivers and helpers	Drivers	Helpers
Average hourly rate	$0.783	$0.805	$0.661	Percent of members whose rates were—			
Percent of members whose rates were—				80 and under 85 cents	11.8	12.2	9.5
Under 35 cents	0.2	0.1	0.6	85 and under 90 cents	7.2	8.1	2.2
35 and under 40 cents	.3	.1	1.5	90 and under 95 cents	6.3	6.8	3.4
40 and under 45 cents	1.1	.9	2.2	95 cents and under $1	5.2	5.9	1.0
45 and under 50 cents	1.9	1.3	5.0	$1 and under $1.05	6.3	7.3	.8
50 and under 55 cents	4.0	2.8	10.7	$1.05 and under $1.10	3.6	4.2	.2
55 and under 60 cents	3.9	3.5	6.4	$1.10 and under $1.15	1.7	1.9	.4
60 and under 65 cents	7.4	4.7	22.6	$1.15 and under $1.20	1.0	1.2	-------
65 and under 70 cents	9.5	9.4	10.4	$1.20 and under $1.25	.4	.4	-------
70 and under 75 cents	10.9	10.9	10.8	$1.25 and under $1.30	.3	.3	-------
75 and under 80 cents	16.9	17.9	12.3	$1.30 and under $1.35	.1	.1	-------
				$1.35 and over	(1)	(1)	-------

[1] Less than a tenth of 1 percent.

[2] See footnote 2, p. 46, for list of cities covered in 1940.

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Overtime Rates

Time and one-half was specified as the initial overtime rate in 73 percent of the quotations for drivers and in 80 percent of the quotations for helpers. In respect to membership, this overtime rate applied to 63 percent of the drivers and to 76 percent of the helpers. (See table 2.)

TABLE 2.—*Overtime rates provided for motortruck drivers and helpers in union agreements, June 1, 1940*

Overtime rate	Drivers and helpers		Drivers		Helpers	
	Number of quotations	Percent of members covered	Number of quotations	Percent of members covered	Number of quotations	Percent of members covered
No penalty rate provided	338	10.8	292	11.7	46	5.7
Time and one-third	40	3.7	26	3.6	14	4.3
Time and one-half	1,628	65.1	1,286	63.3	342	76.2
Double time	8	.3	7	.3	1	.1
Other penalty rates	146	19.6	125	20.7	21	13.1
Overtime prohibited	21	.5	18	.4	3	.6

Maximum Weekly Hours

The average full-time weekly hours in effect for union drivers and helpers in the 71 cities was 47.2 on June 1, 1940. For drivers the average full-time week was 47.4 hours; for helpers the average was 46.3 hours. The higher average for drivers resulted mainly from the fact that helpers were not generally included in the quotations covering road drivers, whose hours were usually longer. The basic workweek of 43.6 percent of the drivers was 48 hours. (See table 3.) A considerable number of drivers were also reported as having normal workweeks of over 40 but less than 44 hours. To a large extent these were 42-hour scales established in conformity with the provisions of the Fair Labor Standards Act. Relatively few drivers were reported as having normal workweeks of less than 40 hours or of more than 60 hours.

TABLE 3.—*Percentage distribution of union motortruck drivers and helpers, by hours per week, June 1, 1940*

Classified hours per week	Drivers and helpers	Drivers	Helpers	Classified hours per week	Drivers and helpers	Drivers	Helpers
Average weekly hours	47.2	47.4	46.3	Percent of members whose hours per week were—			
Percent of members whose hours per week were—				Over 48 and under 51	1.3	1.4	0.9
Less than 40	.4	.3	.8	51	7.8	9.1	.6
40	12.7	12.9	11.6	Over 51 and under 54	.9	.7	1.9
Over 40 and under 44	5.3	5.0	6.6	54	5.5	5.6	5.0
44	12.5	11.8	16.0	Over 54 and under 60	1.7	1.9	.6
Over 44 and under 48	4.1	3.8	5.6	60	3.3	3.8	.4
48	44.4	43.6	50.0	Over 60	.1	.1	-------

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Trend of Wage and Hour Scales

Data based upon comparable quotations for the trucking industry, from which inferences relating to trends may be drawn, are available only for the past 4 years. Since 1936, however, the movement of wage rates has been consistently upward and that of allowed weekly hours has been generally downward.

In 1937 the wage rates of union truck drivers and helpers were 6.6 percent higher on the average than in 1936. The 1938 survey showed an average increase of 3.6 percent over 1937, and in 1939 the reports indicated a further rise of 2.2 percent over 1938. Proportionately, the rise of 2.0 percent between June 1, 1939, and June 1, 1940, indicated by the reports upon which this study is based, was less than that shown in any of the 3 preceding years.

The year-to-year changes in allowed weekly hours since 1936 have all been small. In 1937 the weekly hours of drivers and helpers, on the average, were 0.9 percent less than in 1936. In 1938 the average was unchanged from 1937, but in 1939 the reports indicated an average decline of 0.9 percent from 1938. Similarly the comparable reports obtained in 1940 indicated a further decrease of 0.9 percent from the average allowed hours of 1939.

Office Workers—Earnings, 1937, 1938, and 1940

New York State Factories, October 1940[1]

Weekly earnings of office workers in factories of New York State averaged $35.04 in October 1940. The average for male workers was $45.25, practically double the $22.88 received by women. Office workers received higher pay than shop workers in all industry groups except water, light, and power. The difference between office and shop earnings was much greater for men than for women, men averaging $32.62 in the shops as compared with $45.25 in offices, while women averaged only $4.71 more in offices than in shops.

TABLE 1.—*Employment, pay rolls, and average weekly earnings in representative New York State factories, October 1940*

Industry	Number of employees	Amount of pay roll	Average weekly earnings
All industry groups	49,780	$1,744,310	$35.04
Stone, clay, and glass	996	31,160	31.29
Metals and machinery	20,372	778,789	38.23
Wood manufactures	1,378	44,022	31.95
Furs, leather, and rubber goods	3,145	84,471	26.86
Chemicals, oils, paints, etc	4,448	170,157	38.25
Pulp and paper	540	18,715	34.66
Printing and paper goods	7,596	272,737	35.91
Textiles	2,288	62,059	27.12
Clothing and millinery	3,841	102,601	26.71
Food and tobacco	3,708	124,650	33.62
Water, light, and power	1,468	54,949	37.43

The number of employees, total pay rolls, and average weekly earnings of office employees in representative factories in New York State in October 1940 are shown in table 1, by industry groups. The figures are from the New York Department of Labor's annual report on office workers' earnings, published in its Industrial Bulletin

[1] From the Monthly Labor Review for February 1941.

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(Albany) for November 1940. The employees covered in the survey included clerks, stenographers, bookkeepers, accountants, cashiers, stock clerks, office managers, and superintendents, and also such technical employees as draftsmen, chemists, and other laboratory assistants doing routine work. Salesmen and executives were omitted.

Table 2 gives average weekly earnings of men and of women in factory offices of New York State in October 1940.

TABLE 2.—*Average weekly earnings of men and women in factory offices, October 1940*

Industry group	Men			Women		
	Total State	New York City	Upstate	Total State	New York City	Upstate
All industry groups	$45.25	$43.56	$46.05	$22.88	$24.08	$22.03
Stone, clay, and glass	(1)	(1)	(1)	(1)	(1)	(1)
Metals and machinery	46.30	42.63	47.04	22.28	24.05	21.83
Wood manufactures	42.95	38.28	44.78	20.63	21.00	20.51
Furs, leather, and rubber goods	38.76	38.19	39.22	20.75	21.91	19.27
Chemicals, oils, paints, etc	53.85	36.58	59.74	24.35	23.87	24.61
Pulp and paper	(1)	(1)	(1)	(1)	(1)	(1)
Printing and paper goods	45.02	48.60	38.53	24.57	25.58	22.56
Textiles	38.06	40.99	37.07	20.60	21.19	20.40
Clothing and millinery	37.24	37.23	37.34	22.65	23.30	20.56
Food and tobacco	42.27	45.58	35.75	23.84	25.38	22.17
Water, light, and power	(1)	(1)	(1)	(1)	(1)	(1)

[1] Separate earnings not computed because of small number of employees.

New York City, 1937 and 1938[2]

Weekly salaries of office workers in New York City averaged $31.12 in a pay period falling in May or June 1938, according to a survey made by the industrial bureau of the Merchants' Association of New York (New York City) covering 316 employers and 44,334 workers. The highest average salary for any occupation was $55.27 for accountants, and the lowest average, $21.92 for file clerks. Some accountants, however, received as little as $20 and others as much as $147.50 per week, while the range for file clerks was from $11 to $60. The lowest rate for any occupation, $10, was found in a miscellaneous office group, and the highest, $230.77, in the group of chief and supervisory clerks. The low, high, and average salaries for the different occupation groups are shown in the table below.

TABLE 3.—*Weekly salaries of office workers in New York City, May–June 1938*

Occupations	Number of companies reporting	Number of employees covered	Weekly salaries		
			Low	High	Average
All occupations	316	44,334	$10.00	$230.77	$31.12
Accountants	190	953	20.00	147.50	55.27
Auditors	90	499	17.50	138.50	51.65
Bookkeepers, machine operators	181	848	15.00	82.50	25.61
Bookkeepers, nonmachine operators	227	1,316	13.85	92.31	30.32
Stenographers and secretaries, male	89	396	12.00	109.61	34.94
Stenographers and secretaries, female	297	5,617	14.00	96.15	30.37
Typists	204	2,870	12.00	55.00	22.83
Dictaphone operators	80	515	15.00	38.08	25.15
Telephone operators	280	1,172	13.00	61.25	23.65
Office-machine operators	193	2,464	14.00	70.00	24.53
Chief and supervisory clerks	253	3,339	15.00	230.77	52.07
File clerks	217	1,794	11.00	60.00	21.92
Other office occupations	283	22,551	10.00	175.00	29.95

The report of the Merchants' Association for 1938 did not contain information on numerical distribution of office workers among the

[2] From Monthly Labor Review, January and November 1938.

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various salary brackets, as was the case with that for 1937. The data on distribution given in the 1937 report are therefore reproduced in table 4.

TABLE 4.—*Distribution of clerical workers in New York City, by salary groups, May 1937*

Earnings group	Total	Accountants	Auditors	Bookkeepers		Stenographers and secretaries	
				Machine operators	Others	Male	Female
Number of reporting companies	297	178	88	168	215	86	281
Number of employees covered	43,592	1,061	491	926	1,306	342	5,413
Weekly earnings of—							
Over $300	1						
$225.00 to $300.00	3	1					
$200.00 to $224.99	2		1				
$175.00 to $199.99	4	2					
$150.00 to $174.99	12						
$140.00 to $149.99	10					1	
$130.00 to $139.99	15	2	2				
$120.00 to $129.99	30	4	2				
$110.00 to $119.99	40	9	7				
$100.00 to $109.99	82	8	9			1	1
$90.00 to $99.99	121	27	12		1	4	4
$85.00 to $89.99	105	18	7		1	1	2
$80.00 to $84.99	143	36	9		1	1	3
$75.00 to $79.99	246	49	16		3	5	7
$70.00 to $74.99	226	38	14	1	5	1	10
$65.00 to $69.99	371	57	21	1	6	3	27
$60.00 to $64.99	557	58	28	2	17	6	42
$55.00 to $59.99	665	62	34	1	17	7	71
$50.00 to $54.99	1,136	104	46	15	46	9	143
$45.00 to $49.99	1,531	171	77	10	76	15	202
$40.00 to $44.99	2,585	148	57	14	91	27	377
$35.00 to $39.99	3,864	75	61	54	151	40	604
$30.00 to $34.99	7,554	78	51	139	233	94	1,380
$25.00 to $29.99	8,131	65	20	372	255	69	1,325
$20.00 to $24.99	8,699	43	15	229	250	46	852
$15.00 to $19.99	7,147	6	2	88	148	12	356
$10.00 to $14.99	311				5		7
Less than $10	1						

Earnings group	Typists	Dictaphone operators	Telephone operators	Office-machine operators	Chief and supervisory clerks [1]	File clerks	All other clerical occupations
Number of reporting companies	199	81	262	178	222	209	260
Number of employees covered	2,838	435	1,079	2,178	3,034	1,904	22,585
Weekly earnings of—							
Over $300					1		
$225.00 to $300.00					1		1
$200.00 to $224.99					1		
$175.00 to $199.99					1		1
$150.00 to $174.99					10		2
$140.00 to $149.99					5		4
$130.00 to $139.99					10		1
$120.00 to $129.99					21		3
$110.00 to $119.99					20		4
$100.00 to $109.99					45		18
$90.00 to $99.99					56		17
$85.00 to $89.99					53		23
$80.00 to $84.99					75		18
$75.00 to $79.99			1		118		47
$70.00 to $74.99					105		52
$65.00 to $69.99				2	175		79
$60.00 to $64.99			1		245	1	157
$55.00 to $59.99				1	268	3	201
$50.00 to $54.99		3	1	3	369	5	392
$45.00 to $49.99	9	4	8	9	392	13	545
$40.00 to $44.99	22	1	9	30	524	36	1,249
$35.00 to $39.99	59	14	44	70	224	68	2,400
$30.00 to $34.99	325	70	178	298	179	195	4,334
$25.00 to $29.99	555	123	370	598	104	267	4,008
$20.00 to $24.99	877	167	320	782	22	533	4,563
$15.00 to $19.99	963	53	147	380	10	751	4,231
$10.00 to $14.99	28			5		32	234
Less than $10							1

[1] Includes department heads.

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Paperboard Industry—Hourly Earnings, November-December 1939[1]

As defined for the purpose of this survey, the paperboard industry includes the manufacture of container boards, boxboards, building boards and papers, rag felts, and related products. The survey also included the preparation of pulp from waste paper, straw, and rags, but it did not cover departments in which wood-pulping operations were performed. The first processing of waste paper, straw, and rags for paperboard purposes is usually done in the paperboard mill, and consequently it forms an integral part of paperboard manufacture. Most of the wood pulp used, however, is supplied by independent pulp mills, as few of the board plants engage in the primary pulping operations on this raw material. For this reason, the wood-pulp departments found among the plants scheduled were excluded from the coverage. The definition excludes paper, with the exception of heavy building papers. Some of the establishments scheduled also make various types of paper in addition to paperboard.

The survey covered 16,332 wage earners, employed in 134 establishments. The selection of plants to be scheduled was made in such a way as to obtain a representative cross section of the industry. Accordingly, a description of the characteristics of the establishments surveyed will indicate the outstanding features of the industry as a whole.[2]

The paperboard industry is widely distributed in the United States. In terms of wage earners scheduled, Michigan, in the Lake region, is the most important State, with 9.9 percent of the total. Next in size, however, is Louisiana, with 9.2 percent of the workers covered. Of almost equal importance are the States of New York, Illinois, New Jersey, and Ohio.

Most of the establishments in the paperboard industry are relatively small in size, as measured by employment. Although the single-plant company predominates, a number of important producers have two or more plants. Several large companies have mills in nearly every important producing area. The majority of the paperboard plants are in relatively small communities.

Average Hourly Earnings

Hourly earnings of all wage earners covered by the survey averaged 59.8 cents in November–December 1939. Wide variations in hourly earnings were found, however, among the different plants and in the various sections of the country. Because of the wide variety of products covered by the survey, it is very difficult to develop any positive relationship between type of product and average hourly earnings. In many instances, an apparent product difference is obscured by variations caused by size of establishment, geographical location, etc.

The following table shows the geographical differences in wage levels. Average hourly earnings ranged from 48.5 cents in the East Central region to 73.8 cents in the Pacific region.

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[1] Abstract of article in the Monthly Labor Review for May 1940, prepared by H. E. Riley, of the Bureau of Labor Statistics.

[2] The reports of the United States Census of Manufactures do not show separate data for the paperboard industry.

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Percentage distribution of paperboard workers by average hourly earnings and region, November–December 1939

Average hourly earnings	United States	Northeastern region	East Central region	Southern region	Midwestern region	Lake region	Pacific region
Under 30.5 cents	0.6			3.3	0.1		
30.5 and under 31.5 cents	.1			.3	(1)		
31.5 and under 32.5 cents	(1)			.1			
32.5 and under 33.5 cents	.2	0.3		.3			
33.5 and under 34.5 cents	.1		0.1	.2	(1)	0.7	
34.5 and under 35.5 cents	.8	.1	1.3	3.7	.2		
35.5 and under 36.5 cents	2.2	.1	2.1	11.3			
36.5 and under 37.5 cents	1.2	.2	16.6	.7	.1	.1	
37.5 and under 38.5 cents	1.2	.4	10.8	2.7			
38.5 and under 39.5 cents	.5	(1)	3.3	1.1	.2	.2	
39.5 and under 44.5 cents	8.9	6.2	20.6	24.6	5.1	.3	
44.5 and under 49.5 cents	11.0	12.6	12.0	14.1	9.4	10.7	
49.5 and under 54.5 cents	13.1	16.7	7.0	8.5	17.3	12.3	0.1
54.5 and under 59.5 cents	15.4	20.3	6.5	6.2	19.7	18.2	1.6
59.5 and under 69.5 cents	22.9	21.8	11.3	7.1	27.5	29.9	49.3
69.5 and under 79.5 cents	10.4	10.4	4.0	4.2	10.9	14.2	24.6
79.5 and under 89.5 cents	5.5	5.5	1.3	3.6	5.5	7.5	10.5
89.5 and under 99.5 cents	2.8	2.5	2.3	3.4	1.6	2.7	8.1
99.5 and under 124.5 cents	2.6	2.1	.4	3.5	2.1	3.0	5.6
124.5 and under 149.5 cents	.4	.5	.4	1.0	.2	.2	
149.5 cents and over	.1	.3		.1	.1		.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	16,332	4,990	972	2,986	3,994	2,418	972
Average hourly earnings	$0.598	$0.606	$0.485	$0.528	$0.611	$0.642	$0.738

[1] Less than one-tenth of 1 percent.

Union organization is fairly extensive in the paperboard industry. Of the 134 plants surveyed, 48, or about one-third, had agreements with international unions. The proportion of wage earners employed in plants having agreements ranged from 22.2 percent of the total scheduled in the Northeastern region to virtually 100 percent in the Pacific States.

Wage levels generally tended to be higher in union than in nonunion plants. In the Northern area (including all but the East Central and Southern regions), for example, 18 of the 69 nonunion plants had averages of under 50 cents an hour, whereas none of the 42 mills having union contracts showed averages below that amount. On the other hand, 19 union, as compared with 13 nonunion establishments, averaged 65 cents or more. In the East Central and Southern regions, 12 of the 17 nonunion plants averaged under 55 cents. Of the 6 union establishments, however, only 2 had averages under this figure.

Paper Products, Converted, Industry—Hourly Earnings, January 1940[1]

Hourly earnings of wage earners in the converted paper-products industry averaged 54.6 cents in January 1940. Males averaged 61.5 cents, as compared with 41.6 cents for females.

General averages, however, convey little information about the wage structure in this industry, which is in reality a combination of separate industry groups. The variety of wage levels among the

[1] Abstract of article in the Monthly Labor Review for May 1941, prepared by H. E. Riley, of the Bureau of Labor Statistics.

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several groups is indicated by the fact that average hourly earnings ranged from 79.8 cents in plants making automobile panel boards to 45.7 cents in plants making twisted paper products.

For the purposes of this study, the definition of the converted paper products industry was defined, in general, to include the manufacture of all products which have as a basic component, pulp, paper, or paperboard, and the manufacture of all like products in which synthetic materials such as cellophane, pliofilm, or synthetic resin used in sheet form is a basic component.

Reports of the Census of Manufactures do not contain comparable figures on number of wage earners or amount of wage payments. It is believed, however, that the number of wage earners exceeds 150,000.

The manufacture of paper products has occupied an increasingly important place in the industrial picture. Paper has been introduced as a substitute for wood, metal, glass, and fabrics, in the manufacture of such different articles as shipping boxes, automobile body parts, hats, towels, bags, and containers for liquids.

Scope of Survey

The data on earnings and hours of work that form the basis of this report were obtained through a field survey conducted by the Bureau of Labor Statistics in the early part of 1940. The survey included approximately one-third of the wage earners in the industry. These workers were employed in a representative group of establishments selected for careful study.

For most of the plants, data were secured for a pay-roll period during the months of January or February 1940. The schedules for some establishments, however, cover a pay-roll period during the months of November and December 1939.

As indicated earlier, the converted paper products industry manufactures a wide variety of articles having few characteristics in common. So diverse are these products as well as the conditions under which they are manufactured that a general picture of the wage structure of the entire industry has little meaning. Accordingly, the plants dealt with in this report have been classified into 29 broad groups; these include 28 fairly distinct product categories and one miscellaneous group which embraces plants making products not elsewhere classifiable and not sufficiently important to warrant separate consideration.

The industry includes plants in all parts of the United States. New York was the most important State, with 19.1 percent of all wage earners covered. Massachusetts ranked second, with 8.9 percent, but was only slightly ahead of Pennsylvania and Illinois, each of which had 8.5 percent of the employees scheduled.

The large majority of the establishments covered by the survey were located in large metropolitan areas. Among the 807 establishments scheduled, 360 were in places of 1,000,000 population and over, 208 were in communities of 250,000 to 1,000,000, 101 in cities of 50,000 and under 250,000, 89 in communities of 10,000 and under 50,000, and only 49 in places of under 10,000 population.

Measured by number of wage earners, including not only workers on paper products but also those in departments making other items, the

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establishments in the converted paper products industry range from under 20 to over 2,500 in number of employees. Of the 807 establishments covered in the survey, 214 employed under 21 workers, 204 had 21 to 50, 140 had 51 to 100, 140 had 101 to 250, 44 had 251 to 500, 43 had 501 to 1,000 and 22 had 1,000 and over.

The survey included 702 establishments whose output fell within a single product classification. Of the remaining 105 plants surveyed, 85 made two products, 14 were classified in three product groups, and 6 made products falling in four different categories. The most common combination involved set-up and folding boxes.

The survey included independent paper converters, self-contained converters, and consumer plants. The independent converters use only purchased paper and paperboard, whereas the self-contained mills both make the primary paper or board and convert it into the final product. The consumer plants are those establishments that make converted paper products mainly for the use of a parent or controlling company. Typical in the latter group are the box departments of hosiery mills, hat factories, and breakfast-cereal establishments.

Of the 807 establishments surveyed, all but 151 were independent converters. The latter number included 103 self-contained plants and 48 consumer plants.

Only 176 of the plants surveyed were reported as having agreements with national labor unions. Labor organization was most extensive in New York State, where 52 of the plants scheduled had agreements. The States of California and Pennsylvania ranked next, each having 18 union plants. Some union organization was found in nearly all of the States in which a substantial number of plants were covered.

Union organization was likewise widespread in terms of product groups, being found in nearly all of the branches.

Average Hourly Earnings

In view of the different characteristics exhibited by the various product groups surveyed, it is apparent that a single average or even an inclusive wage distribution is of little value in presenting a picture of the wage structure in the converted paper products industry. Whereas the general average for the industry was 54.6 cents, table 1 shows that average hourly earnings of the wage earners surveyed varied from 79.8 cents in the automobile panel-board plants to 45.7 cents in plants making twisted-paper articles.

Further evidence as to variations in earnings among production units making different products is furnished by table 2, which shows the distribution of individual employees' earnings for all branches of the industry combined and separately for the 7 major industry branches. An outstanding example is found in the distribution for set-up paper boxes. Of the 9,478 workers scheduled in this branch, one-eighth (12.4 percent) were receiving exactly 30 cents an hour. This concentration doubtless reflects the 30-cent minimum wage which was in effect at the time of the survey under provisions of the Fair Labor Standards Act.

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TABLE 1.—*Average hourly earnings of employees in converted paper-products industry, January 1940, by product and sex*

Product	Number of employees			Average hourly earnings		
	Total	Males	Females	Total	Males	Females
All products	59,879	37,821	22,058	$0.546	$0.615	$0.416
Adding-machine rolls and similar products	165	145	20	.514	.531	.357
Auto panel board	1,069	823	246	.798	.828	.696
Blank books, tablets, and index cards	2,789	1,583	1,206	.531	.615	.412
Cans, tubes, cores, and related products	2,792	1,847	945	.481	.524	.390
Carbon paper	211	146	65	.579	.658	.393
Commercial envelopes	3,556	1,750	1,806	.550	.660	.434
Corrugated and solid fiber shipping containers	10,363	8,171	2,192	.562	.589	.449
Die-cut specialties	515	360	155	.566	.638	.385
Expanding envelopes and related products	429	187	242	.481	.593	.383
Folding paper boxes	8,393	6,388	2,005	.594	.642	.425
Glazed and fancy paper	691	612	79	.572	.584	.465
Gummed paper	1,199	1,017	182	.596	.624	.446
Lace-paper and fluted-paper products	836	464	372	.476	.570	.352
Milk-bottle caps and hoods	573	468	105	.546	.572	.416
Miscellaneous rolls and wrapping specialties	734	540	194	.574	.643	.370
Paper, cellophane, and glassine bags	3,141	1,696	1,445	.528	.622	.409
Paper cups	1,461	791	670	.565	.661	.439
Photo mounts	279	141	138	.513	.605	.410
Sandpaper	756	705	51	.665	.677	.484
Sensitized paper	557	381	176	.647	.711	.507
Set-up paper boxes	9,478	3,331	6,147	.464	.579	.395
Shipping sacks	1,386	680	706	.513	.593	.418
Stationery	1,209	496	713	.482	.571	.414
Tags and labels	1,211	761	450	.587	.684	.408
Tissue products	2,296	1,343	953	.519	.578	.427
Twisted-paper products	763	606	157	.457	.486	.342
Waterproof paper	329	303	26	.594	.609	.394
Waxed paper	1,644	1,483	161	.660	.684	.431
Paper products not elsewhere classified	1,054	603	451	.513	.591	.396

TABLE 2.—*Percentage distribution of employees in converted paper-products industry, January 1940, by average hourly earnings and product*

Average hourly earnings	All products	Commercial envelopes	Corrugated and solid fiber shipping containers	Folding paper boxes	Paper, cellophane, and glassine bags	Set-up paper boxes	Shipping sacks	Tissue products
Under 30.0 cents	0.4	(1)	(1)	0.5	(1)	1.6	0.1	0.4
Exactly 30.0 cents	5.7	3.5	3.0	4.7	5.2	12.4	5.5	3.6
30.1 and under 32.5 cents	1.6	.8	.8	.7	2.5	3.4	.1	1.5
32.5 and under 35.0 cents	3.3	1.1	.8	1.8	4.4	7.2	3.6	5.0
35.0 and under 37.5 cents	7.2	7.0	4.4	5.3	8.8	11.2	11.8	6.0
37.5 and under 40.0 cents	4.3	2.8	3.3	2.4	4.0	7.7	.9	3.5
40.0 and under 42.5 cents	8.7	13.7	8.0	8.5	11.5	9.4	7.2	6.6
42.5 and under 47.5 cents	12.8	22.0	12.3	9.6	9.4	13.6	30.4	13.1
47.5 and under 52.5 cents	12.1	12.0	14.2	11.6	19.3	9.7	9.7	18.0
52.5 and under 57.5 cents	9.3	7.1	11.8	10.3	6.3	6.3	8.7	12.3
57.5 and under 62.5 cents	7.2	5.1	10.4	9.5	3.9	3.6	6.1	6.3
62.5 and under 67.5 cents	6.4	3.4	9.4	8.5	7.2	2.5	4.7	10.3
67.5 and under 72.5 cents	5.1	3.8	7.0	4.8	4.3	2.5	3.5	6.9
72.5 and under 77.5 cents	3.9	3.1	4.5	5.0	2.9	2.6	2.5	2.2
77.5 and under 82.5 cents	2.8	3.1	3.1	3.0	2.1	1.4	.8	1.9
82.5 and under 87.5 cents	2.3	2.3	2.3	2.4	1.9	1.4	1.2	1.3
87.5 and under 92.5 cents	2.0	2.6	1.8	2.5	1.9	1.2	1.2	.5
92.5 and under 100.0 cents	1.5	1.6	1.3	2.5	1.6	.9	.2	.4
100.0 and under 110.0 cents	1.5	2.4	.9	2.5	1.2	.6	.9	.1
110.0 and under 120.0 cents	.9	1.3	.4	1.8	.7	.4	.6	(1)
120.0 and under 130.0 cents	.5	.5	.2	.8	.4	.2	.1	-------
130.0 cents and over	.5	.8	.1	1.3	.5	.2	.2	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of workers	59,879	3,556	10,363	8,393	3,141	9,478	1,386	2,296

[1] Less than a tenth of 1 percent.

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Regional Differences

Many of the product groups include too few plants or employees to warrant detailed analysis in terms of other factors that may influence wages. For purposes of regional comparisons, sufficient information is available to permit the analysis of only 7 of the major industry branches. The regional averages for these groups are shown in table 3.

TABLE 3.—*Average hourly earnings in selected product groups in converted paper-products industry, January 1940, by region*

Product	United States	North-eastern region	Mid-western region	Western region	Southern region
Commercial envelopes	$0.550	$0.551	$0.554	$0.641	$0.488
Corrugated and solid fiber shipping containers	.562	.559	.574	.674	.470
Folding paper boxes	.594	.572	.630	.705	.428
Paper, cellophane, and glassine bags	.528	.570	.475	.601	.463
Set-up paper boxes	.464	.477	.438	.540	.372
Shipping sacks	.513	.486	[1].566	----------	.461
Tissue products	.519	.434	.571	.615	.474

[1] Includes 1 plant in the Western region.

It will be observed that in each of these groups wage levels were highest in the West.[2] Furthermore, in every case but one, the lowest averages were found in the South.

To a considerable degree the regional differences in average hourly earnings reflect the influence of other factors. One of these is the extent of collective bargaining. Union organization was sufficiently extensive in three of the major industry branches to afford some indication of the effects of labor agreements on wage levels. A distribution of the plants surveyed in these branches, classified by plant average hourly earnings and unionization, is shown in table 4. From this tabulation it is clearly evident that the wage level is generally higher in union than in nonunion plants. The West, which showed the highest wage levels in these products, also had a substantially higher proportion of union establishments among those surveyed.

TABLE 4.—*Distribution of plants in converted paper-products industry by average hourly earnings and unionization, for selected product groups, January 1940*

Plant average hourly earnings	Corrugated and solid fiber shipping containers		Folding paper boxes		Set-up paper boxes	
	Union	Nonunion	Union	Nonunion	Union	Nonunion
Under 35.0 cents	----------	2	----------	3	----------	24
35.0 and under 40.0 cents	----------	9	----------	10	2	49
40.0 and under 45.0 cents	----------	17	----------	14	4	61
45.0 and under 50.0 cents	2	9	1	19	14	37
50.0 and under 55.0 cents	5	17	2	18	12	20
55.0 and under 60.0 cents	9	22	4	12	17	9
60.0 and under 65.0 cents	6	3	8	7	8	1
65.0 and under 70.0 cents	4	4	5	6	----------	----------
70.0 cents and over	4	1	12	4	3	----------
Total	30	84	32	93	60	201

[2] This is true of shipping sacks, although an average for the Western area cannot be shown without divulging confidential information.

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Comparisons With Results of Previous Survey

The last previous survey by the Bureau of the converted paper-products industry was conducted in 1935 and covered a pay-roll period in August of that year. That study included only two of the branches covered by the present report, namely, folding boxes and set-up boxes. As the two surveys were conducted along similar lines, a comparison of the results will throw some light on changes that may have occurred during the 4½-year period in the wage structures of these important product groups.

The earlier survey revealed that hourly earnings in the folding-box branch averaged 53.5 cents in August 1935. This average is 5.9 cents under that shown for January 1940. Male employees benefited considerably more than females from the increase, the average for males showing a gain of 6.5 cents, as against only 3.6 cents for females. Most of the shift occurred in northern plants, where average hourly earnings advanced 6.2 cents, as against a gain of only 1.3 cents in the South. It is of interest to note that fewer workers in 1935 than in 1940 (5.2 percent as against 7.7 percent) were averaging under 35 cents. On the other hand, 22.1 percent in 1935, as compared with 15.4 percent in 1940, were receiving under 40 cents an hour.

Hourly earnings in the set-up box branch averaged 43.6 cents in August 1935. The average for January 1940 was 46.4 cents, representing an increase of 2.8 cents. Male employees received twice as great an increase as females (3.4 cents as compared with 1.7 cents). Virtually all of the upward shift occurred in the Northern region, which showed a gain of 2.9 cents in average hourly earnings, as against only one-half cent in the South. About 7 percent of the set-up box workers were receiving under 30 cents an hour in 1935 whereas in 1940 less than 2 percent of the workers had hourly earnings below that amount. The proportions of employees averaging below 35 cents were 30.5 percent in 1935 as against 24.6 percent in 1940. Over half (51.9 percent) of the workers scheduled in 1935, as compared with 43.5 percent in 1940, were receiving under 40 cents an hour.

In both of the above-mentioned branches of the industry, the proportion of males and the regional distributions of plants were about the same in 1940 as in 1935.

Police Departments—Salaries and Working Conditions, 1938[1]

This article summarizes the findings of a comprehensive survey of salaries, hours, and working conditions in municipal police departments, conducted by the Bureau of Labor Statistics in cooperation with the Work Projects Administration. The present analysis is based on reports received from 362 cities with a population of 25,000 or more.

[1] Summary of article in the Monthly Labor Review for April 1941. For a more detailed report, see Serial No. R. 1253 of the Bureau of Labor Statistics.

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The accompanying table shows classified salaries for all police-department employees and separately for chiefs, patrolmen, and policewomen. The data are presented by size of city, with New York City being shown separately because of the large size of the department and the relatively high salary scale.

Approximately three-fourths of all employees of police departments were patrolmen, and their salaries consequently dominated the distribution of salaries for all employees. Although annual rates of pay of patrolmen ranged from about $580 to $3,000, less than 1 percent of all patrolmen received less than $100 a month. The highest salaries reported for patrolmen were $3,000 in New York City and also in a few medium-sized cities near New York City. The wide variation in patrolmen's salaries is due not only to differences in size of city and location but also to the fact that in some departments patrolmen are divided into as many as 5 grades (in New York City

Municipal police-department employees in the United States in selected occupations, by salary, July 1, 1938

Salary class	All occupations [1]						Chiefs					
	All cities	New York City	Size of city [2]				All cities	New York City	Size of city [2]			
			500,000 and over	100,000 to 500,000	50,000 to 100,000	25,000 to 50,000			500,000 and over	100,000 to 500,000	50,000 to 100,000	25,000 to 50,000
Cities reporting specified occupations	362	1	12	79	95	175	359	1	12	79	94	173
All salaries	90,703	19,556	31,247	23,646	8,613	7,641	359	1	12	79	94	173
Under $950	265	------	53	103	64	45	------	------	------	------	------	------
$950–$1,049	164	23	13	58	37	33	------	------	------	------	------	------
$1,050–$1,149	222	2	102	74	24	20	------	------	------	------	------	------
$1,150–$1,249	749	91	108	222	240	88	------	------	------	------	------	------
$1,250–$1,349	456	52	95	102	72	135	------	------	------	------	------	------
$1,350–$1,449	960	65	109	206	260	320	1	------	------	------	------	1
$1,450–$1,549	1,633	185	106	659	302	381	------	------	------	------	------	------
$1,550–$1,649	3,032	35	248	1,217	621	911	------	------	------	------	------	------
$1,650–$1,749	4,440	148	497	1,833	948	1,014	2	------	------	------	------	2
$1,750–$1,849	3,924	38	395	1,390	994	1,107	3	------	------	------	------	3
$1,850–$1,949	5,581	7	394	3,791	725	664	3	------	------	------	------	3
$1,950–$2,049	6,139	1,813	485	2,561	603	677	6	------	------	------	------	6
$2,050–$2,149	6,613	------	3,469	1,884	807	453	7	------	------	------	------	7
$2,150–$2,249	11,950	86	7,466	3,041	759	598	5	------	------	------	------	5
$2,250–$2,349	3,195	399	1,189	1,068	383	156	6	------	------	------	------	6
$2,350–$2,449	6,773	40	4,326	1,764	447	196	35	------	------	1	5	29
$2,450–$2,549	8,163	22	5,856	1,288	591	406	17	------	------	1	5	11
$2,550–$2,649	4,088	9	3,646	262	108	63	9	------	------	------	4	5
$2,650–$2,749	866	3	505	181	119	58	17	------	------	------	3	14
$2,750–$2,849	1,027	75	513	205	81	153	11	------	------	1	2	8
$2,850–$2,949	843	6	647	45	127	18	6	------	------	------	3	3
$2,950–$3,049	15,238	13,744	260	1,030	156	48	33	------	------	2	11	20
$3,050–$3,149	281	7	170	73	18	13	7	------	------	1	3	3
$3,150–$3,249	821	566	177	45	7	26	6	------	------	2	------	4
$3,250–$3,349	66	3	11	29	15	8	14	------	------	------	6	8
$3,350–$3,449	82	------	24	37	14	7	7	------	------	1	3	3
$3,450–$3,549	1,295	1,050	49	158	28	10	16	------	------	3	9	4
$3,550–$3,649	135	3	57	47	14	14	36	------	------	10	13	13
$3,650–$3,749	161	------	20	138	2	1	2	------	------	2	------	------
$3,750–$3,849	34	1	22	4	5	2	7	------	------	2	3	2
$3,850–$3,949	11	------	5	4	1	1	4	------	------	2	1	1
$3,950–$4,049	989	839	91	38	16	5	19	------	------	10	4	5
$4,050 and over	507	244	139	89	25	10	80	1	12	41	19	7

[1] Includes 24,914 employees for whom salaries by occupation are not shown separately. For greater detail see Serial No. R. 1253.
[2] Based on U. S. Census of Population for 1930.

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Municipal police-department employees in the United States in selected occupations, by salary, July 1, 1938—Continued

Salary class	Patrolmen						Policewomen					
	All cities	New York City	Size of city				All cities	New York City	Size of city			
			500,000 and over	100,000 to 500,000	50,000 to 100,000	25,000 to 50,000			500,000 and over	100,000 to 500,000	50,000 to 100,000	25,000 to 50,000
Cities reporting specified occupations	362	1	12	79	95	175	123	1	10	48	31	33
All salaries	64,918	14,684	23,526	15,895	5,723	5,090	512	127	194	125	32	34
Under $950	4				3	1	1					1
$950–$1,049	15				14	1	2			2		
$1,050–$1,149							1				1	
$1,150–$1,249	202			27	147	28	7				1	6
$1,250–$1,349	113			1	14	98	4			1		3
$1,350–$1,449	532			86	191	255	1				1	
$1,450–$1,549	939			457	230	252	20		4	12		4
$1,550–$1,649	2,121		45	877	490	709	10			2	1	7
$1,650–$1,749	3,181		119	1,602	707	753	19			10	3	6
$1,750–$1,849	2,582		154	892	730	806	42		18	16	4	4
$1,850–$1,949	4,012		168	2,994	454	396	12			8	3	1
$1,950–$2,049	4,885	1,781	406	1,848	354	496	35		14	18	1	2
$2,050–$2,149	5,374		3,117	1,311	615	331	66		50	13	3	
$2,150–$2,249	10,171		6,864	2,251	605	451	23		2	15	6	
$2,250–$2,349	2,069	383	916	481	272	17	8			5	3	
$2,350–$2,449	5,255		3,508	1,382	265	100	72		51	18	3	
$2,450–$2,549	7,011	8	5,375	871	449	308	20		16	3	1	
$2,550–$2,649	2,818		2,795	2	12	9	39		39			
$2,650–$2,749	64		58	2	4		2			2		
$2,750–$2,849	116	37				79	1	1				
$2,850–$2,949	107			20	87							
$2,950–$3,049	13,347	12,475	1	791	80		127	126			1	

into 7), the lowest frequently consisting of rookie or probationary policemen. Nine out of ten patrolmen throughout the country, however, were in the first grade, and over a fourth of these received from $2,050 to $2,250 in 1938. About a fifth had annual salaries between $2,350 and $2,550, and a slightly higher proportion received $3,000 a year. Most of the latter were in New York City.

The salaries of policewomen, also shown in the table, compare very favorably with those of patrolmen.

Chiefs, as might be expected, were the best paid of the police-department employees. The top salary outside New York City (where there was no chief reported and a commissioner headed the department) was $9,000 for the chief in New Jersey. In Chicago and Detroit, officials with the title of commissioner were paid $10,000 a year, but these salaries were excluded from the tables because the departments also reported chiefs.

More than one-fifth of the chiefs shown in the table received at least $4,050 per year. About one-seventh of the departments (the majority of these being in the smallest cities) paid their chiefs from $2,350 to $2,550 a year, while an equal number paid between $3,450 and $3,650.

Although a few of the 7,068 employees in the detective bureaus had salaries of $4,050 or more, practically five-sixths of them were in the range from $1,250 to $3,050. If the detective bureau of New York City (which handles the fingerprint work of that department) were

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eliminated from the comparison, the percentage of detectives in the other 361 cities receiving less than $3,050 a year would be 95. The greatest concentration of detectives outside New York City, as was the case with patrolmen, was in the $100 interval beginning at $2,150.

Although the above discussion has been confined primarily to interoccupational differences in salaries for the country as a whole, figures are available [2] for similar comparisons of interoccupational differences for each of the four population groups as well as for New York City.

Police Protection Related to Concentration of Population

The problems of concentrated populations result in relatively larger police forces and considerably higher salaries in large cities than in small cities. The number of employees of police departments per 10,000 inhabitants was considerably greater in the larger cities than in the smaller ones: 28 in New York City and 22 in the other cities with a population of 500,000 or more, as against 15, 14, and 13, respectively, in the 3 groups of smaller cities. Similarly, the salary expenditure per capita declined from $8.30 in New York City and $5.29 in other cities of 500,000 or more to $2.41 in the smallest cities.

The number of police employees in relation to population does not by itself measure the adequacy of police protection. The stream of traffic, as well as the frequency of such unusual events as parades, fairs, and conventions, are among the other factors affecting the size of the police departments.

The control of automobile and pedestrian traffic is an important function of public safety, about a seventh of the patrolmen in New York City and a fifth of all those in the other 361 cities covered by the study being permanently assigned to traffic duty. However, this nucleus of full-time traffic officers was supplemented during periods of peak flow of traffic by patrolmen not normally assigned to the traffic squad.

Working Conditions

Hours of duty for policemen throughout the United States varied from continuous duty to as low as 40 hours per week. However, the majority of the force worked 8 hours a day and had a fraction of a day or a full day off each week. Continuous duty is a term used to describe the time on duty required of chiefs who are on call at all hours of the day and night in some of the small- and medium-sized cities. There were only 36 employees on continuous duty in the 362 cities covered by this report. Similarly, only a small number worked as little as 40 hours per week.

More than one-half (56 percent) of all employees in 1938, excluding those in New York City, worked on 8-hour tours, with 1 day off each week. The majority of employees having this 48-hour workweek were in the largest cities, but there were also considerable numbers in the medium- and small-sized cities with the same workweek. Philadelphia, Pittsburgh, Buffalo, Chicago, Detroit, Milwaukee, San Francisco, and Washington, D. C., all had the 8-hour day with 1 day off each week. The New York City police force also worked an 8-hour day with approximately 1 day off each week. Nine percent of all employees were on duty 8 hours a day, but had only 2 days off

[2] See Serial No. R. 1253.

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per month, and 7 percent worked the same number of hours per day, but received no days off except their regular annual vacation. A very small proportion had longer hours.

The majority of police-department employees were given 2 weeks' vacation with pay. The regions in which longer vacations were given were the South Atlantic and the East North Central. In the South Atlantic region slightly more than a fifth of the police-department employees had 26-day vacation periods; most of the remaining employees received from 14 to 20 days. Approximately one-half of the employees in the East North Central police departments received about 3 weeks' vacation, and fully four-fifths of the members of the New York City department had 19 days' vacation. In only one region, East South Central, were the vacation periods appreciably shorter than 2 weeks. Here, one-half of the employees received 10 days or less.

Practically all of the 362 cities reported definite policies regarding the promotion of patrolmen. In 193 cities patrolmen were advanced automatically from the lowest grade to the next higher grade after 1 year of service. Promotion by civil-service examination was reported by 45 cities. Of the remaining cities, 44 reported automatic promotion after some specified period of service, and an equal number indicated that promotion was by appointment. Thirty-six cities reported that they had only one grade of patrolmen, but in many of these cities promotion took the form of salary increases without an increase in official status.

Full uniforms were supplied by 54 cities and raincoats or capes by 43. The majority of cities furnished some items such as revolvers, handcuffs, and badges.

Portable-Lamp and Lamp-Shade Industries—Earnings and Hours, February and March 1940[1]

The portable-lamp industry, as defined by the Wage and Hour Administrator, includes "the manufacture or assembling of any portable lamp which may be plugged into electrical outlets, or an assembled device that is made to receive a socket for lighting purposes and is portable." Some of the larger establishments engaged in the production of portable lamps manufacture their lamp bases, cut the pipe for standards, stamp out or mold various parts, and then assemble and wire these parts to form the complete lamp. Other firms, especially the smaller ones, buy all the parts and shades from establishments which specialize in their manufacture and merely assemble these parts to produce the complete lamp. The firms which are limited to assembly work account for a large proportion of the smaller-sized plants included in the survey. Establishments specializing in the manufacture of parts but not assembling the lamps were excluded from the Bureau's survey.

The lamp-shade industry as defined by the Administrator includes "the manufacturing of any complete device of any material which

[1] Abstract of article in the Monthly Labor Review for January 1941, prepared by Sidney C. Sufrin, of the Bureau of Labor Statistics.

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can be attached to a portable lamp, or to an electric incandescent bulb as a part of a portable electric lamp, or to an electric fixture, and which when so attached will either partially or completely surround the electric incandescent bulb or bulbs; the purpose of such device being primarily for shielding the light source from the normal field of vision, and for decoration, except reflectors of metal, glass, or plastics." Silk, rayon, acetate, mica, and parchment (pure and paper) constitute the principal materials used in making lamp shades. Plants making these several types of shades were included in the Bureau's study, but the relatively few employees who make the wire frames for lamp shades were not included.

According to the Bureau's estimates, the portable-lamp industry employs some 5,300 workers and the lamp-shade industry about 5,000 workers. Of the 191 establishments covered by the Bureau's study, 74 manufactured both lamps and lamp shades. In such cases, for tabulation purposes, the workers making lamps were separated from those making shades and the establishment was regarded as 2 plants. Altogether some 4,959 workers (about evenly divided between the 2 types of products) were employed in these combination establishments, or about half the estimated employment in the 2 industries together.

Except for the New York metropolitan area, very little progress had been made toward regulating working conditions through trade-union agreements. In that area 39 portable-lamp factories and 30 lamp-shade plants had workers covered by trade-union agreements.[2] A few Philadelphia plants in both industries were also unionized, but elsewhere only 3 lamp plants and 2 lamp-shade plants were found which had a union agreement.

The field survey was based upon a carefully selected sample of 137 representative lamp plants and 128 lamp-shade establishments.[3] In both industries less than 1 percent of the workers were found in the South. The final tabulations include all of the data obtained from the southern and the large-sized plants, in addition to properly weighted data from the small- and medium-sized plants. Thus, the combined figures represent the entire industry.

Portable-Lamp Industry

Average Hourly Earnings

The overwhelming majority of wage earners in the portable-lamp industry are paid on a straight time-rate basis.

Hourly earnings of the 5,302 wage earners covered in the portable-lamp survey during February and March 1940 averaged 49.4 cents.[4] Earnings among individual establishments, however, varied considerably, with plant averages ranging from 27 to 80 cents an hour. Despite the wide difference between these extremes, nearly two-thirds of the plants (64.2 percent), employing approximately 68.8 percent of the workers, showed averages that were within the range of 37.5 and under 55 cents.

In table 1, which presents the percentage distribution of individual workers according to average hourly earnings, the broad dispersion of

[2] A union establishment, as defined in this survey, is one in which the majority of the employees are covered by either a written or an oral agreement with a trade-union.

[3] The survey was limited to establishments employing three or more wage earners.

[4] This average, and that for the lamp-shade industry, exclude earnings at overtime rates; had such earnings been included, the averages would have been raised by less than 1 cent.

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wages is further reflected. Omitting the most extreme classes, this table shows that individual hourly earnings ranged from 25 cents to $1.10. Within this range was found 98.7 percent of the entire labor force.

Women constituted only a minor fraction (less than 10 percent) of the entire labor force. Almost nine-tenths of these women were semiskilled workers. Because of the extremely small number of female workers classed as skilled and unskilled—33 of the former and 36 of the latter—distributions by skill are not given for the female group.

TABLE 1.—*Percentage distribution of portable-lamp workers by average hourly earnings, sex, and skill, February and March 1940*

Average hourly earnings	All workers			Skilled		Semiskilled		Unskilled	
	Total	Male	Female [1]	Total	Male	Total	Male	Total	Male
Under 25.0 cents	(2)	(2)				(2)	(2)	0.2	0.2
25.0 and under 27.5 cents	0.1	0.1	0.2			0.1	(2)	.5	.5
27.5 and under 30.0 cents	.7	.6	1.5	0.3	0.3	.8	0.7	1.4	1.1
Exactly 30.0 cents	11.9	9.9	29.9	.5	.5	14.2	11.7	25.7	24.4
30.1 and under 32.5 cents	2.4	2.3	2.5	.1	.1	2.9	2.9	5.0	4.9
32.5 and under 35.0 cents	3.7	3.2	8.0	.8	.7	4.4	3.7	6.7	6.9
35.0 and under 37.5 cents	9.7	9.0	16.3	1.3	1.2	11.9	11.1	17.8	18.0
37.5 and under 40.0 cents	4.7	4.4	7.6	1.5	1.4	5.1	4.8	10.1	9.7
40.0 and under 42.5 cents	15.5	15.7	14.0	4.2	4.2	20.4	21.2	14.6	15.5
42.5 and under 45.0 cents	3.7	3.5	5.5	2.6	2.4	4.2	4.0	3.8	4.0
45.0 and under 47.5 cents	6.7	7.1	2.7	3.6	3.5	7.9	8.8	7.0	7.1
47.5 and under 52.5 cents	9.4	10.0	5.2	8.6	8.4	10.9	11.9	3.4	3.7
52.5 and under 57.5 cents	5.5	5.6	4.6	7.4	7.3	5.5	5.6	1.0	1.1
57.5 and under 62.5 cents	4.8	5.3		8.5	8.7	3.8	4.4	1.2	1.3
62.5 and under 67.5 cents	4.6	5.1	.4	9.7	9.8	3.2	3.8		
67.5 and under 72.5 cents	3.5	3.8	.4	9.2	9.3	1.6	1.9	.2	.2
72.5 and under 77.5 cents	3.6	3.9	.8	9.7	9.7	1.5	1.7	.7	.7
77.5 and under 87.5 cents	3.1	3.5		9.5	9.7	.9	1.0	.7	.7
87.5 and under 100.0 cents	3.0	3.3		10.0	10.1	.6	.7		
100.0 and under 110.0 cents	2.1	2.3		7.6	7.8	.1	.1		
110.0 cents and over	1.3	1.4	.4	4.9	4.9				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers (weighted)	5,302	4,779	[3] 523	1,417	1,384	3,302	2,848	583	547
Average hourly earnings	$0.494	$0.506	$0.377	$0.698	$0.701	$0.429	$0.439	$0.371	$0.374

[1] Number of females too small to warrant percentage distribution by skill.
[2] Less than a tenth of 1 percent.
[3] Includes 33 skilled workers, 454 semiskilled workers, and 36 unskilled workers.

Nearly three-fourths of the workers were employed in 3 metropolitan areas. New York led with 1,729, or 32.6 percent of the total employed; Chicago followed with 1,611, or 30.4 percent; and Philadelphia had 620, or 11.7 percent. Among these 3 areas, Philadelphia had the highest average hourly earnings, 55.2 cents, in contrast with 51.4 cents in New York and 46.8 cents in Chicago. The higher Philadelphia average was due in part to the very small proportion of female workers there. Only 10 female workers were found in Philadelphia out of a total of 620 workers in that area. However, that city also showed higher average hourly earnings for male workers alone—55.4 cents, as compared with averages of 52.5 cents in New York and 48.8 cents in Chicago. In metropolitan areas of less than 1,000,000, average hourly earnings were 44.4 cents. Only 679 workers were employed in these areas.

Weekly Hours and Earnings

The actual weekly hours of all wage earners in the portable-lamp industry averaged 39.4 during February and March 1940. The male

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workers averaged 39.5 hours, as against an average of 37.8 hours for female employees. Among the males, the figures were 39.1 hours for skilled, 39.8 hours for semiskilled, and 39.4 hours for unskilled workers.

Weekly earnings in February and March 1940 for all wage earners covered in the portable-lamp industry averaged $19.45, exclusive of earnings due to the extra rates for overtime.[5] The average for males was $20.02, as compared with $14.26 for females. Among the males, the averages amounted to $27.38 for skilled, $17.46 for semiskilled, and $14.74 for unskilled.

Lamp-Shade Industry

Average Hourly Earnings

More than one-half (52.4 percent) of all the workers in the lamp-shade industry are paid on a time basis. The principal occupations paid at piece rates were hand sewers and gluers and pasters. Hand binders also were frequently employed on a piece-rate basis.

During February and March 1940, workers in the lamp-shade industry earned an average of 40.8 cents per hour.[6] As in other industries, average hourly wages in the lamp-shade industry varied considerably among establishments, ranging from 30.0 to 89.1 cents per hour. However, nearly three-fifths of the plants in the industry (58.6 percent) paid average hourly wages of 35 and under 45 cents.

The dispersion in the earnings of individual workers is shown in table 2, which presents the distribution of employees for the country as a whole, according to their average hourly earnings.

TABLE 2.—*Percentage distribution of lamp-shade workers by average hourly earnings, sex, and skill, February and March 1940*

Average hourly earnings (cents)	All workers			Skilled			Semiskilled			Unskilled		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 25.0	0.1	------	0.1	------	------	------	0.1	------	0.1	0.3	------	0.4
25.0 and under 27.5	.6	0.2	.6	0.5	1.2	------	.4	------	.5	1.5	------	1.9
27.5 and under 30.0	.7	1.0	.6	.5	1.2	------	.7	0.7	.7	.3	1.5	------
Exactly 30.0	15.6	17.6	15.4	2.5	2.4	2.6	14.2	16.8	14.0	31.4	39.3	29.4
30.1 and under 32.5	8.1	1.9	9.4	2.0	1.2	2.6	8.9	2.2	9.9	7.7	1.5	9.3
32.5 and under 35.0	7.3	2.6	8.2	2.0	1.2	2.6	7.6	1.7	8.5	8.8	8.1	8.9
35.0 and under 37.5	12.5	12.5	12.6	5.5	1.8	8.2	13.3	16.2	12.8	12.8	11.1	13.2
37.5 and under 40.0	9.0	6.9	9.5	5.8	7.2	4.8	9.6	5.8	10.2	7.6	11.1	6.7
40.0 and under 42.5	14.8	13.1	15.3	10.3	3.6	15.2	14.9	16.9	14.8	17.0	8.9	19.0
42.5 and under 45.0	6.1	4.7	6.3	3.8	2.4	4.8	6.7	5.6	6.9	3.7	3.7	3.7
45.0 and under 47.5	5.5	5.5	5.5	1.5	1.2	1.7	6.2	6.5	6.1	4.0	6.7	3.4
47.5 and under 52.5	7.7	11.3	7.0	13.2	9.6	15.5	7.8	13.6	6.9	3.9	4.4	3.7
52.5 and under 57.5	4.0	4.9	3.8	9.8	7.2	11.7	3.9	4.7	3.8	.6	3.0	------
57.5 and under 62.5	2.1	2.6	2.0	5.8	2.4	8.2	2.1	3.4	1.8	.3	------	.4
62.5 and under 67.5	1.7	2.5	1.5	5.3	4.2	6.1	1.6	2.6	1.4	------	------	------
67.5 and under 72.5	1.3	3.7	.8	9.6	15.8	5.2	.7	.9	.6	------	------	------
72.5 and under 77.5	1.0	3.2	.5	8.1	13.4	4.3	.4	.7	.3	.1	.7	------
77.5 and under 87.5	.9	2.1	.6	5.0	7.2	3.5	.6	1.1	.5	------	------	------
87.5 and under 100.0	.4	1.4	.1	4.0	7.2	1.7	.1	------	.1	------	------	------
100.0 and under 110.0	.3	.6	.2	1.5	1.8	1.3	.2	.4	.1	------	------	------
110.0 and over	.3	1.7	------	3.3	7.8	------	(1)	.2	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Numbers of workers (weighted)	5,012	838	4,174	397	166	231	3,943	537	3,406	672	135	537
Average hourly earnings	$0.408	$0.461	$0.396	$0.578	$0.665	$0.515	$0.398	$0.421	$0.393	$0.355	$0.364	$0.353

[1] Less than a tenth of 1 percent.

[5] The inclusion of earnings due to the extra rates for overtime work increases the average weekly earnings of all workers in the industry by 21 cents.

[6] See footnote 4, p. 284.

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Skilled male workers earned on the average 66.5 cents an hour, while semiskilled males earned 42.1 cents and unskilled males 36.4 cents. As in the portable-lamp industry, workers in the two eastern cities, where at least part of the plants were operating under trade-union agreements, earned more per hour, on the average, than employees in Chicago. The general average hourly wage in the New York area was 44.2 cents, compared to 39.7 cents in the Philadelphia area and 39.0 cents in the Chicago area.

Weekly Hours and Earnings

Actual weekly hours of all workers in the lamp-shade industry averaged 35.8, the figures being 40.2 for males and 35.0 for females. Skilled males averaged 40.8 hours, semiskilled 40.1 hours per week, and unskilled males 39.9 hours. Skilled females worked, on the average, 39.9 hours per week, semiskilled 34.6 hours, and unskilled women 34.9 hours. It should be borne in mind that the industry predominantly employs semiskilled and unskilled women.

Average weekly earnings of all workers in the lamp-shade industry, exclusive of earnings due to extra rates for overtime work, amounted to $14.62 in February and March 1940.[a] Skilled males earned on the average $27.10 a week, semiskilled $16.86, and unskilled $14.50 a week. The respective figures for females were $20.56, $13.63, and $12.32 per week. The weekly earnings of all male workers averaged $18.50, as compared with an average of $13.84 for female employees.

Printing Trades—Union Wages and Hours, 1940[1]

The average union wage rate per hour for all of the printing trades in the 72 cities covered in a survey by the Bureau of Labor Statistics on June 1, 1940, was $1.201. The average for the book and job trades was $1.131 and for the newspaper trades $1.331.

Data on union scales of wages and hours in the printing trades have been collected by the Bureau of Labor Statistics each year since 1907. The early studies were made in 39 cities and included 7 book and job occupations and 4 newspaper occupations. The study has been gradually extended to cover 72 cities, and now includes 11 book and job occupations and 8 newspaper occupations. These cities are located in 40 States and the District of Columbia.[2]

A union scale is a scale of wages and hours agreed to by an employer (or a group of employers) and a labor organization for persons who are actually working or would be working if there were work to be done in that locality. A union scale usually fixes a limit in one direction, that is, a minimum wage rate and maximum hours of work, with specific provisions for overtime.

[a] If the overtime earnings due to extra rates were included, it would increase the average weekly earnings of all workers in the industry by only 14 cents.

[1] Abstract of article in the Monthly Labor Review for December 1940, prepared by Frank S. McElroy, of the Bureau of Labor Statistics.

[2] See footnote 2, p. 46, for list of cities covered in 1940.

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Trend From 1907 to 1940

As shown in table 1, there was a general upward trend of union hourly wage rates for the printing trades in nearly every year from 1907 to 1940.

TABLE 1.—*Indexes of union hourly wage rates and weekly hours in all printing trades, 1907 to 1940*

[1929=100]

Year	Hourly wage rates			Weekly hours		
	All printing	Book and job	Newspaper	All printing	Book and job	Newspaper
1907	(1)	30.0	39.2	(1)	122.4	102.3
1908	(1)	33.3	41.3	(1)	116.8	101.8
1909	(1)	35.7	43.1	(1)	115.8	101.5
1910	(1)	37.6	44.6	(1)	115.4	101.3
1911	40.0	38.6	45.2	111.6	115.4	101.3
1912	40.7	39.3	46.0	111.5	115.3	101.1
1913	41.5	40.0	47.0	111.4	115.3	101.0
1914	42.3	40.9	47.5	111.3	115.3	100.8
1915	42.5	41.1	47.8	111.3	115.3	100.7
1916	42.9	41.7	48.0	111.3	115.3	100.6
1917	44.4	43.7	49.2	111.3	115.3	100.6
1918	48.3	47.8	51.6	111.3	115.3	100.6
1919	59.1	58.9	62.2	111.3	115.2	100.8
1920	75.7	76.9	76.1	108.1	110.9	100.7
1921	83.0	84.7	82.8	101.5	102.1	100.4
1922	83.8	85.0	83.5	101.1	100.8	102.4
1923	86.4	88.3	84.4	100.7	100.2	102.2
1924	90.6	92.0	89.5	100.3	100.2	100.8
1925	92.0	92.9	91.1	100.3	100.3	100.5
1926	94.0	95.0	93.1	100.2	100.1	100.7
1927	96.7	97.3	95.9	100.1	100.1	100.4
1928	98.5	98.7	98.3	100.1	100.1	100.2
1929	100.0	100.0	100.0	100.0	100.0	100.0
1930	101.5	101.8	101.0	99.9	99.9	99.8
1931	102.1	102.5	101.3	99.8	99.9	99.8
1932	101.3	101.4	101.1	96.5	96.1	97.3
1933	95.3	95.8	94.5	95.7	95.1	96.8
1934	97.3	98.4	95.8	90.8	91.8	89.1
1935	101.0	100.6	101.6	89.3	90.4	87.6
1936	103.3	103.5	103.1	88.9	90.5	86.5
1937	106.8	106.7	107.0	88.5	90.3	85.7
1938	110.2	110.4	109.8	88.1	89.9	85.3
1939	111.2	111.2	111.1	87.8	89.6	84.9
1940	112.7	112.2	113.5	87.6	89.4	84.6

[1] Combined data for the years 1907–10 not available.

Over this same period there was a consistent trend toward shorter weekly hours in the printing trades, but the major changes in average hours occurred within relatively short periods, followed by relatively long periods of comparatively little change.

Trends in Individual Trades

The average hourly wage rates of union members in each of the individual trades (except mailers) from 1929 to 1940 are shown in table 2. Mailers are omitted, as data for this trade have been collected only in recent years.

Compared with the base year (1929) photoengravers showed the greatest increase in average hourly rates, their 1940 indexes indicating an average rise of 19.1 percent in newspaper work and of 18.4 percent in book and job work. The least advance recorded for any occupation

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during the 11 years since 1929 was that of the book and job machine operators, whose wage-rate index rose 8.8 percent. In relation to the base year (1929), the electrotypers' index for 1940 (81.7) reflected the greatest reduction in average hours among the book and job trades.

Separate indexes for day and night work in the newspaper trades are not shown in table 2, since the movement is very similar.

TABLE 2.—*Indexes of union hourly wage rates and weekly hours in each printing trade*

[1929=100]

BOOK AND JOB

Year	Bindery women		Bookbinders		Compositors, hand		Machine operators		Machine tenders (machinists)	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	100.7	99.9	101.2	99.9	102.2	100.0	102.7	100.0	101.8	100.0
1931	101.2	99.8	101.6	99.8	102.8	100.0	103.2	100.0	102.9	100.0
1932	98.7	99.9	97.9	99.7	102.5	99.7	103.3	99.9	103.5	100.0
1933	94.8	99.9	94.4	99.6	96.3	96.5	96.9	95.6	97.4	95.0
1934	99.6	93.5	97.9	93.1	97.3	94.1	97.0	92.9	100.4	91.5
1935	100.5	92.8	99.3	91.5	99.0	92.4	98.6	91.2	100.9	90.7
1936	102.4	92.4	100.6	91.5	102.0	91.7	102.0	90.4	104.0	90.2
1937	104.0	91.9	103.4	91.5	105.8	91.6	104.8	90.3	107.0	90.2
1938	109.0	91.5	107.2	91.2	109.4	91.4	107.7	90.1	110.3	90.1
1939	110.6	90.4	109.3	90.0	109.9	91.4	108.0	90.1	110.7	90.0
1940	111.1	90.4	109.9	90.0	111.8	91.4	108.8	90.1	111.9	90.0

Year	Electrotypers		Photoengravers		Press assistants and feeders		Pressmen, cylinder		Pressmen, platen	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	102.9	98.8	100.2	99.8	101.2	100.0	101.8	100.0	101.7	100.0
1931	105.2	98.1	100.5	99.8	102.0	100.0	102.5	100.0	102.2	100.5
1932	104.8	98.2	103.5	94.9	97.6	87.9	99.8	91.4	100.0	98.2
1933	98.2	93.1	101.5	91.7	90.9	92.9	93.6	92.4	93.1	95.9
1934	105.1	90.1	103.1	90.5	94.4	89.8	96.3	89.2	95.7	92.0
1935	106.7	88.2	109.6	86.9	96.5	89.6	97.5	88.9	96.4	91.3
1936	107.1	86.5	112.3	85.7	99.7	91.9	101.5	90.7	100.4	91.3
1937	108.5	86.3	113.7	85.2	104.8	91.7	105.1	90.4	105.0	90.9
1938	113.4	84.5	116.6	84.4	110.2	91.5	108.2	90.1	108.2	90.6
1939	114.2	83.6	117.5	83.8	110.9	91.5	109.0	90.1	109.2	90.6
1940	114.4	81.7	118.4	83.7	111.7	91.5	109.7	90.1	109.8	90.6

NEWSPAPER

Year	Compositors, hand		Machine operators		Machine tenders (machinists)		Photo-engravers		Pressmen, web presses [1]		Stereo-typers	
	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours	Wage rate	Hours
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	100.9	99.7	100.8	99.8	100.8	99.8	101.6	99.9	101.7	99.8	100.8	100.0
1931	101.0	99.7	100.9	99.8	101.0	99.8	102.6	99.5	102.3	99.8	101.2	100.1
1932	100.0	97.6	100.2	95.9	100.4	92.9	103.8	99.4	103.6	97.8	100.2	99.3
1933	93.4	96.5	93.7	95.2	93.3	92.1	96.0	99.6	97.0	98.7	94.6	98.1
1934	94.8	86.7	94.9	85.2	94.5	82.6	100.5	95.5	97.2	93.9	96.0	94.9
1935	100.9	85.6	101.2	84.3	100.9	81.4	105.3	92.4	102.5	91.8	100.5	92.7
1936	102.7	84.0	102.9	82.7	102.8	79.9	107.9	92.1	103.1	91.4	102.0	92.3
1937	107.1	83.5	107.3	82.2	107.2	79.7	109.9	91.1	106.5	90.3	105.2	90.6
1938	109.3	83.5	109.7	82.1	109.8	79.6	115.5	88.6	109.3	89.7	108.8	88.8
1939	110.1	83.4	110.5	82.1	110.3	79.6	117.8	88.4	111.7	89.1	109.9	86.1
1940	112.4	83.1	112.6	81.9	112.4	79.5	119.1	88.2	114.4	88.9	113.0	85.3

[1] Includes pressmen in charge.

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Average Union Wage-Rates, 1940

The average union rate per hour for all printing trades in the 72 cities studied was $1.201 on June 1, 1940. The book and job average was $1.131 and the newspaper average was $1.331. (See table 3.)

The photoengravers' averages were higher than those of any other trade. For book and job work their average was $1.569; for newspaper work it was $1.637 on day shifts, and $1.798 per hour on night shifts.

TABLE 3.—*Distribution of union members in the printing trades by hourly wage rates, June 1, 1940*

Trade	Average rate per hour	Percent of union members whose rates (in cents) per hour were—								
		Under 40	40 and under 45	45 and under 50	50 and under 55	55 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100
All printing trades	$1.201	0.4	0.3	1.0	2.9	2.2	2.4	1.9	2.4	4.8
Book and job	1.131	.6	.5	1.5	4.4	3.3	3.4	2.5	2.9	5.9
Bindery women	.533	4.6	1.8	13.3	33.3	22.3	22.9	1.8	-----	-----
Bookbinders	1.026	.3	2.0	.1	1.4	6.1	.8	1.1	.8	9.2
Compositors, hand	1.231	-----	-----	-----	-----	-----	-----	-----	.4	2.4
Electrotypers	1.429	-----	-----	-----	-----	-----	-----	-----	.1	2.1
Machine operators	1.266	-----	-----	-----	-----	-----	-----	.3	.6	1.4
Machine tenders (machinists)	1.289	-----	-----	-----	-----	-----	-----	-----	.2	4.8
Mailers	1.076	-----	-----	-----	1.4	.5	.7	1.6	10.5	7.1
Photoengravers	1.569	-----	-----	-----	-----	-----	-----	-----	-----	-----
Press assistants and feeders	.947	.2	.4	.2	3.9	.7	5.6	14.5	13.7	18.4
Pressmen, cylinder	1.250	-----	-----	-----	-----	(1)	(1)	.3	1.5	3.0
Pressmen, platen	1.032	-----	-----	-----	-----	-----	.7	5.9	14.0	32.5
Newspaper	1.331	-----	-----	(1)	.1	(1)	.4	.6	1.4	2.9
Day work	1.268	-----	-----	(1)	(1)	.1	.4	1.0	1.4	4.8
Night work	1.394	-----	-----	-----	.1	(1)	.3	.2	1.5	1.0
Compositors, hand	1.382	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.320	-----	-----	-----	-----	-----	-----	-----	.1	1.7
Night work	1.438	-----	-----	-----	-----	-----	-----	-----	-----	-----
Machine operators	1.390	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.337	-----	-----	-----	-----	-----	-----	-----	.2	1.0
Night work	1.439	-----	-----	-----	-----	-----	-----	-----	-----	-----
Machine tenders (machinists)	1.372	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.325	-----	-----	-----	-----	-----	-----	-----	-----	.2
Night work	1.430	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mailers	.996	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	.935	-----	-----	.1	.2	.7	4.4	9.5	10.0	37.6
Night work	1.038	-----	-----	-----	1.0	.2	2.0	1.7	10.4	5.2
Photoengravers	1.709	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.637	-----	-----	-----	-----	-----	-----	-----	-----	.5
Night work	1.798	-----	-----	-----	-----	-----	-----	-----	-----	1.1
Pressmen (journeymen)	1.285	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.194	-----	-----	-----	-----	-----	-----	.4	.5	1.3
Night work	1.402	-----	-----	-----	-----	-----	-----	-----	.4	1.0
Pressmen in charge	1.426	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.316	-----	-----	-----	-----	-----	-----	-----	1.1	.4
Night work	1.542	-----	-----	-----	-----	-----	-----	-----	-----	.2
Stereotypers	1.283	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	1.212	-----	-----	-----	-----	-----	-----	-----	1.5	2.2
Night work	1.385	-----	-----	-----	-----	-----	-----	-----	-----	.8

[1] Less than a tenth of 1 percent.

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TABLE 3.—*Distribution of union members in the printing trades by hourly wage rates, June 1, 1940*—Continued

Trade	Percent of union members whose rates (in cents) per hour were—										
	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and over
All printing trades	12.2	16.2	12.8	16.1	10.1	4.7	5.4	1.3	2.3	0.1	0.5
Book and job	13.6	16.1	10.8	16.6	8.5	3.5	2.7	.6	2.6	.....	(1)
Bindery women	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookbinders	30.4	36.5	10.2	1.0	.1	.....	.....	.....	.....	.....	.....
Compositors, hand	16.5	20.5	15.2	24.3	20.7	.....	.....	.....	.....	.....	.....
Electrotypers	1.9	9.3	22.3	6.4	3.3	8.8	45.8	.....	.....	.....	.....
Machine operators	11.1	14.4	17.1	49.2	5.6	.....	.....	.....	.....	.....	.3
Machine tenders (machinists)	9.0	14.1	11.3	28.4	30.1	2.1	.....	.....	.....	.....	.....
Mailers	18.0	55.5	4.7	.....	.....	.....	.....	.....	.....	.....	.....
Photoengravers	.....	.....	4.5	13.1	20.5	27.4	.8	5.7	28.0	.....	.....
Press assistants and feeders	18.5	16.9	6.7	.3	.....	.....	.....	.....	.....	.....	.....
Pressmen, cylinder	18.3	16.5	11.0	31.7	11.9	3.1	2.6	.1	.....	.....	.....
Pressmen, platen	9.1	13.0	22.2	2.6	.....	.....	.....	.....	.....	.....	.....
Newspaper	9.7	16.5	16.5	15.8	12.9	6.9	10.4	2.7	1.6	.3	1.3
Day work	12.8	18.5	21.8	12.6	13.2	8.0	1.2	1.3	1.8	.5	.6
Night work	6.5	14.4	11.1	18.9	12.6	5.8	20.0	4.1	1.5	(1)	2.0
Compositors, hand	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	7.0	14.3	23.7	21.5	17.0	13.5	.1	.....	.....	.6	.5
Night work	2.4	8.7	8.2	23.7	19.8	9.1	27.8	.....	.....	.....	.3
Machine operators	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	8.4	12.9	21.5	22.8	15.9	13.2	.5	.....	.....	1.5	2.1
Night work	1.7	8.8	8.7	24.6	21.4	7.5	26.1	.....	.2	.....	1.0
Machine tenders (machinists)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	4.7	14.7	19.4	31.2	11.6	18.0	.....	.....	.....	.2	.....
Night work	.9	10.5	11.4	23.9	19.9	7.1	26.3	.....	.....	.....	.....
Mailers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	36.9	.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Night work	30.9	47.3	1.3	.....	.....	.....	.....	.....	.....	.....	.....
Photoengravers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	.....	.3	4.6	11.0	12.2	15.0	11.6	16.9	27.9	.....	.....
Night work	.....	.....	.....	2.5	5.5	8.4	20.2	19.0	15.9	.5	26.9
Pressmen (journeymen)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	21.9	35.9	23.9	2.3	12.4	1.4	.....	.....	.....	.....	.....
Night work	3.3	10.0	26.2	25.6	.3	1.0	24.9	7.3	.....	.....	.....
Pressmen in charge	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	.6	17.4	38.8	10.6	16.5	2.2	10.9	1.5	.....	.....	.....
Night work	.6	3.2	10.7	17.9	15.5	21.4	4.0	.2	19.8	.....	6.5
Stereotypers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Day work	8.4	33.4	38.9	.7	13.0	.6	.....	1.3	.....	.....	.....
Night work	6.9	17.2	22.3	14.7	10.9	1.7	.....	25.1	.....	.....	.4

[1] Less than a tenth of 1 percent.

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Night Wage-Rate Differentials

The average wage-rate differential in favor of night workers on newspapers, as compared with day workers in identical occupations and cities, was 10.8 cents per hour. In a few instances the same rate was reported for both day and night work, but these quotations applied to only 2 percent of the total membership normally working on night shifts.

Overtime Rates

Time and one-half was almost universally specified as the overtime rate in the printing-trades agreements. Only 6 of the 1,209 book and job quotations and 10 of the 1,077 newspaper quotations showed any other rate for overtime work. A few (17) newspaper quotations indicated that no overtime-rate provisions had been adopted.

Average Rates in Each City

Averages of the combined book and job rates and of the combined newspaper rates in each city, grouped according to population, are presented in table 4.[3]

Not all the tables had effective union scales in all the cities. This was especially true among the bindery women, bookbinders, electrotypers, machine tenders, mailers, and photoengravers—occupations which either did not exist or were not organized in a number of the smaller cities. The averages, however, do represent all the effective union scales in each city. As it may be assumed that the types of printing done in cities of comparable size will in general be similar, these averages should be comparable within the city-size groups.

The highest city averages for the book and job trades were those of Chicago ($1.273 per hour) and New York ($1.267). Only Memphis, Tenn. (76.7 cents) and Jackson, Miss. (79.2 cents) had averages of less than 80 cents per hour. The city averages for the newspaper trades ranged from $1.611 per hour in New York to 91.1 cents in New Orleans, La.

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[3] The averages are weighted according to the number of members in each local union covered by the reported rates. While a comparison of average rates between cities where averages include the influences of the membership factor may be somewhat misleading where membership is unusually large or small in comparison to the same trade in other cities, a weighted average of this kind is obviously more realistic than a simple average of specific rates. In the latter case a wage rate in a trade including half a dozen members would be given the same importance as that of a trade including several thousand members.

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TABLE 4.—*Average union hourly wage rates in the printing trades, by cities and population groups, June 1, 1940*

City and population group	Average hourly rate
Book and job	
Population, over 1,000,000:	
Chicago, Ill	$1.273
New York, N. Y	1.267
Average for group	*1.233*
Detroit, Mich	1.192
Philadelphia, Pa	1.071
Los Angeles, Calif	1.041
Population, 500,000 to 1,000,000:	
San Francisco, Calif	1.161
Cleveland, Ohio	1.137
Pittsburgh, Pa	1.124
Baltimore, Md	1.083
Buffalo, N. Y	1.073
Average for group	*1.050*
St. Louis, Mo	1.007
Milwaukee, Wis	.996
Boston, Mass	.989
Washington, D. C	.931
Population, 250,000 to 500,000:	
Toledo, Ohio	1.180
Seattle, Wash	1.157
Rochester, N. Y	1.123
Cincinnati, Ohio	1.123
Indianapolis, Ind	1.105
Dallas, Tex	1.066
Newark, N. J	1.046
Providence, R. I	1.046
Columbus, Ohio	1.039
Portland, Oreg	1.021
Kansas City, Mo	1.004
Average for group	*.995*
Houston, Tex	.981
Denver, Colo	.972
Atlanta, Ga	.889
New Orleans, La	.889
Louisville, Ky	.864
St. Paul, Minn	.858
Minneapolis, Minn	.856
Birmingham, Ala	.845
Memphis, Tenn	.767
Population, 100,000 to 250,000:	
Youngstown, Ohio	1.197
Rock Island (Ill.) district	1.168
Erie, Pa	1.098
Dayton, Ohio	1.073
El Paso, Tex	1.050
Omaha, Nebr	1.049
South Bend, Ind	1.025
Peoria, Ill	.998
Duluth, Minn	.994
Norfolk, Va	.991
Average for group	*.990*
Reading, Pa	.986
Oklahoma City, Okla	.977
New Haven, Conn	.972
Richmond, Va	.969
Grand Rapids, Mich	.947
Des Moines, Iowa	.940
Scranton, Pa	.940
Springfield, Mass	.933
Spokane, Wash	.932
Salt Lake City, Utah	.922
Worcester, Mass	.910
Wichita, Kans	.887
Jacksonville, Fla	.869
Nashville, Tenn	.845
San Antonio, Tex	.844
Population, 40,000 to 100,000:	
Madison, Wis	1.199
Phoenix, Ariz	1.037
Charleston, W. Va	1.012
Charlotte, N. C	.970
Average for group	*.940*
Butte, Mont	.938
York, Pa	.914
Portland, Maine	.826
Manchester, N. H	.825
Little Rock, Ark	.810
Jackson, Miss	.792

City and population group	Average hourly rate
Newspaper	
Population, over 1,000,000:	
New York, N. Y	$1.611
Average for group	*1.461*
Chicago, Ill	1.401
Detroit, Mich	1.352
Los Angeles, Calif	1.234
Philadelphia, Pa	1.228
Population, 500,000 to 1,000,000:	
Washington, D. C	1.417
Cleveland, Ohio	1.390
Boston, Mass	1.336
Milwaukee, Wis	1.320
Average for group	*1.306*
San Francisco, Calif	1.256
Pittsburgh, Pa	1.244
Buffalo, N. Y	1.238
St. Louis, Mo	1.235
Baltimore, Md	1.230
Population, 250,000 to 500,000:	
Newark, N. J	1.416
Providence, R. I	1.370
Cincinnati, Ohio	1.335
Toledo, Ohio	1.307
Columbus, Ohio	1.294
Indianapolis, Ind	1.281
Seattle, Wash	1.281
Minneapolis, Minn	1.259
Average for group	*1.239*
Portland, Oreg	1.220
St. Paul, Minn	1.212
Houston, Tex	1.204
Denver, Colo	1.191
Rochester, N. Y	1.177
Kansas City, Mo	1.175
Louisville, Ky	1.140
Memphis, Tenn	1.117
Atlanta, Ga	1.101
Dallas, Tex	1.096
Birmingham, Ala	1.022
New Orleans, La	.911
Population, 100,000 to 250,000:	
Scranton, Pa	1.288
Dayton, Ohio	1.268
Youngstown, Ohio	1.267
Reading, Pa	1.218
Erie, Pa	1.216
Des Moines, Iowa	1.189
Omaha, Nebr	1.184
Springfield, Mass	1.179
Rock Island (Ill.) district	1.172
Worcester, Mass	1.155
Duluth, Minn	1.154
Jacksonville, Fla	1.149
Average for group	*1.133*
El Paso, Tex	1.133
Peoria, Ill	1.131
New Haven, Conn	1.101
Salt Lake City, Utah	1.095
Grand Rapids, Mich	1.092
Richmond, Va	1.088
Norfolk, Va	1.086
San Antonio, Tex	1.080
Spokane, Wash	1.076
South Bend, Ind	1.062
Oklahoma City, Okla	1.057
Nashville, Tenn	1.013
Wichita, Kans	.955
Population, 40,000 to 100,000:	
Butte, Mont	1.219
Charleston, W. Va	1.203
Madison, Wis	1.154
Phoenix, Ariz	1.154
Average for group	*1.087*
Portland, Maine	1.070
Manchester, N. H	1.060
Charlotte, N. C	1.032
Little Rock, Ark	.992

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Union Hours, 1940

The average maximum workweek provided in the union agreements of all the printing trades was 38.8 hours on June 1, 1940. For book and job work the average of all trades was 39.5 and for newspaper work, 37.5 hours. Day work on newspapers averaged 38.1 hours and night work averaged 37 hours. (See table 5.)

The electrotypers' average of 35.9 hours per week was the lowest among the book and job trades.

TABLE 5.—*Distribution of union members in each printing trade, by weekly hours, June 1, 1940*

Trade	Average hours per week	Percent of members whose hours per week were—										
		Under 30	30	Over 30 and under 35	35	Over 35 and under 37½	37½	Over 37½ and under 40	40	Over 40 and under 44	44	Over 44
All printing trades	38.8	0.1	0.4	3.6	5.0	3.4	21.7	1.3	63.8	0.5	0.2	(1)
Book and job	39.5	-----	.1	2.2	2.7	.5	7.3	.4	86.5	.1	.2	-----
Bindery women	40.0	-----	-----	-----	-----	-----	3.0	(1)	96.1	-----	.9	-----
Bookbinders	39.9	-----	-----	-----	-----	-----	4.3	.1	94.5	-----	1.1	-----
Compositors, hand	39.5	-----	-----	-----	-----	-----	4.3	-----	95.7	-----	-----	-----
Electrotypers	35.9	-----	.6	45.1	.2	8.9	-----	.6	44.6	-----	-----	-----
Machine operators	39.8	-----	.3	-----	.7	-----	4.5	-----	94.5	-----	-----	-----
Machine tenders (machinists)	39.9	-----	-----	-----	-----	-----	3.2	-----	96.8	-----	-----	-----
Mailers	39.7	-----	-----	1.2	.2	4.5	.7	-----	93.4	-----	-----	-----
Photoengravers	37.4	-----	-----	-----	27.8	-----	47.5	3.5	21.2	-----	-----	-----
Press assistants and feeders	40.0	-----	-----	-----	-----	-----	1.7	-----	98.3	-----	-----	-----
Pressmen, cylinder	40.0	-----	-----	-----	.1	-----	2.0	-----	97.4	.5	-----	-----
Pressmen, platen	40.0	-----	-----	-----	-----	-----	1.9	-----	98.1	-----	-----	-----
Newspaper	37.5	.2	.9	6.1	9.1	8.7	47.7	3.0	22.9	1.3	(1)	0.1
Day work	38.1	.1	1.3	1.7	6.0	4.2	48.6	4.7	30.9	2.4	(1)	.1
Night work	37.0	.3	.5	10.4	12.3	13.2	47.2	1.3	14.7	.1	-----	(1)
Compositors, hand	37.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	37.5	.2	1.1	2.7	5.8	8.2	60.1	4.7	17.2	-----	-----	-----
Night work	37.4	.2	.1	1.5	6.8	11.0	66.4	1.3	12.7	-----	-----	-----
Machine operators	37.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	37.1	.4	4.2	3.4	10.2	8.4	51.8	4.8	16.8	-----	-----	-----
Night work	37.2	.7	1.6	1.7	8.9	9.9	61.8	1.9	13.5	-----	-----	-----
Machine tenders (machinists)	37.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	37.7	-----	.5	1.2	4.3	7.3	62.6	9.2	14.9	-----	-----	-----
Night work	37.6	-----	-----	.9	4.8	10.5	67.3	1.4	15.1	-----	-----	-----
Mailers	38.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	39.4	-----	-----	-----	.6	-----	22.0	1.6	75.6	.2	-----	-----
Night work	37.6	-----	-----	.4	5.8	33.8	36.3	1.8	21.9	-----	-----	-----
Photoengravers	37.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	37.6	-----	-----	-----	27.9	.5	40.7	1.6	28.0	1.3	-----	-----
Night work	37.4	-----	-----	12.0	2.7	4.8	61.3	1.9	16.5	.8	-----	-----
Pressmen (journeymen)	37.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	38.9	-----	-----	-----	.1	.2	48.5	8.5	32.0	10.4	.2	.1
Night work	35.6	-----	-----	36.0	32.1	11.3	8.9	.3	11.2	-----	-----	.2
Pressmen in charge	37.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	38.5	-----	-----	-----	-----	.7	56.2	5.6	36.0	.9	.4	.2
Night work	35.7	-----	-----	30.8	37.3	8.7	9.9	.4	12.7	.2	-----	-----
Stereotypers	37.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Day work	38.7	-----	-----	2.6	2.0	.3	39.3	-----	54.5	.8	-----	.5
Night work	35.9	.4	.5	28.0	10.1	6.6	33.8	.1	19.6	.9	-----	-----

[1] Less than a tenth of 1 percent.

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Processed-Waste Industry—Earnings and Hours, 1940[1]

Hourly earnings of employees in the processed-waste industry averaged 42.7 cents in September 1940, according to a survey by the Bureau of Labor Statistics. Employees in northern establishments received an average of 47.3 cents, contrasted with the 32.9 cents earned by workers in southern mills. Wage earners in waste-sorting plants averaged 34.6 cents, a figure considerably below the 46.9 cents paid to employees in garnetting plants.[2]

The Administrator of the Wage and Hour Division, who requested that the study be made, has defined the processed-waste industry as consisting of "the processing of waste from cotton, silk, flax, jute, or any synthetic fiber, or from mixtures of these fibers with wool or animal fiber (other than silk), provided these mixtures do not contain more than 25 percent by weight of wool or animal fiber (other than silk)." This definition has been interpreted to include the preparation of wiping rags and of oakum.[3]

In general, the definition of the industry used in the Bureau's survey conformed to that of the Administrator. Establishments engaged primarily in the preparation of wiping rags or of oakum, however, were not covered, and for practical reasons the survey excluded plants employing fewer than 10 workers. Plants employing 10 or more workers are believed to account for roughly nine-tenths of the employment in the industry.

Preliminary investigation by the Bureau indicated that roughly 60 mills fell within the scope of the survey. Approximately half (31) of these establishments were studied. The sample in each State and region was carefully selected in order to provide proportional representation with respect to such factors as product, size of plant, location, and unionization.

The survey was made by the Bureau's staff of field representatives, who obtained the necessary data directly from company records through personal observation of processes and plant practices and by means of interviews with plant officials. The information obtained from each establishment included actual hours worked and earnings received by each employee during a selected pay-roll period.[4] In transcribing wage data the field representatives reported earnings at regular rates of pay separately from those resulting from application of an extra overtime rate. The wage data presented in this report include only the earnings at regular rates of pay.[5]

Average Hourly Earnings

Although the earnings of individual employees ranged from under 32.5 to over 82.5 cents per hour, well over half (54.5 percent) averaged less than 40 cents (table 1). Nearly two-fifths of the workers were

[1] Abstract from an article by Louis M. Solomon, Bureau of Labor Statistics, in the Monthly Labor Review for June 1941.
[2] These plants recover the original fiber from waste yarn, thread, or cloth.
[3] Oakum is the material, sometimes tarred, obtained by untwisting old hemp rope; it is extensively used for calking boat seams and for packing.
[4] A majority of reports covered pay-roll periods in August or September 1940.
[5] Had the extra overtime earnings been included, the industry average would have been increased by only six-tenths of a cent.

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receiving exactly 32.5 cents, which was the minimum legal wage rate for the textile industry at the time of the survey. A second sizable group of employees, about 13 percent of the total, were averaging between 55.0 and 57.5 cents an hour.

TABLE 1.—*Percentage distribution of employees in processed-waste industry, September 1940, by average hourly earnings, sex, and skill*

Average hourly earnings	All employees	Males				Females [1]
		Total	Skilled	Semi-skilled	Unskilled	
Under 32.5 cents	5.8	4.4	3.0	2.3	4.7	9.3
Exactly 32.5 cents	39.7	26.3	1.5	13.6	29.8	74.1
32.6 and under 35.0 cents	2.8	2.4	1.5	3.4	2.3	3.8
35.0 and under 37.5 cents	2.8	2.8	4.5	3.4	2.6	2.7
37.5 and under 40.0 cents	3.4	1.6	----	2.3	1.7	7.9
40.0 and under 42.5 cents	4.8	6.5	4.5	5.7	6.8	.5
42.5 and under 45.0 cents	2.9	3.5	----	3.4	3.9	1.4
45.0 and under 47.5 cents	6.5	8.9	3.0	8.0	9.5	.3
47.5 and under 50.0 cents	6.2	8.6	4.5	1.1	9.8	----
50.0 and under 52.5 cents	1.9	2.7	11.9	4.5	1.7	----
52.5 and under 55.0 cents	1.6	2.2	1.5	2.3	2.3	----
55.0 and under 57.5 cents	12.7	17.7	10.4	8.0	19.4	----
57.5 and under 62.5 cents	2.5	3.4	6.0	8.0	2.7	----
62.5 and under 67.5 cents	3.2	4.4	16.3	13.6	2.3	----
67.5 and under 72.5 cents	.9	1.3	9.0	4.5	.3	----
72.5 and under 77.5 cents	.8	1.2	4.5	8.0	.1	----
77.5 and under 82.5 cents	.5	.7	3.0	4.5	.1	----
82.5 cents and over	1.0	1.4	14.9	3.4	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	1,300	934	67	88	779	366
Average hourly earnings	$0.427	$0.460	$0.610	$0.532	$0.436	$0.332

[1] All females were classed as unskilled.

Average hourly earnings of employees of northern mills were markedly higher than those of workers in southern plants (table 2). Employees averaging 32.5 cents or less represented only 19.4 percent of northern workers, but almost 95 percent of the southern wage earners. Earnings exceeding 50 cents an hour were confined almost entirely to workers in northern plants.

TABLE 2.—*Percentage distribution of employees in processed-waste industry, September 1940, by average hourly earnings and region*

Average hourly earnings (in cents)	United States	North	South	Average hourly earnings (in cents)	United States	North	South
Under 32.5	5.8	1.7	13.5	57.5 and under 62.5	2.5	3.7	0.2
Exactly 32.5	39.7	17.7	81.1	62.5 and under 67.5	3.2	4.6	.4
32.6 and under 35.0	2.8	3.7	1.1	67.5 and under 72.5	.9	1.3	.2
35.0 and under 37.5	2.8	3.5	1.3	72.5 and under 77.5	.8	1.3	----
37.5 and under 40.0	3.4	5.2	----	77.5 and under 82.5	.5	.8	----
40.0 and under 42.5	4.8	7.0	.9	82.5 and over	1.0	1.5	----
42.5 and under 45.0	2.9	4.5	----				
45.0 and under 47.5	6.5	9.7	.4	Total	100.0	100.0	100.0
47.5 and under 50.0	6.2	9.3	.2				
50.0 and under 52.5	1.9	3.0	----	Total number of employees	1,300	847	453
52.5 and under 55.0	1.6	2.5	----	Average hourly earnings	$0.427	$0.473	$0.329
55.0 and under 57.5	12.7	19.0	.7				

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This pronounced regional disparity in earnings is partly attributable to the dissimilar proportions of garnetting and sorting plants, respectively, in the two areas. Only 3 of the 8 southern establishments were garnetters, whereas 18 of the 23 northern mills were engaged in garnetting and grinding operations. Average hourly earnings were substantially higher in garnetting and grinding plants than in those establishments whose operations were confined to sorting. The distribution of mills in the processed-waste industry in September 1940 is shown, by type of mill and by mill average hourly earnings, in the accompanying statement.

Mill average hourly earnings:	*Garnetting and grinding mills*	*Sorting mills*
30.0 and under 35.0 cents	3	6
35.0 and under 40.0 cents	2	2
40.0 and under 45.0 cents	2	1
45.0 and under 50.0 cents	8	1
50.0 and under 55.0 cents	3	--
55.0 cents and over	3	--
Total	21	10

Occupational Differences[6]

The small number of workers in skilled and semiskilled occupations permits the presentation of separate data only for foremen, who averaged 60.6 cents (table 3). Unskilled males had average earnings ranging from 53.9 cents for picker tenders to 35.4 cents for hand truckers.

TABLE 3.—*Average hourly earnings, weekly hours, and weekly earnings in processed-waste industry, September 1940, by sex, skill, and occupation*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
Factory employees:				
Males	934	$0.460	39.2	$18.01
Skilled workers	67	.610	41.8	25.53
Foremen	36	.606	42.1	25.48
Miscellaneous skilled, indirect	31	.615	41.6	25.58
Semiskilled workers	88	.532	43.4	23.08
Miscellaneous semiskilled, direct	31	.537	41.7	22.41
Miscellaneous semiskilled, indirect	57	.529	44.3	23.44
Unskilled workers	779	.436	38.5	16.79
Baggers	30	.495	40.4	19.96
Baling press operators	104	.402	39.2	15.74
Breaker tenders	25	.454	43.2	19.59
Garnett, willower, and comber tenders	134	.446	39.3	17.52
Picker tenders	98	.539	35.3	19.01
Shredder tenders	44	.464	38.0	17.63
Truckers, hand	137	.354	36.1	12.76
Watchmen	25	.389	41.4	16.09
Miscellaneous unskilled, direct	147	.455	40.8	18.57
Miscellaneous unskilled, indirect	35	.387	35.8	13.88
Females: Unskilled workers	366	.332	34.7	11.50
Sorters	302	.327	34.2	11.19
Miscellaneous unskilled	64	.351	36.9	12.95
Clerical employees	60	.588	39.8	23.36

[6] Although the data at hand are not sufficient to permit analysis by occupation for the North and South separately, substantial regional variations existed.

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The largest occupational group numerically, and the only one among female employees for which data could be shown, consisted of sorters, whose average of 32.7 cents was the lowest found for any group. Clerical employees, whose earnings have been excluded from tabulations presented earlier, averaged 58.8 cents.

Weekly hours ranged from 43.2 worked by breaker tenders to 34.2 for sorters. The highest weekly earnings averaged by any group was the $25.48 received by foremen. Sorters, whose earnings were influenced by a combination of low hourly earnings and a shorter-than-average workweek, averaged only $11.19.

Professional Workers—Income and Salaries

Accountants, 1936[1]

The 1936 net income, from their profession, of 961 C. P. A. accountants in the United States averaged $4,626, and of 61 non-C. P. A. accountants, $2,910. Incomes of both C. P. A. and non-C. P. A. accountants in 1929 and 1934–36 are shown in table 1, giving data from a report of the United States Bureau of Foreign and Domestic Commerce, published in its Survey of Current Business (Washington) for April 1938.

TABLE 1.—*Net income of accountants, 1929 and 1934-36*

Item	1929	1934	1935	1936
Average net income:				
C. P. A. accountants	$5,749	$4,012	$4,291	$4,626
Non-C. P. A. accountants	$3,303	$2,226	$2,463	$2,910
Percentages of 1929:				
C. P. A. accountants	100	69.8	74.6	80.5
Non-C. P. A. accountants	100	67.4	74.6	88.1
Number of practitioners in sample:				
C. P. A. accountants	695	896	916	961
Non-C. P. A. accountants	45	57	57	61

Chiropodists, 1937[2]

Net incomes of chiropodists in the United States, from professional service, in 1937 averaged $1,788, an increase of 17 percent over the 1933 level, but a decline of nearly 43 percent from the 1929 income, according to a survey by the United States Bureau of Foreign and Domestic Commerce.[3] Although the Bureau had information for only 99 persons in 1929, 199 in 1933, and 359 in 1937, it stated that the regularity of the distribution patterns within the samples gave reason to believe the available data indicated in general the income status of the profession as a whole.

Table 2 shows the percentage distribution of chiropodists by total net income in 1929, 1933, and 1935–37.

[1] From the Monthly Labor Review for November 1938.
[2] From the Monthly Labor Review for February 1940.
[3] Incomes of chiropractors and chiropodists, by Herman Lasken, Washington, 1939.

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TABLE 2.—*Cumulative percentage distribution of chiropodists by total net income from professional service, 1929 to 1937*

Net incomes of—	1929	1933	1935	1936	1937
$0	3	5	3	2	2
Less than $500	8	22	16	13	15
Less than $1,000	15	44	40	30	32
Less than $1,500	21	56	55	50	47
Less than $2,000	34	66	69	62	63
Less than $2,500	43	81	81	75	72
Less than $3,000	53	86	86	83	83
Less than $4,000	68	95	97	94	94
Less than $5,000	78	98	99	97	98
Less than $6,000	90	99	[1] 100	99	99
Less than $7,000	96	100	100	[1] 100	[1] 100
Less than $8,000	99	----------	----------	100	100
Less than $9,000	99	----------	----------	----------	----------
Less than $10,000	100	----------	----------	----------	----------
Average net income	$3,134	$1,527	$1,550	$1,796	$1,788
Median net income	$2,714	$1,236	$1,275	$1,504	$1,583
Number in sample	99	199	280	310	359

[1] More than 99.5 but less than 100 percent.

Chiropractors, 1937[4]

In 1937 the average net income of chiropractors in the United States, from professional service, was $1,976, which was 47.2 percent above that of 1933, but 19.8 percent below the 1929 level, as indicated in table 3, giving data from a report of the United States Bureau of Foreign and Domestic Commerce.[5]

TABLE 3.—*Cumulative percentage distribution of chiropractors, by total net income from professional service, 1929 to 1937*

Net incomes of—	1929	1933	1935	1936	1937
$0	0	4	3	2	3
Less than $500	4	19	15	13	13
Less than $1,000	14	43	35	29	29
Less than $1,500	29	63	53	48	43
Less than $2,000	43	76	68	61	58
Less than $2,500	63	87	81	75	73
Less than $3,000	73	92	89	83	82
Less than $4,000	87	97	96	92	91
Less than $5,000	92	99	99	96	95
Less than $6,000	96	[1] 100	99	98	97
Less than $7,000	98	[1] 100	[1] 100	99	98
Less than $8,000	99	100	[1] 100	[1] 100	99
Less than $9,000	[1] 100	----------	100	[1] 100	99
Less than $10,000	[1] 100	----------	----------	[1] 100	100
Less than $15,000	100	----------	----------	100	----------
Average net income	$2,464	$1,342	$1,614	$1,867	$1,976
Median net income	$2,148	$1,101	$1,400	$1,547	$1,736
Number in sample	284	359	422	456	504

[1] More than 99.5 but less than 100 percent.

Dentists, 1937[6]

The average net income from professional service of dentists practicing in the United States in 1937 was $2,914, as compared with $4,275 in 1929 and $2,251 in 1933, according to data published by the United States Bureau of Foreign and Domestic Commerce. Table 4, giving data of that Bureau, shows the percentage distribution of members of the profession in the different income groups in 1929, 1933, and 1935–37.

[4] From the Monthly Labor Review for February 1940.
[5] Incomes of chiropractors and chiropodists, by Herman Lasken, Washington, 1939.
[6] From the Monthly Labor Review for June 1939, with later revised data.

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TABLE 4.—*Cumulative percentage distribution of dentists according to total net income from professional services, 1929 to 1937*

Item	By years					By type of practice, 1937			By type of income recipient, 1937		
	1929	1933	1935	1936	[1] 1937	General	Partly specialized	Wholly specialized	Non-salaried	Part salaried	100 percent salaried
Percent of total reporting net income of less than—											
$0	0.4	1.6	1.3	1.1	1.0	1.0	1.5	1.2	1.1	0.4	0.0
$500	2.2	6.9	6.1	5.2	4.5	4.6	3.8	2.0	4.7	2.8	.9
$1,000	5.0	20.3	15.5	13.9	13.0	13.4	9.5	5.2	13.5	9.1	1.2
$1,500	10.2	37.1	30.4	25.9	24.9	21.5	17.6	8.8	25.6	20.1	10.0
$2,000	18.6	53.6	45.2	39.9	37.1	38.0	28.1	13.8	37.9	33.0	17.6
$2,500	27.9	66.8	59.1	53.5	50.4	51.5	39.5	22.3	51.0	44.8	38.1
$3,000	37.5	76.7	69.9	64.6	61.8	63.2	49.8	28.1	62.4	56.2	50.4
$4,000	56.0	88.5	84.6	80.4	78.1	79.6	65.5	41.5	78.5	71.9	76.6
$5,000	70.5	93.5	91.4	88.9	87.2	88.7	75.3	58.9	87.3	84.0	99.4
$6,000	80.6	96.1	95.1	93.3	92.1	93.3	81.9	66.9	92.2	89.0	94.1
$7,000	86.6	97.6	97.1	96.0	95.2	96.1	89.8	74.3	95.4	92.2	96.6
$8,000	90.4	98.5	98.1	97.6	97.0	97.7	92.1	79.9	97.1	93.4	98.4
$9,000	93.4	99.0	98.9	98.5	98.1	98.7	94.7	86.0	98.2	95.9	98.4
$10,000	95.2	99.4	99.3	99.0	98.7	99.1	96.3	90.0	98.8	96.8	98.8
$20,000	99.6	[2]100.0	99.9	99.9	99.9	99.9	100.0	98.4	99.9	99.6	100.0
$50,000	100.0	100.0	100.0	100.0	100.0	100.0	-------	100.0	100.0	100.0	-------
Average net income	$4,275	$2,251	$2,536	$2,769	$2,914	$2,809	$3,671	$5,451	$2,883	$3,386	$3,178
Median net income	$3,676	$1,880	$2,173	$2,371	$2,485	$2,444	$3,011	$4,489	$1,962	$2,228	$2,484
Percent of total	-------	-------	-------	-------	-------	91.6	5.9	2.5	92.5	4.8	2.7
Number in sample	4,967	6,185	7,028	7,455	7,963	6,876	472	231	7,345	388	230

[1] Includes returns not classified by type of practice.
[2] Less than a twentieth of 1 percent of the returns reported $20,000 or more.

Average and median net incomes of dentists in 1937 in the different geographic divisions and in selected States are shown in table 5.

TABLE 5.—*Average and median net incomes of dentists, by geographic divisions and by selected States, 1937*

Geographic division or State	Number in sample	Net income from professional services	
		Average	Median
New England	519	$3,155	$2,722
Massachusetts	277	3,212	2,640
Other	242	3,090	2,806
Middle Atlantic	2,042	3,209	2,690
New York	1,121	3,393	2,821
New Jersey	313	3,159	2,522
Pennsylvania	608	2,844	2,419
East North Central	1,844	2,818	2,476
Ohio	435	2,908	2,575
Indiana	187	2,541	2,309
Illinois	617	2,752	2,366
Michigan	329	3,291	3,105
Wisconsin	276	2,491	2,187
West North Central	1,166	2,240	1,981
Minnesota	321	2,688	2,497
Iowa	226	2,257	1,982
Missouri	281	1,932	1,679
Other	338	2,111	1,899
South Atlantic	467	3,158	2,716
District of Columbia	57	3,527	3,348
North and South Carolina	73	2,431	2,184
Georgia and Florida	125	3,609	2,970
Other	212	3,043	2,600
East South Central	208	2,496	2,268
West South Central	369	2,768	2,476
Texas	203	3,030	2,749
Other	166	2,364	2,009
Mountain	263	2,642	2,324
Pacific	986	3,214	2,777
Washington	180	2,633	2,492
Oregon	102	2,410	2,332
California	704	3,426	2,950

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Engineering Profession[7]

A study of employment and earnings of professional engineers was made by the Bureau of Labor Statistics in 1935, at the request of the American Engineering Council, in order to determine the effects of the depression upon professional engineers.

The data were collected by means of mail questionnaires sent to 173,151 professional engineers. The 52,589 usable returns covered 33,841 older engineers who reported that they were professionally active prior to 1930, and 18,748 younger engineers who had entered the profession in the period 1930–34. This sample may be considered as representative of all professional engineers in the country.

Although the reports in the survey embraced a substantial number of men who had obtained professional engineering status without formal engineering education, analysis revealed that a first degree in engineering is almost a prerequisite to obtaining professional status. Insistence upon rigid engineering education as a prerequisite to engineering experience is further evidenced by the fact that all but a very small proportion of the agricultural, ceramic, and chemical engineers had college degrees. However, as many as 17.3 percent of the civil engineers were not college graduates.

Employment

Over the 5-year period ending December 1934, the number of persons in, or trained for, the engineering profession increased by 25.3 percent. On the other hand, opportunities for engineering employment increased only 4.4 percent. The result was a large amount of unemployment and intense pressure to find nonengineering work. Thus, the proportion of engineers engaged in nonengineering employments increased from 6.3 percent in 1929 to 14.1 percent in 1934. The proportion unemployed increased from 0.7 to 8.5 percent. Had it not been for the large increase in the employment of engineers by public authorities, the effect of the depression on the profession would have been even more disastrous.

In 1929 private engineering furnished by far the greatest employment for engineers. For civil engineers this covered 54.3 percent. There was a range of from 80.6 to 87.3 percent among the other four professional classes. By December 1932 private engineering among civil engineers had dropped to 37.6 percent, and by December 1934 to 31.8 percent. There was also a continuous decline in this type of employment among electrical engineers; only 63.1 percent reporting such employment in December 1934. There was only a slight improvement over 1932 for the remaining professional classes. In 1934 these three averaged 69.1 percent.

Over this period there was a remarkable stability in the number of engineers classified as independent consultants, and those engineers engaged in the teaching of engineering subjects. This was also the case for those in the employ of State, county, municipal, and other public authorities.

Analysis of reports furnished by engineers in engineering work in December 1934 indicated that 68.4 percent of all professional engineers

[7] Summarized from Bureau of Labor Statistics Bulletin No. 682: Employment and Earnings in the Engineering Profession, 1929 to 1934, by Andrew Fraser, Jr.

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used personal contacts and recommendations to obtain their jobs. Those who used this medium, together with those who obtained their positions through the civil service, formed nearly four-fifths of all reporting.

The degree of economic security among professional engineers, as evidenced by possession of an employment contract covering some period of time, or by pension privileges, was negligible.

Unemployment

From the end of 1929 to the end of 1932, the percentage of engineers who were unemployed increased from 0.7 to 10.1. At the end of 1934 the percentage was 8.5. There was slight variation in the proportions of unemployment among the various professional groups for each of the three periods. Thus, in 1932, the range was from 8.6 percent for the chemical and ceramic engineers to 10.7 for mechanical and industrial engineers. In 1929, although 2.0 percent of the mining and metallurgical engineers reported unemployment, the range for the remaining professional classes was only from 0.5 to 0.7 percent. So also in 1934 there was a narrow range for all professional groups, except civil engineers. In their case the proportion unemployed increased from 10.0 to 10.2 percent.

More than 34 percent of all the engineers reporting were unemployed at one time or another in the period 1930–34, as against about 10 percent who were unemployed on December 31, 1932. For all graduates 33.9 percent experienced unemployment. This percentage differed but slightly from the general average of 35.4 and 35.6 percent, respectively, for engineers who did not complete a college course and for engineers with a noncollegiate technical-school training.

For the country as a whole, the median period of unemployment for engineers who were college graduates was 12.2 months. For engineers who did not complete their college course it was 16.3 months, and for those with a noncollegiate technical-school training, it was 17.3 months.

The average length of the period of unemployment increased with age. When the older engineers became unemployed, unemployment lasted longer than it did with the younger engineers. Thus, the median period of unemployment for engineers graduating in 1925–29 was 12.1 months, whereas the median for those graduating prior to 1905 was 23.1 months.

At no time was direct relief extensive among professional engineers, but the development of work-relief programs after 1932 was important. In fact, relief work on work-relief projects was the main source of assistance to those who remained unemployed. Thus, on December 31, 1932, when slightly more than 10 percent of the engineers were unemployed, only 0.7 percent were on work relief. Two years later nearly 5 percent of all engineers were on work relief, which was approximately half of the total number of engineers unemployed at that time.

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Income of Professional Engineers, 1929-34

Analysis of the income data reported by all engineers in 1929, 1932, and 1934 showed that average earnings advanced with age up to 60 or 65 years of age. The initial periods of exceptionally rapid rise were followed by slower rates of increase. Thus in 1929 the median earnings of those graduating in 1927–28 were $2,098 and were $3,145 among those who graduated in 1921–24. The average of those who graduated in 1889–96 ($4,968) was little higher than the average of the group graduating in 1897–1904. Similar relationships, but with lower average earnings for each age group, prevailed in 1932 and 1934.

Although the general changes in monthly earnings showed tendencies similar to those concerning annual earnings, it should be emphasized that monthly engineering earnings give a more accurate measure of the rate at which engineering services are compensated than do the annual earnings from engineering work, because the latter figure is influenced by continuity of employment as well as rate of remuneration.

On an age basis, the 1929 monthly compensation for engineering services of the lowest tenth of reporting engineers was more than twice as high for those in the age group 48 to 55 as for those of 23 years. At the upper 10-percent earnings level, maximum earnings of $1,050 a month were reached in the sixties. Similarly, at the average and at the upper and lower quarters earnings levels, age 60 was the turning point.

Although the 1929 data on engineering earnings reveal an advantage in favor of men who had engineering degrees, this advantage was less clearly defined than was the case with earned annual incomes.

With due allowance for varying proportions of experienced engineers in the several professional classes, it appears that in 1929, and among those engineers in the employ of private firms, mining and metallurgical engineering paid the highest rates for engineering services, followed by chemical and ceramic engineering, mechanical and industrial engineering, civil engineering, and electrical engineering. In the order as stated, the median monthly engineering earnings reported for 1929 were $338, $341, $314, $300, and $276. These relationships held at all levels of earnings with only one significant exception.

From 1929 to 1934 there were large decreases in the rates of pay at all earnings levels among engineers in the employ of private firms. There was an especially marked decline in the earnings of independent consultants as compared with the decline in rates for the other kinds of employment. These changes are to be regarded as in large part a measure of underemployment. In the other kinds of employment, the largest decline (27 percent) in average rates paid was in private-firm employment. The smallest decline (14 percent) was in teaching. Average compensation by the Federal Government for engineering services declined 23 percent, as against 19 and 17 percent, respectively, for State and county governments, and municipal and other public authorities.

In general it may be said that at all earnings levels and among engineers with 5 years or more of experience, State and county employ-

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ment were at lower rates than Federal or municipal. For civil engineers and electrical engineers and mechanical engineers, public employment averaged less than any of the fields of private employment except construction.

Within the various fields of private employment, average rates in the construction industry were low. Furthermore, in the five fields of private engineering activity and in personal service, chemical and ceramic engineers and mining and metallurgical engineers appear to have had a distinct advantage in earnings, whereas among the three other professional classes the differences in the median monthly earnings reported were not very great.

For engineers with 5 years of experience or more, those engaged in general administration and management were without any important exception the best-paid group. On the average, engineers engaged in general administration make from half again to twice as much as those engaged in design, construction, or operation. For example, mechanical engineers engaged in design and research averaged $228 while those in general administration and management averaged $324 per month.

Consulting, teaching, and sales in all instances averaged less than administration and generally averaged more than design, construction, and operation.

The earnings reported by the two groups of younger engineers show that in all types of engineering work younger engineers start with practically the same level of earnings.

In 1929 there were persistent differences by geographical regions in the average rates of pay of three types of engineering. Thus, graduate mechanical engineers in 1929 averaged higher than electrical or civil engineers in all geographical divisions except the District of Columbia. In all regions except New England, graduate electrical engineers earned less than graduate civil engineers.

In 1929 there was an extreme range in average earnings among the cities with a population of 400,000 or more, from about $280 per month for Los Angeles and Minneapolis and St. Paul to $351 in Pittsburgh. None of the 18 cities of 400,000 or more in 1934, and only two in 1929, had average earnings materially lower than the average in the smaller cities.

Lawyers, 1936[8]

The average net professional income in 1936 of 784 lawyers in the United States was found by the United States Bureau of Foreign and Domestic Commerce to be $4,320. Table 6, containing data from a report published by that Bureau in its Survey of Current Business (Washington) for April 1938, shows average net incomes of lawyers in 1929 and in each year from 1932 to 1936. Two sets of figures are given in each case, one for a sample covered by the questionnaire of the Bureau of Foreign and Domestic Commerce, and the other for a sample covered by a separate set of questions submitted by the American Bar Association and sent out with the Bureau's questionnaire.

[8] From the Monthly Labor Review for November 1938.

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TABLE 6.—*Net income of lawyers, 1929 and 1932–36*

Item	1929	1932	1933	1934	1935	1936
Average net income	[1] $6,601	[1] $4,088	[1] $3,786	[1] $3,692	[1] $3,885	[1] $4,320
	[2] 5,561	[3]	[2] 3,273	[3]	[3]	[2] 3,725
Percentages of 1929	[1] 100	[1] 61.9	[1] 57.4	[1] 55.9	58.9	[1] 65.4
	[2] 100	[3]	[2] 58.9	[3]	[3]	[2] 67.0
Number of practitioners in sample	[1] 557	[4] 685.8	[1] 734	[1] 777	[1] 787	[4] 784.5
	[2] 706	[3]	[2] 944	[3]	[3]	[2] 1,157

[1] Average based on questions asked by Department of Commerce.
[2] Average obtained from supplementary questions included for American Bar Association.
[3] Information not obtained.
[4] Average based on questions asked by Department of Commerce. Fractions indicate part-of-year participation in legal firms.

Incomes of a group of 1,090 lawyers ranged in 1936 from $1,059 after 1 year of experience to $4,964 after 28 to 37 years' experience, as shown in table 7.

TABLE 7.—*Net income and percentage distribution of independent legal practitioners, by years of experience, 1936*

Years of experience	Persons in sample		Average net income	Years of experience	Persons in sample		Average net income
	Number	Percent			Number	Percent	
Total	1,090	100.0		1 to 2 years	83	7.6	$1,099
				3 to 7 years	263	24.1	1,990
1 year	30	2.7	$1,059	8 to 17 years	326	29.9	3,629
2 years	53	4.9	1,121	18 to 27 years	207	19.0	4,893
3 years	48	4.4	1,630	28 to 37 years	139	12.7	4,964
4 years	59	5.4	1,779	38 to 47 years	53	4.9	4,016
5 years	60	5.5	2,047	48 to 52 years	13	1.2	2,591
6 years	54	4.9	2,176	Over 52 years	6	.6	1,248
7 years	42	3.9	2,375				

Library Employees, 1939[9]

In selected cities of the United States having populations of over 200,000, the salaries of chief librarians in public libraries on November 1, 1939, ranged from $3,000 in Dallas, Tex., to $10,000 in Brooklyn, N. Y., and Newark, N. J., according to information published in the American Library Association Bulletin (Chicago) for April 1940. However, salaries of chief librarians in several cities, notably New York, were not reported. Salaries of department heads ranged from a minimum of $1,020 (maximum, $2,700) in Birmingham, Ala., to a maximum of $4,500 in Milwaukee, Wis. The minimum for catalogers ranged from $900 (maximum, $960) in New Orleans, La., to a maximum of $2,880 in Chicago.

Salaries of librarians, department heads, and catalogers on November 1, 1939, in public libraries of cities of over 200,000 population in the United States and Canada, are shown in table 8.

[9] From the Monthly Labor Review for August 1940.

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TABLE 8.—*Salaries for specified occupations in public libraries in cities of over 200,000 population, in effect Nov. 1, 1939*

City	Chief librarian	Department heads			Branch and sub-branch librarians			Catalogers [1]		
		Number	Minimum	Maximum	Number	Minimum	Maximum	Number	Minimum	Maximum
United States and Canada:										
High	$10,000	19	$3,300	$4,500	53	$2,520	$3,420	17	$1,980	$2,880
Median	6,000	8	2,100	2,820	12	1,560	2,059	4½	1,380	1,800
Low	2,988	3	1,020	1,500	1	600	1,320	1	900	960
United States										
Akron, Ohio	5,000	6	2,580	2,640	9	1,600	2,000	1	1,600	------
Atlanta, Ga.[2]	3,600	4	2,100	2,100	9	1,200	1,680	5	1,200	1,440
Baltimore, Md	7,000	18	2,400	3,200	25	1,440	1,920	7	1,320	1,740
Birmingham, Ala.[3]	4,000	12	1,020	2,700	11	900	1,800	------	------	------
Buffalo, N. Y	7,300	10	2,800	3,100	17	1,660	2,300	------	------	------
Chicago	[4]	14	2,400	3,480	46	1,560	3,420	17	1,440	2,880
Cincinnati, Ohio [2]	[4]	13	2,000	3,200	11	1,300	1,880	10	1,480	1,860
Cleveland, Ohio [5]	9,000	11	2,900	4,400	33	2,200	3,400	12	1,560	2,800
Columbus, Ohio [6]	5,000	4	1,980	2,820	6	1,740	1,980	3	1,140	1,620
Dallas, Tex	3,000	5	1,500	1,800	5	900	1,380	1	1,200	------
Dayton, Ohio [6]	6,000	9	2,040	3,120	10½	1,170	2,400	4	1,980	2,280
Denver, Colo	6,000	12	1,800	2,500	12	1,200	1,560	5	1,200	1,560
Detroit, Mich	8,500	15	2,700	4,140	21	2,520	2,760	------	------	------
Houston, Tex	4,020	4	1,530	2,100	3	1,080	1,500	1	1,320	------
Indianapolis, Ind	6,500	11	1,932	3,000	19	1,560	2,916	6	1,020	1,584
Jersey City, N. J	7,500	5	2,580	2,760	12	1,800	2,040	7	1,800	2,040
Kansas City, Mo	5,425	9	1,627	2,520	15	1,522	2,100	3	1,276	1,575
Los Angeles, Calif. (city)	6,000	19	2,400	3,300	41½	1,980	2,700	13	1,500	1,920
Los Angeles, Calif. (county) [7]	5,000	------	------	------	8⅝10	900	1,740	6	1,380	1,860
Louisville, Ky.[3]	6,000	7	1,980	2,220	9	1,380	1,800	[8]	------	------
Memphis, Tenn.[3]	5,400	7	1,920	1,980	25	600	2,040	3	1,200	1,440
Milwaukee, Wis.[3]	7,000	9	2,520	4,500	18	1,860	2,220	5	1,920	2,160
Minneapolis, Minn.[3]	6,000	12	2,400	3,000	[9] 25	1,800	2,500	2	1,400	1,800
New Orleans, La	4,000	4	1,320	1,500	6	900	1,320	3	900	960
New York City	------	24	2,100	3,600	111	1,620	2,820	35	1,320	2,220
N. Y. P. L. circulation department [10]	[11]	8	2,400	3,600	53	2,160	2,820	12	1,380	2,220
Brooklyn	10,000	7	2,100	3,600	34	2,100	2,820	12	1,440	2,220
Queens	7,500	9	2,640	3,600	24	1,620	2,820	11	1,320	2,160
Newark, N. J	10,000	9	1,400	3,300	8	1,600	3,100	3	1,700	2,200
Oakland, Calif	6,000	5	2,100	2,400	19	1,560	1,800	1	1,680	------
Omaha, Nebr	3,040	7	1,500	2,200	3	1,380	1,740	2	1,200	1,260
Philadelphia, Pa	[4]	12	1,800	2,475	32	1,350	1,700	3	1,200	1,840
Pittsburgh, Pa	------	12	1,650	4,000	13	1,680	2,100	7	1,320	1,800
Old City	8,000	8	3,000	4,000	12	1,680	2,100	6	1,320	1,800
Allegheny	4,130	4	1,650	2,200	1	1,980	------	1	1,620	------
Portland, Oreg.[2]	4,800	7	2,180	2,640	17	1,320	1,980	6	1,440	1,740
Providence, R. I	------	8	[8]	[8]	21	[8]	[8]	9	[8]	[8]
Providence, P. L	[8]	7	[8]	[8]	20	[8]	[8]	8	[8]	[8]
Elmwood, P. L	[4]	1	[8]	------	1	[8]	------	1	[8]	------
Rochester, N. Y	6,000	[12] 12	1,680	3,360	[13] 12	1,680	2,300	3	1,320	1,800
St. Louis, Mo	9,000	16	1,710	3,600	16	1,410	2,190	12	1,440	2,160
St. Paul, Minn	4,500	------	------	------	4	1,919	2,059	4	1,778	1,778
San Antonio, Tex	3,120	3	1,740	1,824	3	906	1,380	------	------	------
San Francisco, Calif	4,800	11	2,100	3,000	21	1,560	2,100	6	1,200	1,920
Seattle, Wash	6,000	10	2,200	2,820	10	1,740	2,220	2	1,680	1,800
Syracuse, N. Y	5,000	11	1,500	2,200	7	1,500	1,800	1	1,300	------
Toledo, Ohio	4,500	7	2,100	2,700	14	1,200	2,200	5	1,160	1,500
Washington, D. C	8,000	4	3,300	3,500	12	1,800	3,400	3	1,620	2,100
Youngstown, Ohio [3]	[4]	4	2,100	2,700	13	1,320	1,800	1	1,500	------
Canada										
Vancouver, B. C	4,162	5½	1,776	2,220	1	1,776	------	2	1,554	1,720
Winnipeg, Manitoba	2,988	3	1,371	1,687	3	1,160	1,371	------	------	------

[1] Excludes department head.
[2] Serves city and county.
[3] Serves city and part of county.
[4] Salary confidential or not for publication.
[5] Excludes statistics for county department.
[6] Provides extension service to all residents of county not served by a local library.
[7] Serves part of county.
[8] Not reported.
[9] Includes 9 librarians in junior high school branches on 10 months' basis; salaries omitted.
[10] Serves 3 boroughs—Bronx, Manhattan, and Richmond.
[11] Chief of circulation department; salary not for publication.
[12] Includes 2 active department heads at $1,680 each; other department heads' salaries begin at $1,860.
[13] Includes 3 acting branch librarians at $1,680 each; other branch librarians' salaries begin at $1,860.

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Public Health Nurses, 1938[10]

In December 1938, median monthly salaries of public health staff nurses in nonofficial agencies ranged from $122 in cities of from 50,000 to 99,999 population to $141 in rural sections. For staff nurses in municipal health departments, medians ranged from $127 in cities of from 250,000 to 499,999 population to $164 in those of 1,000,000 and over. These figures are from a report by the National Organization for Public Health Nursing, published in its journal, Public Health Nursing (New York), for November 1939. Table 9, presenting data from that report, shows median salaries of public-health staff nurses in official and nonofficial agencies in December 1938.

TABLE 9.—*Median monthly salaries of public-health staff nurses, December 1938*

Item	Nonofficial agencies		Health departments				Combined agencies	
			Municipal		County			
	Number of nurses	Median monthly salary	Number of nurses	Median monthly salary	Number of nurses	Median monthly salary	Number of nurses	Median monthly salary
All sections	2,622	$128	3,090	$148	456	$135	263	$132
New England	480	129	270	151	7	125	48	129
Middle Atlantic	919	127	1,016	160	30	151	53	145
South	239	127	407	123	167	125	61	114
Middle West	856	128	1,153	147	61	153	83	133
Far West	111	133	244	155	191	146	18	150
Other	17	145	------	------	------	------	------	------
Population served:								
1,000,000 and over	560	135	1,527	164	------	------	------	------
500,000 to 999,999	479	128	583	132	------	------	------	------
250,000 to 499,999	475	128	413	127	------	------	------	------
100,000 to 249,999	512	124	262	135	98	153	167	133
50,000 to 99,999	252	122	186	128	193	136	74	118
25,000 to 49,999	178	124	68	130	108	131	22	137
Less than 25,000	125	131	51	146	57	132	------	------
Rural	41	141	------	------	(1)	(1)	------	------
Size of staff:								
100 persons and over	707	129	1,691	161	------	------	------	------
50 to 99 persons	403	133	442	153	73	148	42	127
25 to 49 persons	399	126	379	125	------	------	128	130
10 to 24 persons	665	125	318	129	143	142	65	144
2 to 9 persons	422	127	247	128	231	129	28	136
1 person	26	151	13	142	9	145	------	------

[1] It seemed expendient in the 1938 study to consider that for the most part all county health departments were serving rural populations.

According to reports from 119 boards of education, employing 1,078 nurses (including 42 directors and 8 supervisors), the median staff nurse's salary, in 1938, was $1,677 per annum, the minimum being $650 and the maximum, $2,900. Of 109 nurses employed in the South, all but 1 received less than the median for the country. Salaries were highest in the far West, for which a median of $2,024 was reported.

[10] From the Monthly Labor Review for January 1940.

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Osteopathic Physicians, 1937[11]

Osteopathic physicians practicing in the United States in 1937 received an average net income from professional services of $2,584, the corresponding figure for 1929 being $3,620 and for 1933, $1,943, as shown in a survey by the United States Bureau of Foreign and Domestic Commerce. Table 10, giving data of that Bureau, shows the percentage distribution of osteopaths in the different income groups in 1929, 1933, and 1935–37.

TABLE 10.—*Cumulative percentage distribution of osteopathic physicians according to total net income from professional services, 1929 to 1937*

Item	By years					By type of practice, 1937			By type of income recipient, 1937		
	1929	1933	1935	1936	[1] 1937	General	Partly specialized	Wholly specialized	Non-salaried	Part salaried	100 percent salaried
Percent of total reporting net incomes of less than—											
$0	1.9	2.6	2.3	2.8	1.8	2.3	0.5	0.0	1.9	0	0
$500	4.9	12.3	10.5	10.2	9.5	10.6	7.4	0.0	9.8	2.7	10.6
$1,000	11.7	30.9	27.0	24.3	21.3	23.9	16.3	2.3	21.5	15.1	27.7
$1,500	19.2	49.4	42.7	37.8	33.9	37.1	26.8	9.1	34.1	30.1	38.3
$2,000	30.5	63.7	56.9	51.5	49.1	54.2	38.1	15.9	49.2	45.4	55.4
$2,500	39.5	74.1	67.5	63.3	61.4	65.9	50.7	34.1	61.6	55.0	70.4
$3,000	48.9	80.9	76.3	71.5	68.9	73.7	56.9	38.6	68.8	65.9	81.0
$4,000	65.3	89.8	87.3	84.2	82.5	85.1	74.6	56.8	82.2	81.0	85.3
$5,000	76.9	94.1	92.2	91.0	89.1	91.8	81.9	70.5	89.3	83.7	95.8
$6,000	84.6	96.9	95.4	94.1	92.9	94.7	89.3	70.5	93.1	87.8	95.8
$7,000	90.1	98.2	96.9	96.3	95.4	96.7	92.7	79.6	95.6	91.9	97.9
$8,000	93.5	98.8	98.1	97.7	96.7	97.7	95.0	81.8	96.9	93.2	97.9
$9,000	95.7	99.2	98.9	98.2	97.9	98.3	97.2	88.7	98.1	96.0	97.9
$10,000	96.5	99.7	99.2	98.8	98.6	98.9	98.9	88.7	98.9	97.3	97.9
$15,000	99.3	100.0	100.0	99.7	99.9	99.9	100.0	97.7	99.9	100.0	100.0
$20,000	99.8	------	-------	99.9	99.9	99.9	-------	97.7	99.9	-------	-------
$25,000	100.0	-------	-------	99.2	99.9	100.0	-------	97.7	99.9	-------	-------
$50,000	-------	-------	-------	100.0	100.0	-------	-------	100.0	100.0	-------	-------
Average net income	$3,620	$1,943	$2,190	$2,425	$2,584	$2,348	$3,058	$5,309	$2,580	$2,950	$2,150
Median net income	$3,067	$1,521	$1,757	$1,945	$2,037	$1,877	$2,472	$3,626	$2,032	$2,240	$1,842
Percent of total	-------	-------	-------	-------	-------	73.1	24.4	2.5	93.6	3.9	2.5
Number in sample	704	873	1,088	1,240	1,472	1,018	349	38	1,374	61	37

[1] Includes returns not classified by type of practice.

Physicians, 1939[12]

Gross incomes of physicians in the United States averaged $7,365 in 1939, according to data obtained in a survey of medical practice made by Medical Economics, Inc. (Rutherford, N. J.), and published in its journal, Medical Economics, for September 1940. The figure for 1939, an average based on 7,565 reports, is about 20 percent (or

[11] From the Monthly Labor Review for June 1939, with later revised data.
[12] From the Monthly Labor Review for November 1940.

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more than $1,200) higher than average gross incomes in 1935 ($6,139, based on 4,565 returns), but still about $2,000 under those received before the depression. The average for 994 physicians in 1928 was found to be $9,329. The low point of the depression for physicians apparently was reached around 1935.

Replies to the questionnaire used in the survey were received from 8,540 active private physicians, but 833 were not usable for the purposes of the study as a whole. The analysis is therefore based, in general, on the remaining 7,707 reports. This sample is said to be the largest on which such a survey of the medical profession has ever been based. Fairly proportionate returns were received from the 48 States, from towns of different sizes, and from doctors of different ages in general and specialty practice. There was no disproportion of replies from specialists, from members of the American Medical Association, or from men with presumably higher incomes. Among the 7,707 physicians whose reports were used in the general analysis, there were 5,944 general practitioners, 2,312 partial specialists, and 1,719 full specialists.

Gross income was used as the basic unit of measurement, it being considered more accurate than a net figure, owing to a tendency on the part of those reporting either to minimize or to overlook certain items of overhead which, if included, would reduce the net amount. All figures given in this article therefore represent gross income.

A physician's maximum earning capacity seems to come between the thirteenth and seventeenth years of practice, usually while he is in the forties. From this period until retirement, Medical Economics states, earnings may be expected to decline more than 40 percent. It was found that physicians who had been practicing from 13 to 17 years averaged $9,330 in 1939, while those who had practiced for 43 or more years averaged only $5,298. For the intermediate period of 28 to 32 years, the figure was $7,741. The averages for physicians in the earlier years of practice ranged from $3,647 for beginners (2 years or under) to $8,545 for those with 8 to 12 years' experience.

The analysis of incomes according to length of training revealed the peculiar situation that although there was a steady increase with years of training from 4 to 7, the trend was reversed after 7, men with 8 years' training earning less than those with 7, and men with 9 less than those with 8. Men with 10 years of training averaged slightly more than those with 9, but less than those with 8.

Comparing the earnings of specialists and nonspecialists, the average for 1,663 specialists was $10,057, or about 65 percent more than the $6,096 averaged by 3,593 general practitioners. The average for partial specialists, $7,411, was about $1,300 more than for nonspecialists. However, it is pointed out that the higher incomes of specialists may be due in part to their having practiced longer.

Incomes varied considerably with size of community and between different sections of the country. In general, they were lowest in

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towns of under 10,000 population and in cities of over 1,000,000, being highest in localities of from 50,000 to 100,000 population. In rural sections they ran about 37 percent under the average for all physicians combined. Incomes in cities of 1,000,000 and over, and in communities of from 5,000 to 10,000, averaged about the same—$7,117 and $7,162, respectively. For those of from 50,000 to 100,000, the figure was $8,395. The highest incomes were earned in the Pacific and Mountain States. Pacific coast physicians received over 25 percent more than those in the Middle Atlantic States (including New York). Relatively high incomes, however, were found among physicians in the South Atlantic States.

Table 11 shows average gross incomes in 1939 of 5,522 general practitioners, by years of practice, geographic area, and size of community.

TABLE 11.—*Average gross income of 5,522 general practitioners in 1939*

Years of practice and geographic area	Population of community		
	Under 2,500	2,500 to 100,000	More than 100,000
Less than 13 years:			
East	$5,921	$6,851	$5,113
West	6,424	7,812	6,159
South	5,121	7,088	6,790
13 to 27 years:			
East	6,252	8,589	7,201
West	5,044	8,880	7,743
South	5,124	7,431	8,652
More than 27 years:			
East	4,192	6,890	6,028
West	4,403	6,196	5,942
South	3,623	5,335	5,953

School Employees, 1940-41[13]

Median salaries of practically all classes of school employees in cities having over 100,000 population increased substantially between 1935 and 1941, and in many cases exceeded those of 1930–31, according to a report on salaries of city-school employees published by the National Education Association of the United States (Washington).[14] Table 12, taken from that report, shows the salaries of all classes of school employees in cities of over 100,000 population from 1930–31 to 1940–41 and percentages of change over this period. The data are based on reports from 86 of the 92 cities recorded in the 1940 Census as having over 100,000 inhabitants.

[13] From the Monthly Labor Review for June 1941.
[14] Research Bulletin, vol. XIX, No. 2, March 1941: Salaries of City School Employees, 1940–41.

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TABLE 12.—*Median salaries of school employees in cities of over 100,000 population, 1930–31 to 1940–41*

Type of school employee	Median salary paid in—						Percent of change		
	1930–31	1932–33	1934–35	1936–37	1938–39	1940–41	1931–1941	1935–1941	1939–1941
Classroom teachers									
Kindergarten	$2,077	$1,909	$1,926	$2,045	$2,208	$2,227	+7.22	+15.63	+0.86
Elementary school	2,118	1,947	1,922	2,027	2,217	2,268	+7.08	+18.00	+2.30
Atypical classes	2,372	2,100	1,996	2,182	2,393	2,357	−.63	+18.09	−1.50
Junior high school	2,348	2,204	2,078	2,303	2,450	2,471	+5.24	+18.91	+.86
High school	2,731	2,479	2,436	2,551	2,672	2,768	+1.35	+13.63	+3.59
Part-time or continuation school	2,695	2,793	2,693	2,886	2,198	2,458	−8.79	−8.73	+11.83
High-school department heads	3,436	3,008	2,913	3,288	3,512	3,536	+2.91	+21.39	+.68
Deans									
Junior high school	3,092	2,730	2,539	2,888	3,107	3,043	−1.58	+19.85	−2.06
High school	2,942	2,667	2,268	2,464	2,669	2,677	−9.01	+18.03	+.30
Principals									
Elementary school:									
Assistant principals	4,280	4,614	4,042	4,245	4,647	4,621	+7.97	+14.32	−.56
Teaching principals	2,436	2,184	2,135	2,207	2,633	2,315	−4.97	+8.43	−12.08
Supervising principals	3,519	3,102	3,016	3,225	3,339	3,420	−2.81	+13.40	+2.43
Junior high school:									
Assistant principals	3,496	2,899	2,850	3,106	3,318	3,940	+12.70	+38.25	+18.75
Principals	4,500	3,961	3,718	4,064	4,359	4,403	−2.16	+18.42	+1.01
High school:									
Assistant principals	5,544	3,647	3,453	3,569	3,992	3,869	−30.21	+12.05	−3.08
Principals	5,100	4,468	4,252	4,473	4,758	4,806	−5.76	+13.03	+1.01
Part-time or continuation school principals	4,111	3,700	4,125	5,125	3,900	4,050	−1.48	−1.82	+3.85
Administrative and supervisory staff									
Superintendents of schools	10,000	8,267	7,288	7,825	8,286	8,605	−13.95	+18.07	+3.85
Associate, assistant, or deputy superintendents	6,527	5,672	5,578	5,645	5,971	6,039	−7.48	+8.26	+1.14
Business managers	5,361	4,500	4,186	4,543	4,571	4,967	−7.35	+18.66	+8.66
Directors, assistant directors, or supervisors of—									
Research, tests, etc	3,400	3,010	2,925	3,020	3,417	3,333	−1.97	+13.95	−2.46
Vocational education	3,550	3,380	3,075	3,187	3,825	3,667	+3.30	+19.25	−4.13
Physical education	3,100	3,123	2,909	2,989	3,152	3,285	+5.97	+12.93	+4.22
Health	3,167	2,500	2,800	2,175	3,350	2,947	−6.95	+5.25	−12.03
Evening schools	.....	3,325	3,000	2,700	2,875	3,275	.....	+9.17	+13.91
Americanization classes	3,240	3,033	2,750	2,950	2,950	3,000	−7.41	+9.09	+1.69
Art	2,867	2,744	2,687	2,860	3,000	3,044	+6.17	+13.29	+1.47
Music	2,909	2,825	2,569	2,813	2,896	3,077	+5.78	+19.77	+6.25
Penmanship	2,933	2,789	2,727	2,907	2,889	2,960	+.92	+8.54	+2.46
Manual or industrial arts	3,450	3,308	3,278	3,136	3,137	3,480	+.87	+6.16	+10.93
Home economics	3,219	2,967	2,818	3,040	3,240	3,325	+3.29	+17.99	+2.62
Visual education	.....	.....	.....	.....	3,167	3,100	.....	.....	−2.12
Other school employees									
Secretarial and clerical employees:									
Secretaries to superintendents of schools	2,329	1,978	1,779	1,918	2,075	2,107	−9.53	+18.44	+1.54
Secretaries of boards of education	4,450	3,700	3,333	3,767	3,825	3,850	−13.48	+15.51	+.65
Clerks in principals' offices	1,281	1,133	1,147	1,218	1,299	1,355	+5.78	+18.13	+4.31
Clerks in other administrative and supervisory offices	1,581	1,442	1,450	1,528	1,590	1,628	+2.97	+12.28	+2.39
Superintendents of buildings	4,267	3,400	3,109	3,156	3,850	3,960	−7.19	+27.37	+2.86
Head janitors	2,500	2,000	1,564	2,657	2,063	3,022	+20.88	+93.22	+46.49
Janitors	1,541	1,265	1,211	1,297	1,429	1,419	−7.92	+17.18	−.70
Head nurses	2,138	2,029	1,875	1,943	2,000	2,050	−4.12	+9.33	+2.50
Nurses	1,715	1,611	1,512	1,706	1,739	1,764	+2.86	+16.67	+1.44
Chief attendance officers	3,125	2,783	2,530	2,767	2,788	2,967	−5.06	+17.27	+6.42
Attendance officers	2,078	1,971	1,888	2,063	2,219	2,241	+7.84	+18.70	+.99

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Median salaries in 1940–41 of four occupation groups in cities of over 100,000 population are given, by city, in table 13, compiled from the National Education Association's report.

TABLE 13.—*Median salaries in four teaching occupations in cities of over 100,000 population, 1940–41*

City	Kindergarten teachers	Elementary-school teachers	Junior high-school teachers	Senior high-school teachers [1]
Birmingham, Ala.	-------	[2] $1,469	-------	$1,697
Long Beach, Calif.	$2,426	2,447	$3,000	3,000
Los Angeles, Calif.	2,420	[3] 2,436	2,962	[3] 3,012
Oakland, Calif.	2,448	2,460	2,830	2,838
Sacramento, Calif.	2,100	2,100	2,370	2,700
San Diego, Calif.	2,157	2,178	[4] 2,511	[5] 2,769
San Francisco, Calif.	2,175	2,720	2,385	3,305
Denver, Colo.	2,567	2,775	2,833	2,856
Bridgeport, Conn.	1,700	2,000	2,070	2,334
Hartford, Conn.	2,317	2,455	2,444	3,413
New Haven, Conn.	1,825	1,853	2,100	2,468
Wilmington, Del.	1,700	2,200	1,957	2,139
Washington, D. C.	2,246	[6] 2,236	2,451	2,841
Miami, Fla.[7]	-------	1,594	(8)	[9] 1,634
Atlanta, Ga.	1,930	1,954	2,461	2,514
Chicago, Ill.	2,313	2,334	-------	3,515
Peoria, Ill.	1,700	1,723	1,758	2,111
Fort Wayne, Ind.	1,813	1,839	-------	2,520
Gary, Ind.	1,825	1,788	-------	2,326
Indianapolis, Ind.	-------	1,999	-------	2,243
South Bend, Ind.	1,800	1,823	1,996	2,357
Des Moines, Iowa	1,894	1,832	1,883	2,053
Kansas City, Kans.	1,575	1,723	1,912	2,208
Wichita, Kans.	1,600	1,818	1,842	1,884
Louisville, Ky.	1,700	1,659	1,839	2,265
New Orleans, La.	1,659	1,658	-------	2,236
Baltimore, Md.	1,900	[9] 1,920	2,146	2,793
Boston, Mass.	1,981	2,355	2,429	3,078
Fall River, Mass.	1,550	1,615	1,945	2,106
Lowell, Mass.	1,440	1,550	1,855	2,067
New Bedford, Mass.	1,543	1,542	1,908	2,232
Somerville, Mass.	1,830	2,015	2,144	2,226
Springfield, Mass.	2,093	2,091	2,595	3,050
Worcester, Mass.	2,043	2,051	2,530	2,761
Detroit, Mich.	2,414	2,423	2,873	[10] 2,856
Flint, Mich.	1,478	1,508	1,682	1,766
Grand Rapids, Mich.	1,647	1,700	2,138	2,179
Duluth, Minn.	1,817	1,802	1,989	2,169
Minneapolis, Minn.	2,010	2,045	[4] 2,069	[11] 2,348
St. Paul, Minn.	1,654	1,649	-------	2,229
Kansas City, Mo.	1,838	1,814	2,067	2,266
St. Louis, Mo.	2,700	2,700	-------	3,861
Omaha, Nebr.	1,527	1,524	-------	1,780
Camden, N. J.	1,900	2,016	1,913	2,579
Elizabeth, N. J.	2,100	2,036	2,291	2,681
Jersey City, N. J.	$1,650	$2,242	-------	$3,329
Newark, N. J.	3,271	3,012	$2,375	3,045
Paterson, N. J.	3,000	2,353	-------	2,955
Trenton, N. J.	2,350	2,390	2,058	3,370
Albany, N. Y.	1,954	2,074	2,388	[10] 2,414
Buffalo, N. Y.	2,100	2,158	-------	2,550
New York, N. Y.	3,331	3,344	3,830	4,503
Rochester, N. Y.	2,213	2,181	(8)	[9] 2,710
Syracuse, N. Y.	2,000	2,052	2,400	2,400
Yonkers, N. Y.	3,083	3,244	3,650	4,000
Charlotte, N. C.	-------	1,345	1,343	1,321
Akron, Ohio	-------	1,900	-------	2,073
Canton, Ohio	-------	1,800	(8)	[9] 2,154
Cincinnati, Ohio	2,488	2,592	2,674	3,000
Cleveland, Ohio	2,173	2,347	2,603	3,108
Columbus, Ohio	-------	1,841	2,425	2,428
Dayton, Ohio	-------	1,857	-------	[12] 2,434
Toledo, Ohio	-------	2,029	2,138	2,362
Youngstown, Ohio	-------	2,000	[4] 2,664	[5] 3,014
Oklahoma City, Okla.	1,425	1,467	1,432	1,769
Tulsa, Okla.	1,633	1,807	1,800	1,900
Portland, Oreg.	1,800	2,070	-------	2,231
Erie, Pa.	1,886	1,898	2,163	[10] 2,329
Philadelphia, Pa.	2,200	2,243	[10] 2,639	[13] 3,052
Pittsburgh, Pa.	-------	2,243	2,837	3,276
Reading, Pa.	2,017	2,082	2,338	2,522
Scranton, Pa.	1,871	1,934	2,217	2,247
Providence, R. I.	2,202	2,115	2,363	2,756
Knoxville, Tenn.	-------	1,438	1,547	1,700
Nashville, Tenn.	-------	1,350	1,353	1,752
Dallas, Tex.	-------	1,825	1,900	2,520
Fort Worth, Tex.	-------	1,523	1,447	1,807
Houston, Tex.	1,650	1,919	1,855	2,133
San Antonio, Tex.	-------	1,620	[4] 1,665	[5] 1,689
Salt Lake City, Utah	1,300	1,750	1,917	2,017
Norfolk, Va.	-------	1,356	1,638	1,811
Richmond, Va.	1,800	1,800	2,103	2,224
Seattle, Wash.	(14)	[14] 2,282	2,595	2,608
Spokane, Wash.	-------	2,070	2,115	2,242
Tacoma, Wash.	-------	1,899	2,004	2,005
Milwaukee, Wis.	2,438	2,459	[15] 2,441	[10] 2,656

[1] Excludes vocational-school teachers unless otherwise noted.
[2] Includes head teachers.
[3] Includes teachers of atypical classes.
[4] Excludes junior-senior high-school teachers; these teachers are reported with high-school teachers.
[5] Includes junior-senior high-school teachers.
[6] Includes Americanization teachers.
[7] Dade County including Miami.
[8] Junior high-school teachers are reported with high-school teachers.
[9] Includes occupational teachers.
[10] Includes vocational-school teachers.
[11] Includes vocational and junior-senior high-school teachers.
[12] Includes cooperative high-school teachers.
[13] Includes normal-school teachers.
[14] Kindergarten teachers are reported with elementary-school teachers.
[15] Includes junior-trade teachers; excludes junior-senior high-school teachers, who are reported with high-school teachers.
[16] Includes teachers of boys' and girls' trade and technical high schools and of junior-senior high schools.

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In cities of under 100,000 population, salaries increased between 1935 and 1941, but in most cases were lower in 1940–41 than in 1930–31. For example, median salaries of high-school teachers were lower in 1940–41 than in 1930–31 by percentages ranging from 3.41, in cities of 30,000 to 100,000, to 7.69, in cities of from 2,500 to 5,000 population. Elementary-school teachers in cities of from 10,000 to 100,000 population were being paid approximately the same in both periods.

Y. M. C. A. Secretaries, 1939 [a]

The median salary of 3,673 persons employed as Y. M. C. A. secretaries in 1939 was $2,436, the lowest fourth in the group being paid $1,857 or less, and the top fourth from $3,280 to $12,000, according to a report on "Professional Opportunities in the Y. M. C. A," published in the November 1939 issue of Occupations—The Vocational Guidance Magazine (New York). The median salary of new entrants in the service was $1,273 per annum.

The employing association fixes salaries. In general, the report states, remuneration tends to increase with age and length of service. Salaries are ordinarily higher (for comparable duties) in the more important cities and vary somewhat according to geographical location. Account is also taken of educational preparation and specialized training.

A secretary has a long span of hours during the day and is likely to have varying hours of service with a substantial amount of evening work, his schedule calling at times for a longer workweek than that which generally prevails in the community.

Radio Manufacture—Earnings, 1936 and 1937 [1]

The Bureau of Labor Statistics survey of earnings in the radio industry was restricted to establishments engaged in the manufacture of receiving sets, receiving-set parts (except cabinets), and radio-receiving tubes. It covered neither establishments engaged in the manufacture of transmitting apparatus nor of amplifier and sound equipment; neither did it cover the broadcasting and transmitting branches of the industry.

In view of the size of the industry, it was not feasible for the Bureau to attempt a complete canvass of each establishment engaged in the manufacture of radio sets, parts, and tubes. For this reason, the inquiry was confined to 59 plants so selected as to afford an accurate cross section of each branch of the industry.

The wage earners covered in these establishments numbered 28,555, or approximately half the estimated total number of workers engaged in the industry as defined in this survey.[2] Of the workers for whom

[a] From the Monthly Labor Review for January 1940.

[1] Abstract of articles in the Monthly Labor Review for August 1938 and July 1939, prepared by J. Perlman, O. R. Mann, D. L. Helm, and H. O. Rogers, of the Bureau of Labor Statistics.

[2] The Census of Manufactures classification of "Radio apparatus and phonographs" includes all establishments engaged primarily in the manufacture of "all kinds of radio apparatus, including tubes, for transmitting and receiving; all kinds of machines for mechanically recording or reproducing speech, music, or other sounds; combination radios and phonographs, parts and supplies, such as mechanical parts, record blanks, and records." The present study differs from the census classification in that it does not include the manufacture of transmitting apparatus and amplifier and sound equipment. Moreover, workers employed in the manufacture of phonographs alone were not covered, although those workers employed in the manufacture of combined radio and phonograph sets were included. The census includes both groups. On the other hand, workers employed in the manufacture of some radio parts, such as coils, transformers, and condensers, which the Bureau of the Census groups with the electrical machinery and apparatus industry, have been included in this survey.

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data were obtained, 4,329 were skilled, 19,576 were semiskilled, and 4,650 were unskilled. The workers covered in the manufacture of radio sets numbered 14,360—2,791 skilled, 9,095 semiskilled, and 2,474 unskilled. The 7,918 in the radio-parts branch included 966 skilled, 5,431 semiskilled, and 1,521 unskilled. In the manufacture of tubes there were 572 skilled, 5,050 semiskilled, and 655 unskilled workers covered.

Of the 59 plants for which information was obtained, 24 with 14,360 employees manufactured complete radio receiving sets, 27 with 7,918 employees made radio parts only, and 8 with 6,277 employees manufactured radio tubes only. However, the manufacturers of sets also make numerous parts for original and replacement uses.

In all, information was obtained from establishments located in 11 States—Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Ohio, Michigan, Indiana, Illinois, and Kentucky.

Another factor considered in the selection of the sample was unionization. Of the 59 plants included, 27 were operating at the time of the survey under an oral or written agreement with either the United Electrical and Radio Workers of America or the International Brotherhood of Electrical Workers, and 6 other establishments dealt with independent unions. Organization of the workers was further advanced in some areas, notably in the Eastern States, than in others.

An August pay-roll period was selected primarily because in years of normal business activity in the industry this month is one of moderately good volume.

Hourly Earnings

The average hourly earnings for the industry were 54.1 cents in August 1937 (table 1). No general average, however, gives an accurate perspective of the earnings of most of the workers who are employed by the industry. Not only do earnings vary widely between branches, but there are likewise sharp variations between plants in the same branch. Hourly earnings were found to be highest in the sets branch of the industry, where the average in August 1937 was 60.9 cents. But this figure represents a composite of individual plant averages ranging from less than 40 cents to more than 65 cents an hour.

In the parts branch of the industry hourly earnings averaged 47.9 cents an hour, but the individual plant averages ranged from less than 35 cents to over 60 cents. In the tubes branch of the industry, the average hourly earnings in August 1937 were precisely the same

TABLE 1.—*Average hourly earnings of radio workers, August 1937, by sex, skill, and branch of industry*

Sex and skill	Total industry	Sets	Parts	Tubes
All employees	$0.541	$0.609	$0.479	$0.479
Skilled	.725	.752	.660	.716
Semiskilled	.513	.581	.464	.455
Unskilled	.472	.531	.406	.428
Males	.642	.696	.545	.637
Skilled	.770	.784	.729	.768
Semiskilled	.605	.677	.513	.564
Unskilled	.528	.577	.443	.512
Females	.459	.504	.418	.439
Skilled	.500	.523	.477	.495
Semiskilled	.464	.510	.424	.444
Unskilled	.419	.473	.378	.373

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as in the parts division, whereas the range by plants was from 35.9 to 57.9 cents an hour.

Table 2 shows for all three branches of the industry combined, the distribution of employees according to average hourly earnings, as well as by sex and skill. A substantial portion of all workers were females.

TABLE 2.—*Distribution of radio workers, all 3 branches of industry combined, by average hourly earnings, sex, and skill, August 1937*

Average hourly earnings	All		Skilled		Semiskilled		Unskilled	
	Number of employees	Simple percentage	Number of employees	Simple percentage	Number of employees	Simple percentage	Number of employees	Simple percentage
Both sexes								
Under 22.5 cents	15	0.1	1	(1)	4	(1)	10	0.2
22.5 and under 27.5 cents	239	.8			100	0.5	139	3.0
27.5 and under 32.5 cents	997	3.5	19	0.4	630	3.2	348	7.5
32.5 and under 37.5 cents	3,236	11.3	83	1.9	2,355	12.0	798	17.2
37.5 and under 42.5 cents	3,403	11.9	167	3.9	2,518	12.9	718	15.4
42.5 and under 47.5 cents	3,865	13.5	247	5.7	2,896	14.9	722	15.5
47.5 and under 52.5 cents	4,702	16.6	348	8.0	3,847	19.8	507	10.9
52.5 and under 57.5 cents	3,073	10.8	390	9.1	2,308	11.8	375	8.1
57.5 and under 62.5 cents	1,954	6.8	301	7.0	1,336	6.8	317	6.8
62.5 and under 67.5 cents	1,751	6.1	294	6.8	1,065	5.4	392	8.4
67.5 and under 72.5 cents	1,108	3.9	315	7.3	645	3.3	148	3.2
72.5 and under 77.5 cents	1,103	3.9	320	7.4	703	3.6	80	1.7
77.5 and under 82.5 cents	840	2.9	321	7.4	456	2.3	63	1.4
82.5 and under 87.5 cents	666	2.3	412	9.6	239	1.2	15	.3
87.5 and under 92.5 cents	524	1.8	370	8.5	146	.7	8	.2
92.5 and under 100.0 cents	479	1.7	322	7.4	149	.8	8	.2
100.0 and under 110.0 cents	400	1.4	252	5.8	146	.7	2	(1)
110.0 and under 120.0 cents	155	.5	127	2.9	28	.1		
120.0 cents and over	45	.2	40	.9	5	(1)		
Total	28,555	100.0	4,329	100.0	19,576	100.0	4,650	100.0
Males								
Under 27.5 cents	38	.3	1	(1)	29	.5	8	.4
27.5 and under 32.5 cents	154	1.3	3	.1	70	1.1	81	3.9
32.5 and under 37.5 cents	491	4.1	37	1.0	247	3.9	207	10.1
37.5 and under 42.5 cents	694	5.8	77	2.2	400	6.3	217	10.5
42.5 and under 47.5 cents	1,100	9.2	94	2.6	713	11.3	293	14.2
47.5 and under 52.5 cents	1,337	11.3	157	4.4	942	14.9	238	11.6
52.5 and under 57.5 cents	1,164	9.8	267	7.5	669	10.6	228	11.1
57.5 and under 62.5 cents	969	8.1	235	6.6	504	8.0	230	11.2
62.5 and under 67.5 cents	1,006	8.4	259	7.3	483	7.6	264	12.8
67.5 and under 72.5 cents	935	7.8	292	8.2	520	8.2	123	6.0
72.5 and under 77.5 cents	984	8.2	301	8.5	607	9.6	76	3.7
77.5 and under 82.5 cents	813	6.8	315	8.9	438	6.9	60	2.9
82.5 and under 87.5 cents	657	5.5	412	11.5	230	3.6	15	.7
87.5 and under 92.5 cents	523	4.4	369	10.4	146	2.3	8	.4
92.5 and under 100.0 cents	477	4.0	320	9.0	149	2.4	8	.4
100.0 and under 110.0 cents	400	3.3	252	7.1	146	2.3	2	.1
110.0 and under 120.0 cents	155	1.3	127	3.6	28	.4		
120.0 cents and over	45	.4	40	1.1	5	.1		
Total	11,942	100.0	3,558	100.0	6,326	100.0	2,058	100.0
Females								
Under 22.5 cents	14	.1			4	(1)	10	.4
22.5 and under 27.5 cents	202	1.2			71	.5	131	5.1
27.5 and under 32.5 cents	843	5.1	16	2.1	560	4.2	267	10.3
32.5 and under 37.5 cents	2,745	16.5	46	6.0	2,108	15.9	591	22.7
37.5 and under 42.5 cents	2,709	16.3	90	11.7	2,118	16.0	501	19.2
42.5 and under 47.5 cents	2,765	16.6	153	19.7	2,183	16.5	429	16.6
47.5 and under 52.5 cents	3,365	20.3	191	24.7	2,905	22.0	269	10.4
52.5 and under 57.5 cents	1,909	11.5	123	16.0	1,639	12.4	147	5.7
57.5 and under 62.5 cents	985	5.9	66	8.6	832	6.3	87	3.4
62.5 and under 67.5 cents	745	4.5	35	4.5	582	4.4	128	4.9
67.5 and under 72.5 cents	173	1.0	23	3.0	125	.9	25	1.0
72.5 and under 77.5 cents	119	.7	19	2.5	96	.7	4	.2
77.5 and under 82.5 cents	27	.2	6	.8	18	.1	3	.1
82.5 and under 87.5 cents	9	.1			9	.1		
87.5 and under 92.5 cents	1	(1)	1	.1				
92.5 cents and over	2	(1)	2	.3				
Total	16,613	100.0	771	100.0	13,250	100.0	2,592	100.0

[1] Less than a tenth of 1 percent.

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Annual Earnings

Average annual earnings in 1936 in 17 radio-manufacturing plants employing about one-sixth of the total workers in the industry were $1,199 for wage earners whose employment extended throughout the year. Those who had employment for 9 months or more averaged $1,048. When the group was enlarged to include employees who worked at least 6 months the average fell to $922. For the whole number who worked any part of the year the average was $828. These wage earners were those on the pay rolls of the factories studied in August 1937, and the data relate to their earnings for 1936 in these plants only.

Since the figures were obtained from employers' records, they covered only the total earnings and number of pay-roll periods [3] in 1936 of each wage earner in the establishment in which he worked during August 1937, or the month including the pay-roll period covered by the wages and hours data. In other words, the data do not include the earnings of an individual in other plants in which he may have worked during the year. This limitation of the data was overcome to some extent by classifying the wage earners according to the number of months worked in the establishment in which they were employed during August 1937.

It is obvious that for employees who worked in the same plant throughout the year, the figures obtained by the Bureau cover their total annual earnings in 1936. The same is substantially true of those who worked 9 months or more in the same establishment, because in most instances the opportunities for such persons to obtain employment in other plants are very small. On the other hand, no such reliance may be placed on the data when the group is enlarged to include those whose work period was as low as 6 months.

Table 3 presents the average annual earnings of workers in all plants by product, sex, and skill in 1936. This table shows the large

TABLE 3.—*Average annual earnings of workers in radio manufacture, by product, sex, and skill, 1936*

Employees whose work extended over—	Whole industry			Radio sets			Radio tubes and parts		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
12 months	$1,199	$1,394	$877	$1,351	$1,455	$950	$1,093	$1,327	$856
Skilled	1,480	1,610	905	1,566	1,669	(1)	1,403	1,611	880
Semiskilled	1,092	1,283	879	1,259	1,383	954	994	1,185	857
Unskilled	1,088	1,214	823	1,215	1,298	(1)	949	1,075	804
9 months or more	1,048	1,309	781	1,141	1,369	800	953	1,221	768
Skilled	1,406	1,547	868	1,457	1,539	897	1,332	1,561	852
Semiskilled	934	1,188	772	1,016	1,276	790	864	1,081	760
Unskilled	969	1,098	760	1,057	1,181	790	849	953	732
6 months or more	922	1,176	693	992	1,245	698	848	1,080	689
Skilled	1,295	1,446	772	1,367	1,442	844	1,196	1,452	737
Semiskilled	822	1,053	687	873	1,140	689	774	953	684
Unskilled	851	980	673	914	1,073	680	760	836	664
Any part of the year	828	1,073	618	919	1,179	639	739	941	602
Skilled	1,211	1,351	723	1,308	1,375	826	1,087	1,309	677
Semiskilled	736	957	613	804	1,078	629	677	833	599
Unskilled	734	860	571	837	1,002	611	612	683	527

[1] Workers too few to justify computation of an average.

[3] The number of pay-roll periods during which an employee worked by no means indicates the actual number of hours worked by him during the year. Thus, an employee is credited here with having worked during a pay-roll period even if he worked only a very short time.

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differences in average annual earnings between male and female wage earners. For the total industry, the difference in favor of males amounted to $517 for employees who worked throughout the year, $528 for those who worked 9 months or more, $483 for those who worked 6 months or more, and $455 for those who worked any part of the year.

Radio Transmitters and Related Products Manufacture—Earnings and Hours, 1938[1]

This survey by the Bureau of Labor Statistics, covered 21 establishments and 2,137 wage earners engaged in the manufacture of radio transmitters, commercial radio receivers, and public address equipment, including also microphones, transmitter tubes, radio compasses, radio beacons, direction finders, remote-control equipment, and other similar apparatus.

The 5 largest establishments covered, with a total of 1,628 wage earners, are separate units or departments belonging to several large companies that manufacture radio receiving sets, airplane parts, and electrical apparatus. The remaining 16 establishments each employed from 10 to 150 wage earners. There are several establishments engaged solely in making transformers, capacitors, dials, meters, or other parts, which are sold to manufacturers of transmitter sets. Most of these products are likewise adapted for use in radio-receiving sets. Hence, the important producers of parts used in radio-transmitter manufacture have been included in the survey of radio manufacturing.[2]

Exact information is not available as to the number of firms engaged primarily in the manufacture of the various types of apparatus included in this survey. However, it is believed that the 21 establishments, with 2,137 employees, covered in the survey, included virtually the entire industry as here defined. Of the plants studied, 3 were located in California, 1 in Iowa, 5 in Illinois, 1 in Maryland, 5 in New Jersey, 4 in New York, and 2 in Massachusetts.

Average Hourly Earnings

Most of the employees in this industry are paid on a straight-time basis. In three of the largest establishments, however, a substantial number worked under a production-bonus system, and in one small plant a few were paid on a straight piece-work basis.

In 11 establishments, with 1,856 employees, overtime beyond 40 hours per week was compensated at the rate of time and one-half, and 1 small plant paid this rate for time worked in excess of 44 hours. Of the 12 establishments paying punitive rates, 9 also allowed the extra compensation for any time worked beyond 8 hours per day. One plant paid double time for Sunday work. On the other hand, 6 establishments, with 184 workers, paid straight time for overtime. Among the remaining plants, 2 did not allow any overtime compensation to their employees, all of whom were on a weekly salary basis, and 1 establishment reported no provision for overtime work.

[1] Abstract of article in the Monthly Labor Review for September 1938, prepared by H. E. Riley and G. E. Votava, of the Bureau of Labor Statistics.

[2] See p. 313.

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Hourly earnings of individual wage earners employed in this industry averaged 68.1 cents in May 1938. The distribution in table 1, however, shows that this figure has little validity as an indicator of the wages received by a great majority of the employees. The distribution extended over a wide range, with a significant number of workers earning under 37.5 cents (3.0 percent) and over $1.075 (3.8 percent).

Skilled male employees averaged 79.6 cents an hour. The distribution of this group revealed a wide range in hourly earnings, with the significant limits at 42.5 cents and $1.175. The average for semiskilled males was 56.8 cents an hour. Nearly nine-tenths of the workers were found within the 45-cent range between 37.5 and 82.5 cents. An examination of the original schedules reveals the fact that all of the semiskilled males averaging above 87.5 cents were employed in one establishment which paid them very substantial production bonuses. The 72 unskilled males averaged 50.8 cents an hour. However, in view of the small number, their distribution by individual earnings has little significance.

TABLE 1.—*Distribution of all workers in radio transmitter and related products industry, May 1938, by average hourly earnings, sex, and skill*

Average hourly earnings (in cents)	Total		Males								Females	
			Total		Skilled		Semiskilled		Unskilled		Semiskilled	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	2,137	100.0	1,788	100.0	1,187	100.0	529	100.0	72	100.0	349	100.0
Under 32.5	10	.5	8	.4	------	------	6	1.1	2	2.8	2	.6
32.5 and under 37.5	54	2.5	30	1.7	3	.3	24	4.5	3	4.2	24	6.9
37.5 and under 42.5	186	8.7	99	5.5	15	1.3	70	13.2	14	19.4	87	24.9
42.5 and under 47.5	144	6.7	113	6.3	25	2.1	73	13.8	15	20.8	31	8.9
47.5 and under 52.5	251	11.6	139	7.8	69	5.8	61	11.5	9	12.5	112	32.1
52.5 and under 57.5	180	8.4	102	5.7	55	4.6	45	8.5	2	2.8	78	22.3
57.5 and under 62.5	170	8.0	157	8.8	74	6.2	69	13.0	14	19.4	13	3.7
62.5 and under 67.5	124	5.8	124	6.9	83	7.0	36	6.8	5	6.9	------	------
67.5 and under 72.5	139	6.5	139	7.8	100	8.4	37	7.0	2	2.8	------	------
72.5 and under 77.5	138	6.5	137	7.7	96	8.1	38	7.2	3	4.2	1	.3
77.5 and under 82.5	123	5.8	123	6.9	80	6.7	41	7.8	2	2.8	------	------
82.5 and under 87.5	179	8.4	179	10.0	162	13.6	17	3.2	------	------	------	------
87.5 and under 92.5	128	6.0	127	7.1	122	10.3	4	.8	1	1.4	1	.3
92.5 and under 97.5	112	5.2	112	6.3	112	9.4	------	------	------	------	------	------
97.5 and under 102.5	73	3.4	73	4.1	72	6.1	1	.2	------	------	------	------
102.5 and under 107.5	47	2.2	47	2.6	46	3.9	1	.2	------	------	------	------
107.5 and under 112.5	31	1.5	31	1.7	28	2.4	3	.6	------	------	------	------
112.5 and under 117.5	23	1.1	23	1.3	22	1.9	1	.2	------	------	------	------
117.5 and under 122.5	8	.4	8	.4	7	.6	1	.2	------	------	------	------
122.5 and over	17	.8	17	1.0	16	1.3	1	.2	------	------	------	------

All of the women employed in the industry were found in semiskilled occupations. Their average hourly earnings, 47.3 cents, were nevertheless lower than those for unskilled males.

Variations by Occupation

The nature of the various operations involved in the manufacture of radio transmitters and related apparatus is indicated by the occupational structure in the industry. The principal occupations are assemblers, machinists, punch and drill press operators, sheet-metal workers, and testers. The fundamental processes in which

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those occupations are employed consist of building a metal framework, assembling in it various tubes, indicators, condensers, transformers, and other parts (usually purchased from other companies), and testing the completed equipment.

Assemblers not only were the most numerous but were among the lowest-paid employees in their respective skill classifications. (See table 2.) Skilled assemblers, all of whom were men, earned 72 cents an hour on the average. Tool makers, who averaged 98.1 cents, were the best-paid workers.

The woman workers were engaged mostly in assembly operations. The largest group consisted of 165 transmitter assemblers, who earned 45.3 cents an hour on the average. The tube workers, who perform tube-assembly operations, averaged 47.2 cents. The female miscellaneous clerks, receiving 50.7 cents, were the best-paid woman employees.

TABLE 2.—*Average hourly earnings, weekly hours, and weekly earnings in radio transmitter and related products industry, May 1938, by sex, skill, and occupation,*

Sex, skill, and occupation	Number of employees	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	2,137	$0.681	38.5	$26.22
Skilled males	1,187	.796	39.3	31.31
Assemblers, first class	384	.720	39.4	28.38
Draftsmen	36	.819	41.4	33.93
Foremen, working	81	.924	42.2	39.00
Inspectors	51	.816	38.4	31.30
Testers	122	.810	36.9	29.91
Machine tool operators	70	.726	39.4	28.62
Machinists, first class	109	.881	38.3	33.76
Model makers	29	.725	41.6	30.16
Set-up men	29	.872	31.8	27.74
Sheet-metal workers, first class	34	.856	40.2	34.44
Tool makers	68	.981	39.2	38.50
Tube workers, first class	32	.924	36.7	33.91
Maintenance employees	35	.731	41.7	30.49
Miscellaneous skilled employees	107	.756	41.3	31.22
Semiskilled males	529	.568	38.4	21.82
Assemblers, second class	121	.511	40.4	20.65
Clerks, miscellaneous	34	.599	41.0	24.56
Drill-press operators	43	.572	38.1	21.76
Helpers, general	34	.450	37.2	16.78
Punch-press operators	45	.639	31.3	19.98
Sheet-metal workers, second class	52	.695	41.6	28.92
Stockmen and storekeepers	47	.591	39.6	23.40
Miscellaneous semiskilled employees	153	.561	37.3	20.92
Unskilled males	72	.508	43.4	22.04
Learners [1]	26	.455	38.8	17.64
Service employees	46	.534	46.0	24.52
Semiskilled females	349	.473	34.7	16.42
Assemblers	165	.453	31.8	14.40
Clerks, miscellaneous	41	.507	42.4	21.49
Tube workers	80	.472	37.3	17.59
Miscellaneous semiskilled employees	63	.496	34.1	16.95

[1] Includes a few apprentices.

It will be observed that the wages of male semiskilled assemblers are considerably higher than those of the females in the same occupations. This difference is due in part to the type of product upon which the two groups are employed. The men usually work on the heavier assembly jobs, while the women do lighter bench work.

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Weekly Hours and Earnings

The actual hours worked in the selected pay-roll period averaged 38.5 for all employees. Nearly one-half of the wage earners (48.1 percent) in the industry worked exactly 40 hours. Another sizable group (9.5 percent) was that working 44 and under 48 hours—representing largely the employees in companies having a normal workweek of 44 hours. Likewise, a further concentration occurred at 24 to 28 hours; most of these workers were employed in one plant, which was operating on a short-time schedule during the week surveyed. About one-twelfth (8.8 percent) of all employees worked 48 hours or more. Male employees averaged 39.2 hours and female employees 34.7 hours.

Weekly earnings of all employees in the industry averaged $26.22 in May 1938.[a] Over two-thirds (68.6 percent) earned $15 to $35 in the week surveyed, one-fifth received $35 or more, and only 11.3 percent were paid less than $15.

The skilled males earned $31.31, as compared with $21.82 for the semiskilled, and $22.04 for the unskilled. The higher weekly earnings of the unskilled, as compared with the semiskilled males, were due to the fact that, although receiving lower hourly earnings, the unskilled workers were employed 5 hours longer on the average than the semiskilled males.

A comparison of the distributions for the three classifications by skill shows that, whereas only 10.3 percent of the skilled males earned under $20, 42.0 percent of the semiskilled and 41.7 percent of the unskilled males were paid less than this amount. On the other hand, 17.6 percent of the skilled males earned $40 or more, whereas only 2.5 percent of the semiskilled and none of the unskilled males were found in that class.

The average weekly earnings of females were $16.42. Over nine-tenths (90.6 percent) of the women received $10 and under $25 a week, 7.1 percent averaged under $10, and only 8 women in the group were paid $25 or more.

Rayon and Silk Industry—Earnings and Hours, 1940[1]

Late in 1940, the Bureau of Labor Statistics conducted a survey of hours and earnings in the rayon and silk industry. The study was one of a series of similar surveys of this industry that have been made at varying intervals for more than a quarter century. The most recent survey, which covered pay-roll periods in August and September 1940, included 132 establishments employing 20,173 workers, or approximately one-fifth of the industry.

Earnings of employees in the rayon and silk industry at the time of the study averaged 43.6 cents an hour.[2] As shown by table 1,

[a] For weekly hours and earnings by occupation see table 2.

[1] A more complete report based on this study will be found in the August 1941 Monthly Labor Review.

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substantially higher wage levels were in effect in northern mills than in southern establishments. Male employees, as is commonly the case, received more than female workers, and skilled employees more than either semiskilled or unskilled workers.

Table 1 also reveals that southern workers had a longer workweek than was required of the northern wage earners. As a consequence, the difference between weekly earnings in the North and in the South was not as great as the difference in hourly earnings might suggest.

TABLE 1.—*Average hourly earnings, average weekly hours and earnings of rayon and silk workers, September 1940, by region and by skill and sex*

Region	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
United States	$0.436	$0.484	$0.385	$0.563	$0.591	$0.475	$0.393	$0.434	$0.374	$0.354	$0.357	$0.348
North [1]	.456	.520	.394	.572	.605	.485	.403	.470	.376	.367	.374	.357
South [2]	.402	.431	.367	.538	.557	.429	.378	.390	.371	.339	.341	.335
	Average weekly hours											
United States	38.4	40.2	36.6	40.1	40.9	37.7	37.3	39.7	36.2	38.5	39.6	37.0
North	37.8	39.5	36.2	39.1	39.8	37.3	36.7	39.0	35.8	38.2	39.6	36.6
South	39.4	41.3	37.3	43.1	43.8	40.0	38.3	40.7	36.9	38.8	39.6	37.6
	Average weekly earnings											
United States	$16.73	$19.48	$14.08	$22.57	$24.16	$17.94	$14.66	$17.24	$13.56	$13.62	$14.15	$12.86
North	17.23	20.53	14.27	22.36	24.07	18.09	14.79	18.30	13.48	14.02	14.80	13.06
South	15.86	17.81	13.70	23.20	24.39	17.14	14.45	15.87	13.70	13.17	13.50	12.60

[1] Includes the States of Connecticut, Illinois, Indiana, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island.
[2] Includes the States of Georgia, Maryland, North Carolina, South Carolina, Tennessee, and Virginia.

Tables 2 and 3 present the average hourly earnings of each sex and skill group by type of plant and type of product. It will be noted that employees of independent weaving establishments received higher wages than were paid to workers in either of the two other types of mills, and further that workers in jacquard fabric mills had the highest average earnings of any product group. A large part of these differences may be attributed to variations in composition of the labor force. Thus, independent weaving mills had a considerably higher proportion of skilled workers than were found in either independent spinning mills or integrated spinning and weaving establishments. The high average earnings in jacquard fabric mills may be attributed in part to a proportion of skilled employees, fully two-thirds of the workers being found in skilled occupations.

[3] The data on earnings presented for 1940 do not include earnings at extra rates for overtime. Had these extra earnings been included, the average for the industry would have been increased by only six-tenths of a cent.

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TABLE 2.—*Average hourly earnings of rayon and silk workers, September 1940, by region, type of plant, and skill and sex*

Region	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
United States	$0.436	$0.484	$0.385	$0.563	$0.591	$0.475	$0.393	$0.434	$0.374	$0.354	$0.357	$0.348
Independent throwsters	.382	.427	.363	.548	.567	.480	.374	.410	.365	.343	.364	.321
Integrated throwsters and weavers [1]	.431	.463	.386	.565	.589	.461	.398	.418	.383	.351	.351	.353
Independent weavers	.489	.536	.417	.563	.595	.482	.429	.494	.385	.366	.369	.361
North	.456	.520	.394	.572	.605	.485	.403	.470	.376	.367	.374	.357
Independent throwsters	.387	.438	.365	.567	.588	.490	.376	.418	.365	.354	.369	.337
Integrated throwsters and weavers	.501	.560	.427	.615	.658	.499	.463	.537	.419	.385	.393	.375
Independent weavers	.489	.536	.417	.563	.595	.482	.429	.494	.385	.366	.369	.361
South	.402	.431	.367	.538	.557	.429	.378	.390	.371	.339	.341	.335
Independent throwsters	.358	.374	.353	.450	.455	(2)	.364	.367	.363	.304	.339	.280
Integrated throwsters and weavers [3]	.410	.435	.372	.541	.561	.428	.381	.392	.374	.343	.341	.345
	Number of employees											
United States	20,173	9,914	10,259	5,858	4,358	1,500	9,939	2,979	6,960	4,376	2,577	1,799
Independent throwsters	5,613	1,548	4,065	350	266	84	4,409	853	3,556	854	429	425
Integrated throwsters and weavers [1]	8,186	4,635	3,551	2,166	1,730	436	3,660	1,414	2,246	2,360	1,491	869
Independent weavers	6,374	3,731	2,643	3,342	2,362	980	1,870	712	1,158	1,162	657	505
North	12,861	6,077	6,784	4,377	3,121	1,256	6,178	1,680	4,498	2,306	1,276	1,030
Independent throwsters	4,530	1,286	3,244	295	225	70	3,572	707	2,865	663	354	309
Integrated throwsters and weavers	1,957	1,060	897	740	534	206	736	261	475	481	265	216
Independent weavers	6,374	3,731	2,643	3,342	2,362	980	1,870	712	1,158	1,162	657	505
South	7,312	3,837	3,475	1,481	1,237	244	3,761	1,299	2,462	2,070	1,301	769
Independent throwsters	1,083	262	821	55	41	14	837	146	691	191	75	116
Integrated throwsters and weavers [3]	6,229	3,575	2,654	1,426	1,196	230	2,924	1,153	1,771	1,879	1,226	653

[1] Includes 2 southern independent weaving mills.
[2] Number of employees not sufficient to justify computation of an average.
[3] Includes 2 independent weaving mills.

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TABLE 3.—*Average hourly earnings of rayon and silk workers, September 1940, by region, type of product, and skill and sex*

Region and type of product	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Average hourly earnings											
United States:												
Yarn and thread	$0.382	$0.427	$0.363	$0.548	$0.567	$0.480	$0.374	$0.410	$0.365	$0.343	$0.364	$0.321
Plain loom fabrics	.452	.492	.397	.568	.595	.480	.409	.450	.383	.358	.357	.359
Box loom fabrics	.439	.471	.393	.544	.577	.455	.398	.415	.383	.351	.352	.350
Jacquard loom fabrics	.533	.582	.437	.588	.609	.507	.454	.559	.396	.374	.377	.370
North:												
Yarn and thread	.387	.438	.365	.567	.588	.490	.376	.418	.365	.354	.369	.337
Plain loom fabrics	.498	.545	.427	.593	.623	.505	.451	.517	.407	.381	.383	.378
Box loom fabrics	.455	.502	.400	.525	.570	.453	.402	.455	.368	.351	.357	.343
Jacquard loom fabrics	.533	.582	.437	.588	.609	.507	.454	.559	.396	.374	.377	.370
South:												
Yarn and thread	.358	.374	.353	.450	.455	(1)	.364	.367	.363	.304	.339	.280
Plain loom fabrics	.400	.426	.365	.517	.543	.419	.372	.387	.364	.337	.336	.338
Box loom fabrics	.425	.447	.385	.582	.587	.487	.396	.398	.393	.351	.349	.355
	Number of employees											
United States:												
Yarn and thread	5,613	1,548	4,065	350	266	84	4,409	853	3,556	854	429	425
Plain loom fabrics	8,437	4,763	3,674	2,875	2,172	703	3,417	1,252	2,165	2,145	1,339	806
Box loom fabrics	4,698	2,674	2,024	1,690	1,178	512	1,785	767	1,018	1,223	729	494
Jacquard loom fabrics	1,425	929	496	943	742	201	323	107	216	159	80	79
North:												
Yarn and thread	4,530	1,286	3,244	295	225	70	3,572	707	2,865	663	354	309
Plain loom fabrics	4,608	2,683	1,925	1,957	1,454	503	1,615	626	989	1,036	603	433
Box loom fabrics	2,298	1,179	1,119	1,182	700	482	663	240	423	453	239	214
Jacquard loom fabrics	1,425	929	496	943	742	201	323	107	216	159	80	79
South:												
Yarn and thread	1,083	262	821	55	41	14	837	146	691	191	75	116
Plain loom fabrics	3,829	2,080	1,749	918	718	200	1,802	626	1,176	1,109	736	373
Box loom fabrics	2,400	1,495	905	508	478	30	1,122	527	595	770	490	280

[1] Number of employees not sufficient to justify computation of an average.

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Table 4 shows a percentage distribution of employees by average hourly earnings, sex, and skill. As indicated by the table, 46.9 percent of the employees received in 1940 hourly earnings averaging less than 37.5 cents, the legal minimum for the industry which became effective June 30, 1941. Only 7.7 percent of the skilled workers, but more than three-fourths (78.9 percent) of the unskilled workers earned less than the legal minimum now in effect.

TABLE 4.—*Percentage distribution of rayon and silk workers, by average hourly earnings, skill, and sex, September 1940*

Average hourly earnings	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 32.5 cents	0.9	0.4	1.5	0.1	0.1	0.2	0.4	0.2	0.6	3.1	1.2	5.9
Exactly 32.5 cents	20.5	16.0	24.9	1.9	1.4	3.6	24.1	16.1	27.6	37.1	40.4	32.4
32.6 and under 35.0 cents	11.2	7.9	14.4	2.0	1.1	4.5	13.4	9.5	15.0	18.6	17.5	20.2
35.0 and under 37.5 cents	14.3	11.6	16.8	3.7	2.4	7.3	18.4	19.7	17.7	19.1	17.9	20.8
37.5 and under 40.0 cents	8.6	4.6	12.4	3.9	2.5	7.9	11.2	5.8	13.6	8.9	6.8	12.0
40.0 and under 42.5 cents	6.7	5.4	8.0	6.5	4.5	12.3	7.4	5.8	8.1	5.4	6.4	4.0
42.5 and under 45.0 cents	5.2	4.4	6.0	5.3	4.3	8.1	6.4	5.4	6.8	2.7	3.6	1.4
45.0 and under 47.5 cents	5.3	6.3	4.3	8.2	7.5	10.5	5.0	7.9	3.8	1.9	2.4	1.2
47.5 and under 50.0 cents	3.5	4.0	2.9	6.3	5.5	8.5	2.9	4.3	2.3	1.0	1.2	.7
50.0 and under 52.5 cents	4.0	5.7	2.3	8.3	8.3	8.3	2.7	5.8	1.4	1.0	1.1	.9
52.5 and under 55.0 cents	2.9	4.3	1.6	6.9	7.2	6.1	1.8	3.5	1.0	.2	.3	.1
55.0 and under 57.5 cents	2.7	4.1	1.4	6.1	6.0	6.2	1.8	4.5	.7	.3	.3	.2
57.5 and under 60.0 cents	2.0	3.2	.9	5.3	5.7	4.2	.8	1.9	.3	.3	.3	.1
60.0 and under 62.5 cents	2.0	3.2	.9	5.3	5.6	4.5	1.0	2.5	.3	.1	.1	------
62.5 and under 65.0 cents	1.2	1.9	.6	3.1	3.1	2.8	.6	1.5	.3	.2	.3	------
65.0 and under 67.5 cents	1.3	2.4	.3	3.8	4.7	1.2	.4	1.0	.1	.1	.1	.1
67.5 and under 70.0 cents	1.2	2.2	.2	3.6	4.5	.7	.3	.8	.1	(1)	.1	------
70.0 and under 72.5 cents	1.4	2.5	.3	4.3	5.3	1.5	.3	.7	.1	(1)	(1)	------
72.5 and under 75.0 cents	1.1	2.2	.1	3.6	4.7	.4	.2	.5	.1	------	------	------
75.0 and under 77.5 cents	1.4	2.7	.1	4.1	5.4	.5	.3	1.0	(1)	------	------	------
77.5 and under 82.5 cents	1.1	2.1	.1	3.4	4.5	.5	.2	.4	.1	(1)	(1)	------
82.5 and under 87.5 cents	.6	1.2	(1)	1.7	2.2	.1	.2	.7	------	------	------	------
87.5 and under 92.5 cents	.5	.9	(1)	1.4	1.9	.1	.1	.3	(1)	------	------	------
92.5 and under 97.5 cents	.1	.2	------	.3	.4	------	(1)	.1	------	------	------	------
97.5 and under 102.5 cents	.1	.2	------	.4	.5	------	(1)	(1)	------	------	------	------
102.5 cents and over	.2	.4	(1)	.5	.7	------	.1	.1	(1)	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of workers	20,173	9,914	10,259	5,858	4,358	1,500	9,939	2,979	6,960	4,376	2,577	1,799
Average hourly earnings	$0.436	$0.484	$0.385	$0.563	$0.591	$0.475	$0.393	$0.434	$0.374	$0.354	$0.357	$0.348

[1] Less than a tenth of 1 percent.

Table 5 permits the comparison of data on average earnings for three periods, April 1933 (before the application of an NRA industry code), August 1934 (a period when the code was in operation), and September 1940. It will be noted that average earnings for all employees increased considerably after adoption of the code, but have shown relatively little change since that time. The average earnings of individual employees, however, were subject to somewhat more variation. For example, 5.6 percent of the employees were receiving less than 32.5 cents in 1934, but by 1940, the number of workers at this wage level had dropped to less than one percent of the total. This shift was, of course, largely due to the application of the textile minimum wage rate of 32.5 cents, which became effective on October 24, 1939.

A slightly larger proportion of the employees had earnings of 70 cents or more in 1934 than in 1940. This, however, may be due to the exclusion from the 1940 data of extra earnings resulting from overtime; overtime earnings were included in the averages in 1934.

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TABLE 5.—*Cumulative percentage distribution of rayon and silk workers by average hourly earnings, 1933, 1934, and 1940*

Average hourly earnings	April 1933	August 1934	September 1940
Less than 12.5 cents	4.1		
Less than 17.5 cents	19.6		
Less than 22.5 cents	40.8	5.6	0.9
Less than 27.5 cents	62.8		
Less than 30.0 cents	68.9		
Less than 32.5 cents	75.3		
Less than 35.0 cents	80.0	30.8	32.6
Less than 40.0 cents	86.6	49.3	55.5
Less than 45.0 cents	91.2	62.7	67.4
Less than 50.0 cents	94.1	73.4	76.2
Less than 60.0 cents	97.4	85.5	87.8
Less than 70.0 cents	98.8	92.8	93.5
Average hourly earnings	$0.269	$0.448	$0.436

The information on earnings by occupation which is presented in table 6, supplies additional evidence that the wage structure of the industry underwent changes between 1934 and 1940 which are not revealed by the broad industry averages. Earnings of the higher paid occupations were measurably greater in 1934 than in 1940. Loom fixers, for example, earned 4 cents an hour more in 1934 than in the latter period. Earnings in the lower paid occupations, however, were generally higher in 1940 than in 1934.

TABLE 6.—*Average hourly earnings in specified occupations in the rayon and silk industry, 1933, 1934, and 1940*

Occupation	Average hourly earnings (in cents)		
	April 1933	August 1934	September 1940
Loom fixers, male	53.4	76.5	72.5
Warpers, male	39.6	62.0	58.5
Warpers, female	32.1	49.9	45.9
Weavers, male	28.7	48.2	52.9
Weavers, female	25.4	43.3	48.1
Spinners, male	25.1	45.6	38.3
Spinners, female	21.1	35.6	36.7
Winders, female	20.6	35.6	36.7
Quillers, female	19.2	35.7	36.5
Pickers, female	19.4	34.6	36.9
Redrawers, female	17.7	35.3	36.5
Bobbin boys	17.8	33.7	34.5

Rubber Products—Earnings and Hours, May 1940[1]

The basic data for the present study, covering the pay-roll period ending nearest May 15, 1940, were obtained by the Bureau of Labor Statistics at the joint request of the Wage and Hour Division and the Public Contracts Division of the United States Department of Labor. These divisions agreed upon a definition of the industry which was

[1] Abstract of an article by Sidney C. Sufrin, Bureau of Labor Statistics, in the Monthly Labor Review for June 1941.

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followed in conducting the survey and preparing the report. According to this definition, the rubber manufacturing industry includes:

(*a*) The manufacture of pneumatic tires and inner tubes for motor vehicles, motorcycles, bicycles, and other vehicles; solid and cushion rubber tires for trucks and other vehicles; and

(*b*) The manufacture from rubber, natural or synthetic, of other goods including, but without limitation: (1) Rubber footwear; (2) rubber heels and soles; (3) heavy and other mechanical rubber goods; (4) druggists', surgical, household, and stationers' rubber sundries; (5) reclaimed rubber for sale or for use in the same plant for further manufacture; (6) rubber flooring; (7) hard-rubber goods; (8) molded, extruded, and lathe-cut rubber goods; (9) industrial sponge rubber; (10) proofed goods, including automobile and other fabrics, but excluding the manufacture of finished rubber or rubberized clothing and apparel. Expressly excluded also is the manufacture of insulated wire and cable.

The industry as a whole cooperated closely with the Bureau in this study. Out of 675 mail questionnaires sent to members of the industry, 392 were returned in usable form. Only 135 firms failed to respond to the questionnaire, while the replies of 148 were, for one reason or another, not usable.[2] The proportion of usable responses (58 percent) is unusually high for a questionnaire survey of this type.

Tire and Tube Industry

The tire and tube industry is the most important segment of the combined rubber products industry. The manufacture of tires and tubes accounts for over half of the dollar volume of all rubber products, and more than two-fifths of the employment in all rubber factories in the United States.

The tire and tube industry is typically one of large-scale production. In 1939, according to the Census of Manufactures, there were 53 establishments in the industry, and they employed 54,000 wage earners and manufactured a product valued at more than half a billion dollars.

Census of Manufactures information indicates that in 1937 the tire and tube industry was located in 16 States. In the Middle West—the largest tire and tube producing area—plants were reported in Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. In the East, plants were located in Connecticut, Maryland, Massachusetts, New Jersey, New York, and Pennsylvania. In the South there were tire and tube plants in the States of Alabama and Tennessee. The West was represented by California and Colorado.

Average Hourly and Weekly Earnings

The 43 plants manufacturing principally rubber tires and tubes, which returned usable questionnaires, employed 56,754 workers in May 1940, of whom 43,597 were engaged in direct production activities and 13,157 in nonproduction activities, such as the provision of heating, lighting and power, custodial, clerical, and maintenance work. Average hourly earnings for these workers combined were 92.9 cents, production workers earning on the average 95.3 cents and nonproduction workers 85.8 cents. It is interesting to note that the

[2] Nearly 100 schedules could not be used because the reporting firms were found to be outside the definition of the industry. In addition, several duplicate returns were received from firms operating under more than one name; a dozen or so firms had gone out of business, and so forth.

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rubber tire and tube industry is the only one of the rubber industries covered in this survey in which the average hourly earnings of production workers exceeded those of nonproduction workers.

Table 1 presents for the United States and for each major region of the industry [3] information regarding the number of workers covered in the survey of the rubber tire and tube industry, their average hourly earnings, average weekly "hours paid for," and average weekly earnings. Both production and nonproduction workers in the industry had average earnings of slightly more than $33 per week. The average hours per week were just under 36 for the entire industry; for production workers the hours were less than 35 per week and for nonproduction workers, 39 per week. Insofar as the industry as a whole is concerned, overtime work had little influence on average earnings during May 1940. Some individual workers, to be sure, may have worked a considerable number of overtime hours.

TABLE 1.—*Average hourly earnings, weekly hours paid for, and weekly earnings in the rubber tire and tube industry, May 1940, by region, class of work, and sex*

Region and class of work	All workers				Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings
United States	56,754	$0.929	35.7	$33.15	48,373	$0.972	36.1	$35.12	8,381	$0.658	33.1	$21.79
Production	43,597	.953	34.7	33.07	36,969	.993	35.3	35.06	6,628	.700	31.4	21.97
Nonproduction	13,157	.858	39.0	33.45	11,404	.909	38.9	35.34	1,753	.532	39.6	21.09
Akron and Detroit	33,117	1.063	33.0	35.05	27,931	1.118	33.5	37.41	5,186	.738	30.3	22.34
Production	25,685	1.087	32.0	34.78	21,103	1.150	32.6	37.47	4,582	.764	29.3	22.40
Nonproduction	7,432	.990	36.4	36.00	6,828	1.027	36.3	37.24	604	.582	37.7	21.93
California	3,943	.933	38.3	35.73	3,603	.963	38.3	36.86	340	.620	38.3	23.73
Production	2,966	.966	37.8	36.51	2,823	.979	37.9	37.11	143	.686	35.8	24.58
Nonproduction	977	.840	39.7	33.36	780	.907	39.6	35.94	197	.576	40.1	23.11
Southern region	3,825	.607	44.7	27.17	3,558	.616	44.7	27.55	267	.492	44.7	22.02
Production	2,894	.602	44.2	26.64	2,726	.610	44.1	26.87	168	.490	46.8	22.91
Nonproduction	931	.621	46.4	28.81	832	.634	47.0	29.80	99	.497	41.3	20.52
Northeastern region	6,820	.777	39.0	30.34	5,885	.809	39.3	31.74	935	.573	37.6	21.54
Production	5,433	.793	38.1	30.20	4,815	.817	38.4	31.35	618	.594	35.7	21.22
Nonproduction	1,387	.722	42.8	30.91	1,070	.775	43.2	33.50	317	.537	41.3	22.17
Midwestern region	9,049	.778	38.2	29.74	7,396	.828	38.6	31.98	1,653	.541	36.5	19.74
Production	6,619	.813	37.0	30.05	5,502	.856	37.4	32.06	1,117	.582	34.7	20.17
Nonproduction	2,430	.693	41.7	28.90	1,894	.754	42.1	31.74	536	.468	40.3	18.86

The average hourly earnings in the Akron and Detroit areas were appreciably higher than those in any other region surveyed. The average hourly wage of $1.06 in these cities compared favorably with the average earnings in any mass-production industry in the United States. California, usually a high-wage area, paid an average hourly wage 13 cents below the average paid in Akron and Detroit. Although the hourly wages in Akron and Detroit were the highest in the indus-

[3] The data secured by the questionnaire survey were segregated by the important regions in which the tire and tube industry is located. These regions are (1) Akron and Detroit; (2) the Northeastern region, including the States of Connecticut, Maryland, Massachusetts, New York, and Pennsylvania; (3) the Midwestern region, including the States of Illinois, Indiana, Iowa, Michigan (exclusive of Detroit), Minnesota, Ohio (exclusive of Akron), and Wisconsin; (4) the Southern region, including the States of Alabama, Mississippi, Missouri, and Tennessee; and (5) California.

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try, the weekly earnings of tire and tube workers in Akron and Detroit in May 1940 were slightly lower than the weekly earnings of the workers in California—$35.05 as compared to $35.73. In both the Akron and Detroit areas and in California, the typical workweek was less than 40 hours.

In the Northeast and Midwest regions, which together employed less than half the number of workers employed in Akron and Detroit, the average hourly earnings were just under 78 cents. The average workweek in these two regions was slightly below 40 hours, so that average weekly earnings approximated $30 a week. In the South, where the average hourly earnings were only 60.7 cents, the average weekly earnings of $27.17 approached the average weekly earnings in the Northeast and Midwest regions, because the average hours of work exceeded 44 per week.

In each region of the industry, male workers earned more than female workers and in each region other than the South and California, male workers tended to work longer hours than female workers. Male workers were five times as numerous as female workers in the industry as a whole.

Hourly Earnings by Sex of Workers, Class of Work, and Region

Table 2 shows the percentage distribution of workers by classified hourly earnings for the United States.

TABLE 2.—*Percentage distribution of workers in the rubber tire and tube industry by average hourly earnings, sex, and class of work, May 1940*

Average hourly earnings	All workers			Males			Females		
	Total	Production	Nonproduction	Total	Production	Nonproduction	Total	Production	Nonproduction
27.5 and under 32.5 cents	0.1	0.1	0.3	0.1	(1)	0.2	0.3	0.2	0.6
32.5 and under 37.5 cents	.5	.3	1.1	.3	0.2	.6	1.6	.7	4.8
37.5 and under 42.5 cents	1.6	1.3	2.7	1.3	1.2	1.7	3.3	1.7	9.4
42.5 and under 47.5 cents	2.4	2.0	3.8	1.5	1.6	1.0	7.6	3.8	21.8
47.5 and under 52.5 cents	2.2	1.6	3.9	1.2	1.0	1.6	7.8	5.0	18.4
52.5 and under 57.5 cents	2.3	1.8	4.0	1.6	1.2	2.7	6.4	4.9	11.9
57.5 and under 62.5 cents	3.2	3.0	3.6	2.5	2.3	3.1	7.0	6.9	7.5
62.5 and under 67.5 cents	4.4	4.1	5.4	2.8	2.4	4.4	13.4	13.8	11.9
67.5 and under 72.5 cents	5.4	5.6	4.6	4.1	4.0	4.6	12.7	14.7	5.1
72.5 and under 77.5 cents	5.9	6.0	5.4	4.5	4.1	5.6	14.1	16.6	4.3
77.5 and under 82.5 cents	7.0	6.2	9.8	6.3	4.8	11.0	11.4	13.9	2.1
82.5 and under 87.5 cents	5.5	5.4	5.8	4.9	4.4	6.5	9.3	11.6	.7
87.5 and under 92.5 cents	5.4	5.5	4.9	5.9	6.0	5.6	2.3	2.8	.4
92.5 and under 97.5 cents	5.9	6.0	5.6	6.7	6.8	6.4	1.2	1.5	.4
97.5 and under 102.5 cents	6.6	6.5	6.8	7.6	7.6	7.8	.6	.7	.2
102.5 and under 107.5 cents	6.2	6.5	5.2	7.2	7.6	6.0	.2	.2	.2
107.5 and under 112.5 cents	7.0	6.9	7.7	8.3	8.1	8.8	.2	.2	-------
112.5 and under 117.5 cents	8.2	7.9	10.0	9.8	9.2	11.5	.1	.2	-------
117.5 and under 122.5 cents	6.4	7.1	4.2	7.5	8.4	4.9	.1	.1	-------
122.5 and under 127.5 cents	4.2	4.6	2.7	4.8	5.4	3.1	.3	.4	.1
127.5 and under 132.5 cents	3.9	4.7	1.2	4.5	5.5	1.4	.1	.1	.1
132.5 and under 137.5 cents	2.6	3.2	.5	3.0	3.8	.5	(1)	(1)	-------
137.5 and under 142.5 cents	1.9	2.3	.3	2.2	2.7	.4	(1)	-------	.1
142.5 and under 147.5 cents	.6	.7	.2	.7	.9	.2	-------	-------	-------
147.5 cents and over	.6	.7	.3	.7	.8	.4	-------	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	56,754	43,597	13,157	48,373	36,969	11,404	8,381	6,628	1,753
Average hourly earnings	$0.929	$0.953	$0.858	$0.972	$0.993	$0.909	$0.658	$0.700	$0.532

[1] Less than a tenth of 1 percent.

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Hourly Earnings of Workers in Central Administrative Offices

More than 4,700 central administrative workers in the tire and tube industry were reported in the questionnaire survey. Male workers slightly outnumbered females, there being 2,537 of the former as compared to 2,204 of the latter. Males averaged 91.5 cents an hour, as compared to only 58.9 cents an hour for females (table 3). This difference of over 30 cents an hour probably implies that the jobs held by male workers required more training and responsibility than did those held by female workers in the same offices. Indeed, 40 percent of the male workers earned as much as 97.5 cents per hour or more. Such wages are not ordinarily paid for simple clerical work. A negligible percentage of female central administrative workers earned such hourly wages. The bulk of the female workers (72.8 percent) averaged 37.5 cents an hour and under 67.5 cents. No similar concentration for any 30-cent wage range was shown for male employees.

TABLE 3.—*Percentage distribution of workers in central administrative offices of the tire and tube industry, by average hourly earnings and sex, May 1940*

Average hourly earnings	Total	Males	Females	Average hourly earnings	Total	Males	Females
Under 27.5 cents	0.1	(1)	0.1	107.5 and under 112.5 cents	2.6	4.7	0.3
27.5 and under 32.5 cents	1.0	1.7	.2	112.5 and under 117.5 cents	3.2	5.6	.3
32.5 and under 37.5 cents	2.4	2.6	2.3	117.5 and under 122.5 cents	1.5	2.6	.1
37.5 and under 42.5 cents	4.9	1.4	9.0				
42.5 and under 47.5 cents	8.7	3.7	14.2	122.5 and under 127.5 cents	1.8	3.3	.2
				127.5 and under 132.5 cents	1.9	3.3	.3
47.5 and under 52.5 cents	9.1	3.4	15.4	132.5 and under 137.5 cents	.6	1.1	-------
52.5 and under 57.5 cents	6.2	2.0	11.1	137.5 and under 142.5 cents	1.0	1.9	(1)
57.5 and under 62.5 cents	7.6	2.8	13.2	142.5 and under 147.5 cents	.8	1.3	.1
62.5 and under 67.5 cents	6.9	4.3	9.9				
67.5 and under 72.5 cents	7.9	7.8	8.1	147.5 and under 152.5 cents	.4	.7	.1
				152.5 and under 157.5 cents	.3	.6	-------
72.5 and under 77.5 cents	3.6	2.8	4.5	157.5 and under 162.5 cents	.3	.6	-------
77.5 and under 82.5 cents	5.1	5.4	4.8	162.5 cents and over	1.1	2.1	(1)
82.5 and under 87.5 cents	5.3	8.0	2.2				
87.5 and under 92.5 cents	3.3	4.9	1.4	Total	100.0	100.0	100.0
92.5 and under 97.5 cents	5.3	9.2	.9				
				Number of workers	4,741	2,537	2,204
67.5 and under 102.5 cents	3.9	6.5	1.0	Average hourly earnings	$0.765	$0.915	$0.589
102.5 and under 107.5 cents	3.2	5.7	.3				

[1] Less than a tenth of 1 percent.

Rubber Boot and Shoe Industry

The rubber boot and shoe industry manufactures "all rubber footwear, waterproof fabric upper footwear, and other fabric upper footwear having rubber soles."[4] The number of plants in this industry in 1939 were reported as 13. The average employment of wage earners reported for the industry in 1939 was 14,861. The output value of the industry in 1939 was reported as being about $50,000,000.

Thirteen questionnaires were received from plants in the rubber boot and shoe industry. The number of workers, including wage earners and clerical workers, employed in the 13 plants was 15,988, or approximately 95 percent of the 16,962 workers reported by the Census of Manufactures, 1939.

[4] U. S. Bureau of the Census. Census of Manufactures, 1939. Preliminary Report on Rubber Boots and Shoes, released September 14, 1940.

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The location of the plants reporting in the questionnaire survey corresponds fairly closely to that of plants enumerated by the Census of Manufactures. Eight of the 13 plants of the industry were in the New England States of Massachusetts, Connecticut, and Rhode Island. The four plants in Massachusetts provided jobs for over 5,200 workers. The two Connecticut establishments together employed nearly 5,000 workers; one of these plants employed fewer than 1,000 workers. The two plants in Rhode Island employed fewer than 1,000 workers.

Two plants in the industry were found in Maryland. These plants were not reported in the Census of Manufactures in 1937. The combined employment of these plants was fewer than 1,000 workers. Reports were received from 3 plants in the East North Central region (Illinois, Indiana, and Wisconsin). The labor force of these plants varied from scarcely more than 500 to over 2,500. No plant in the State of Missouri was reported in the present survey.

Average Hourly and Weekly Earnings

Plants in the boot and shoe industry, like those in the other rubber industries, supplied data regarding hours of work and earnings of their workers, by sex and class of work. The class of workers reported separately were the same as those discussed in connection with the tire and tube industry, namely, "production workers" and "nonproduction workers."

Table 4 presents the number of employees reported, by sex and class of work, and their average hourly earnings, average weekly "hours paid for," and average weekly earnings.

TABLE 4.—*Average hourly earnings, weekly hours paid for, and weekly earnings of rubber boot and shoe workers, May 1940, by sex and class of work*

Sex and class of work	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings
All workers	15,988	$0.586	37.3	$21.86
Production	13,306	.583	36.5	21.32
Nonproduction	2,682	.596	41.1	24.51
Males	7,799	.686	38.1	26.14
Production	6,291	.685	37.1	25.42
Nonproduction	1,508	.691	42.2	29.15
Females	8,189	.486	36.6	17.77
Production	7,015	.490	36.0	17.64
Nonproduction	1,174	.466	39.8	18.56

An examination of the questionnaire schedules received from the reporting members of the industry indicates that there are no well-defined regional differences in wage structure. The individual plants of the industry paid general average hourly wages ranging from less than 35 cents to nearly 70 cents. More than half of the plants in the industry, however, averaged from 45 to 60 cents an hour.

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Hourly Earnings by Sex and Class of Work

The distribution of workers in the rubber boot and shoe industry according to average hourly earnings, by sex and class of work is given in table 5.

TABLE 5.—*Percentage distribution of rubber boot and shoe workers, by average hourly earnings, sex, and class of work, May 1940*

Average hourly earnings	All workers			Males			Females		
	Total	Production	Nonproduction	Total	Production	Nonproduction	Total	Production	Nonproduction
Under 27.5 cents	(1)	(1)					(1)	(1)	
27.5 and under 32.5 cents	2.6	2.9	1.4	1.8	1.9	1.5	3.4	3.7	1.3
32.5 and under 37.5 cents	4.5	4.6	3.8	2.0	2.4	.6	6.8	6.6	7.9
37.5 and under 42.5 cents	8.8	8.0	12.6	2.6	2.7	2.3	14.7	12.8	25.9
42.5 and under 47.5 cents	10.7	10.1	13.6	3.4	3.4	3.2	17.6	16.1	26.7
47.5 and under 52.5 cents	13.6	14.2	10.6	6.1	6.5	4.8	20.6	21.1	18.1
52.5 and under 57.5 cents	14.8	15.9	9.6	7.7	6.8	11.3	21.6	23.9	7.5
57.5 and under 62.5 cents	10.1	10.2	9.8	9.9	9.0	13.3	10.4	11.2	5.4
62.5 and under 67.5 cents	6.8	6.6	7.8	10.4	10.3	10.9	3.3	3.3	3.8
67.5 and under 72.5 cents	6.5	6.4	7.2	12.5	12.6	11.5	.9	.8	1.5
72.5 and under 77.5 cents	7.0	6.9	7.1	14.0	14.5	12.2	.3	.3	.6
77.5 and under 82.5 cents	5.6	5.6	5.4	11.3	11.8	9.0	.2	.1	.9
82.5 and under 87.5 cents	3.9	4.0	3.6	8.0	8.4	6.2	.1	(1)	.3
87.5 and under 92.5 cents	2.3	2.0	3.6	4.6	4.1	6.3	.1	.1	.1
92.5 and under 97.5 cents	1.2	1.1	1.7	2.5	2.4	3.0			
97.5 and under 102.5 cents	.8	.8	.9	1.7	1.7	1.6			
102.5 and under 107.5 cents	.4	.4	.3	.7	.8	.6			
107.5 and under 112.5 cents	.2	.2	.3	.4	.4	.5			
112.5 cents and over	.2	.1	.7	.4	.3	1.2			
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	15,988	13,306	2,682	7,799	6,291	1,508	8,189	7,015	1,174
Average hourly earnings	$0.586	$0.583	$0.596	$0.686	$0.685	$0.691	$0.486	$0.490	$0.466

[1] Less than a tenth of 1 percent.

"Other Rubber Goods" Industry

That part of the rubber products manufacturing industry designated as the "other rubber goods" industry includes a heterogeneous class of establishments producing such diverse products as rubber heels and soles, mechanical rubber goods, rubber balls, toys, and balloons, druggists' household, and stationers' rubber sundries, rubber cements, fabrics, reclaimed rubber, etc. Many individual plants in this group produce several of the products enumerated.

According to the Census of Manufactures, there were in 1939, 529 plants in the "other rubber goods" industry. Usable questionnaire returns were received from 299 of these plants or about 57 percent of them. In terms of employment, however, more than 80 percent of the clerical and factory workers of the plants reporting to the Census of Manufactures were covered in the present report. Fairly comprehensive samples of plants were secured for each branch

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of the industry. The smallest proportionate sample was obtained in the rubber heels and soles branch, where about half of the employees reported in the Census of Manufactures were covered in the present survey. In the sundries branch the number of employees reported in the questionnaire survey exceeded the number of employees reported in the Census of Manufactures by 20 percent. About 70 percent of the workers reported in the rubber balls, toys, and balloons branch by the Census of Manufactures, and 80 percent in the mechanical rubber goods branch and miscellaneous branch were covered in the present survey. The geographical representation of the sample may be considered adequate. This statement is based on a State-by-State comparison of census information regarding volume of employment, number and size of plants with the questionnaire returns.

Average Hourly and Weekly Earnings

As has been pointed out, the "other rubber goods" industry includes a group of subindustries whose products are not homogeneous. There are also important differences in the skill required of the labor force in the several industries, the location of the industries, and the degree of unionization. These factors should be kept in mind in reviewing the tables referring to the industry as a whole.

Table 6 summarizes for the industry, by branch and region, the number of workers by sex and class of work, their average hourly earnings, average weekly "hours paid for," and average weekly earnings. It will be seen that hourly earnings throughout the industry averaged 60.5 cents and were lowest in the Southern region (45.0 cents) and highest in the Western region (65.7 cents).[5] In the entire industry, nonproduction workers (65.6 cents) averaged more than production workers (59.1 cents). Of the six branches for which separate figures are available, the reclaimed rubber branch paid the highest average hourly wage (76.9 cents) and the rubber balls, toys, and balloons branch the lowest (44.6 cents).

[5] The regions established for the industry as a whole were as follows: The New England region, including the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; the Middle Atlantic Region, including the States of New Jersey, New York, and Pennsylvania; the Southern region, including the States of Delaware, Georgia, Kentucky, Maryland, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia; the Midwestern region, including the States of Colorado, Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, Ohio, and Wisconsin; and the Western region, including the States of California and Oregon.

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TABLE 6.—*Average hourly earnings, weekly hours paid for, and weekly earnings in the "other rubber goods" industry, by branch, region, class of work, and sex, May 1940*

Region and class of work	All workers				Male				Female			
	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings
All branches												
United States	44,192	$0.605	38.3	$23.21	31,412	$0.662	39.0	$25.83	12,780	$0.457	36.8	$16.79
Production	35,078	.591	37.4	22.12	24,605	.649	38.0	24.67	10,473	.446	36.1	16.11
Nonproduction	9,114	.656	41.8	27.43	6,807	.705	42.6	29.99	2,307	.500	39.7	19.86
New England region	11,995	.542	39.1	21.16	7,687	.594	39.9	23.68	4,308	.443	37.6	16.66
Production	9,611	.527	38.3	20.20	6,028	.578	38.9	22.51	3,583	.437	37.3	16.32
Nonproduction	2,384	.594	42.1	25.03	1,659	.644	43.4	27.95	725	.467	39.3	18.36
Middle Atlantic region	10,390	.629	38.7	24.35	7,994	.674	38.9	26.21	2,396	.475	38.2	18.14
Production	7,912	.615	38.0	23.36	6,089	.662	38.0	25.18	1,823	.457	37.8	17.28
Nonproduction	2,478	.667	41.2	27.50	1,905	.706	41.8	29.50	573	.530	39.3	20.85
Southern region	2,159	.450	37.9	17.07	1,474	.486	38.2	18.57	685	.371	37.4	13.86
Production	1,883	.440	37.6	16.54	1,275	.481	37.8	18.20	608	.351	37.2	13.05
Nonproduction	276	.518	40.1	20.74	199	.517	40.4	20.91	77	.519	39.1	20.32
Midwestern region	18,528	.650	37.6	24.42	13,334	.714	38.5	27.48	5,194	.469	35.2	16.54
Production	14,754	.637	36.4	23.16	10,438	.703	37.3	26.20	4,316	.462	34.2	15.80
Nonproduction	3,774	.693	42.3	29.35	2,896	.749	42.9	32.13	878	.498	40.6	20.18
Western region	1,120	.657	40.4	26.53	923	.683	40.9	27.97	197	.524	37.7	19.77
Production	918	.645	40.6	26.18	775	.671	41.2	27.64	143	.485	37.6	18.25
Nonproduction	202	.716	39.2	28.12	148	.748	39.7	29.70	54	.626	38.0	23.79
Mechanical rubber goods branch [1]												
United States [2]	24,184	.658	38.8	25.53	18,953	.700	39.3	27.49	5,231	.496	37.2	18.45
Production	18,359	.652	37.8	24.66	14,503	.692	38.3	26.49	3,856	.492	36.1	17.77
Nonproduction	5,825	.675	41.9	28.29	4,450	.723	42.5	30.74	1,375	.507	40.1	20.35
New England region	3,120	.552	40.6	22.43	2,295	.592	41.1	24.31	825	.436	39.4	17.18
Production	2,328	.543	40.1	21.75	1,757	.583	40.5	23.58	571	.414	39.0	16.11
Nonproduction	792	.579	42.2	24.41	538	.620	43.1	26.69	254	.486	40.3	19.58
Middle Atlantic region	7,398	.662	38.5	25.47	6,027	.695	38.6	26.83	1,371	.516	37.8	19.51
Production	5,509	.660	37.7	24.86	4,575	.689	37.8	26.03	934	.514	37.2	19.14
Nonproduction	1,889	.669	40.7	27.27	1,452	.712	41.2	29.37	437	.519	39.1	20.30
Midwestern region	12,257	.690	38.5	26.58	9,469	.740	39.2	29.01	2,788	.506	36.2	18.31
Production	9,360	.685	37.2	25.48	7,187	.734	37.9	27.82	2,173	.508	34.9	17.73
Nonproduction	2,897	.704	42.8	30.13	2,282	.756	43.4	32.76	615	.499	40.8	20.36
Reclaimed rubber branch [3]												
All workers	1,095	.769	35.3	27.18	------	------	------	------	------	------	------	------
Production	902	.756	34.2	25.81	------	------	------	------	------	------	------	------
Nonproduction	193	.821	40.9	33.62	------	------	------	------	------	------	------	------
Rubber heels and soles branch												
United States	3,502	.487	35.6	17.31	2,344	.530	37.2	19.71	1,158	.384	32.4	12.44
Production	2,984	.473	34.1	16.16	1,942	.517	35.6	18.41	1,042	.380	31.4	11.96
Nonproduction	518	.546	43.8	23.92	402	.580	44.8	25.98	116	.413	40.5	16.75

[1] Includes mechanical rubber goods, rubber flooring, rubber mats, and hard rubber goods except druggists' sundries.
[2] Includes data for the Southern and Western regions for which separate tabulations were not made.
[3] Only 7 females were reported.

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TABLE 6.—*Average hourly earning, weekly hours paid for, and weekly earnings in the "other rubber goods" industry, by branch, region, class of work, and sex May 1940*—Continued

Region and class of work	All workers				Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours paid for	Average weekly earnings
Rubber heels and soles branch—Continued												
New England region	1,902	$0.499	35.9	$17.91	1,399	$0.530	37.4	$19.83	503	0.395	31.7	$12.55
Production	1,604	.481	34.2	16.47	1,174	.511	35.6	18.20	430	.387	30.4	11.75
Nonproduction	298	.571	44.9	25.65	225	.609	46.6	28.38	73	.434	39.8	17.26
All other regions	1,600	.472	35.2	16.59	945	.530	36.8	19.53	655	.376	32.8	12.36
Production	1,380	.464	34.0	15.80	768	.528	35.5	18.74	612	.376	32.2	12.11
Nonproduction	220	.509	42.4	21.57	177	.540	42.5	22.94	43	.380	41.8	15.90
Rubber balls, toys, and balloons branch												
United States	1,788	.446	37.3	16.61	951	.491	38.7	18.99	837	.390	35.7	13.91
Production	1,498	.433	36.3	15.70	788	.480	37.2	17.87	710	.378	35.2	13.28
Nonproduction	290	.503	42.5	21.36	163	.536	45.6	24.42	127	.453	38.5	17.43
Midwestern region	1,238	.443	36.6	16.20	614	.500	38.1	19.07	624	.382	35.1	13.38
Production	1,102	.427	35.5	15.16	537	.487	36.7	17.86	565	.366	34.4	12.60
Nonproduction	136	.547	45.0	24.60	77	.573	47.9	27.46	59	.507	41.1	20.86
All other regions	550	.452	38.8	17.55	337	.475	39.7	18.86	213	.412	37.5	15.47
Production	396	.448	38.3	17.17	251	.466	38.4	17.88	145	.418	38.2	15.95
Nonproduction	154	.460	40.2	18.50	86	.499	43.5	21.70	68	.399	36.2	14.46
Rubber sundries branch [4]												
United States [5]	5,986	.529	37.6	19.89	3,081	.625	38.1	23.86	2,905	.423	37.0	15.67
Production	5,110	.510	37.2	18.96	2,483	.610	37.6	22.93	2,627	.413	36.8	15.22
Nonproduction	876	.633	39.9	25.27	598	.686	40.5	27.74	278	.516	38.7	19.97
New England region	2,291	.511	38.6	19.70	1,155	.603	39.0	23.53	1,136	.415	38.1	15.80
Production	1,922	.489	38.0	18.59	903	.583	38.0	22.17	1,019	.406	37.9	15.42
Nonproduction	369	.614	41.5	25.47	252	.669	42.5	28.41	117	.485	39.5	19.14
Middle Atlantic region	1,289	.527	39.6	20.89	622	.658	39.9	26.26	667	.404	39.4	15.89
Production	1,094	.499	39.7	19.80	484	.644	39.8	25.60	610	.384	39.6	15.20
Nonproduction	195	.684	39.5	27.03	138	.705	40.5	28.57	57	.626	37.2	23.29
Midwestern region	2,244	.561	35.3	19.83	1,213	.647	36.3	23.52	1,031	.454	34.1	15.49
Production	1,947	.550	34.8	19.18	1,016	.637	36.0	22.90	931	.450	33.6	15.13
Nonproduction	297	.626	38.5	24.09	197	.698	38.3	26.74	100	.486	38.8	18.85
Miscellaneous rubber goods branch [6]												
United States [5]	7,637	.562	39.4	22.16	4,495	.612	40.2	24.61	2,642	.462	37.9	17.53
Production	6,225	.543	38.8	21.08	3,987	.590	39.5	23.30	2,238	.455	37.6	17.12
Nonproduction	1,412	.642	41.9	26.91	1,008	.693	43.0	29.77	404	.502	39.4	19.79
New England and Middle Atlantic regions	5,390	.575	39.9	22.95	3,419	.628	40.9	25.68	1,971	.477	38.2	18.21
Production	4,310	.557	39.3	21.91	2,623	.606	40.2	24.38	1,687	.476	37.9	18.06
Nonproduction	1,080	.644	42.1	27.12	796	.696	43.1	29.98	284	.484	39.4	19.08
Midwestern region	1,809	.528	38.1	20.10	1,226	.583	38.4	22.40	583	.409	37.3	15.27
Production	1,533	.509	37.4	19.02	1,043	.564	37.7	21.25	490	.389	36.8	14.28
Nonproduction	276	.623	41.9	26.11	183	.677	42.8	28.97	93	.509	40.2	20.48

[4] Includes druggists', stationers', and household sundries, rubber bands, and rubber gloves.
[5] Includes data for Southern region for which separate tabulation was not made.
[6] Includes rubberized fabric, rubber cement, gutta-percha, sponge rubber, latex, camel-back, tire repair materials, etc.

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Mechanical Rubber Goods Branch

From the viewpoint of employment, the largest single division of the "other rubber goods" industry is that manufacturing mechanical rubber goods. This division of the industry produces heavy and light beltings, mechanical parts, rubber sheetings, floorings, hose, mats, battery parts, packings, toilet seats, and so forth. According to the 1939 Census of Manufactures, there were 173 establishments engaged in the production of mechanical rubber goods. These establishments employed 27,690 wage workers, and about 2,500 clerical employees (table 7).

TABLE 7.—*Percentage distribution of workers in mechanical rubber goods branch, by average hourly earnings, sex, and class of work, United States, May 1940*

Average hourly earnings	All workers			Males			Females		
	Total	Production	Non-production	Total	Production	Non-production	Total	Production	Non-production
27.5 and under 32.5 cents	0.9	0.9	0.9	0.4	0.2	0.9	2.7	3.2	1.2
32.5 and under 37.5 cents	3.3	3.5	2.9	1.1	1.1	1.4	11.2	12.5	7.8
37.5 and under 42.5 cents	6.9	6.9	7.0	3.5	3.6	3.5	19.2	19.7	18.4
42.5 and under 47.5 cents	7.4	7.3	7.6	4.3	4.4	3.7	18.6	18.1	19.9
47.5 and under 52.5 cents	10.8	11.0	9.9	10.1	10.7	8.2	13.4	12.7	15.3
52.5 and under 57.5 cents	9.9	9.8	10.4	9.6	9.6	9.6	10.9	10.3	12.5
57.5 and under 62.5 cents	10.5	10.6	10.2	10.9	11.0	10.7	8.8	9.0	8.1
62.5 and under 67.5 cents	9.1	9.3	8.8	10.1	10.3	9.6	5.7	5.5	6.0
67.5 and under 72.5 cents	8.2	8.4	7.5	9.4	9.6	8.5	4.1	4.0	4.1
72.5 and under 77.5 cents	6.9	7.1	6.4	8.2	8.3	7.6	2.4	2.4	2.6
77.5 and under 82.5 cents	5.8	5.9	5.4	7.1	7.2	6.8	1.1	1.1	1.2
82.5 and under 87.5 cents	5.3	5.3	5.1	6.5	6.6	6.4	.6	.5	.9
87.5 and under 92.5 cents	4.2	4.2	4.4	5.3	5.2	5.6	.4	.3	.7
92.5 and under 97.5 cents	3.1	3.2	2.7	3.8	3.9	3.5	.3	.3	.2
97.5 and under 102.5 cents	2.8	2.8	2.8	3.6	3.6	3.7	.1	.1	.1
102.5 and under 107.5 cents	1.9	1.8	2.4	2.4	2.2	2.9	.2	(1)	.6
107.5 and under 112.5 cents	.9	.6	1.5	1.1	.8	2.0	.1	.1	.1
112.5 and under 117.5 cents	.6	.3	1.4	.7	.4	1.9	.1	.1	------
117.5 and under 122.5 cents	.5	.3	1.0	.6	.4	1.2	.1	.1	.2
122.5 and under 127.5 cents	.4	.3	.5	.5	.4	.7	------	------	------
127.5 and under 132.5 cents	.3	.3	.5	.4	.3	.7	------	------	------
132.5 cents and over	.3	.2	.7	.4	.2	.9	(1)	------	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	24,184	18,359	5,825	18,953	14,503	4,450	5,231	3,856	1,375
Average hourly earnings	$0.658	$0.652	$0.675	$0.700	$0.692	$0.723	$0.496	$0.492	$0.507

[1] Less than a tenth of 1 percent.

Shoe and Allied Industries—Earnings and Hours, 1939[1]

A study of earnings and hours was made by the Bureau of Labor Statistics in the boot and shoe industry, the cut-stock and findings industry, and the shoe-pattern industry, in 1939. The study covered a pay-roll period during the first quarter of the year. It indicated that hourly earnings averaged 48.9 cents in the manufacture of foot-

[1] Abstract of article in the Monthly Labor Review for September 1939, prepared by J. Perlman, P. L. Jones, O. R. Witmer, and H. O. Rogers, of the Bureau of Labor Statistics.

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wear, 48.7 cents in the manufacture of cut stock and findings, and 81.5 cents in the manufacture of shoe patterns.[2]

Included in the survey were 284 plants with 61,560 workers engaged in the production of shoes, 113 plants with 6,210 workers engaged in the manufacture of boot and shoe cut stock and findings, and 20 establishments with 225 employees making shoe patterns. In the shoe industry, only plants with more than 50 wage earners were included; in the cut-stock and findings industry, only those with 20 or more workers; and in the shoe-pattern industry, only those with 5 or more. The survey covered about 40 percent of the plants and 29.6 percent of the total wage earners employed in the boot and shoe industry; and over half of the plants and 37.4 percent of the wage earners in the cut-stock and findings industry. As no census data are available showing the total number of plants and wage earners in the shoe-pattern industry, it is impossible to state the proportion of that industry covered by the Bureau's survey.

Boot and Shoe Manufacture

Average Hourly Earnings

For male workers, the average hourly earnings were 66.4 cents for skilled, 52.4 cents for semiskilled, and 40.1 cents for unskilled (table 1). The hourly earnings of female employees, by contrast, averaged 44.4 cents for skilled, 39.4 cents for semiskilled, and only 33.7 cents for unskilled.

TABLE 1.—*Average hourly earnings of boot and shoe workers, first quarter of 1939, by sex, skill, and region*

Sex and skill	United States	New England States	Middle Atlantic States	Middle Western States [1]	Southern States
All workers	$0.489	$0.491	$0.525	$0.476	$0.427
Skilled	.615	.620	.639	.607	.516
Semiskilled	.454	.454	.486	.445	.398
Unskilled	.363	.343	.385	.366	.358
Males	.571	.573	.598	.564	.480
Skilled	.664	.666	.682	.666	.558
Semiskilled	.524	.521	.559	.518	.440
Unskilled	.401	.378	.410	.415	.379
Females	.390	.396	.404	.382	.358
Skilled	.444	.467	.450	.428	.371
Semiskilled	.394	.400	.407	.388	.361
Unskilled	.337	.324	.362	.336	.339

[1] Includes 3 establishments in California.

[2] The hourly earnings used in this article, unless otherwise specified, are based on regular rates, thus excluding the earnings from extra rates paid for overtime. However, the inclusion of these extra-rate earnings paid for overtime would only raise the total averages by 0.2 cent, 0.1 cent, and 0.9 cent, respectively.

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Table 2 presents the distribution of workers according to average hourly earnings for the entire country. Leaving out the extreme classes, the spread is from 25.0 cents to $1.10, within which are found 98.6 percent of the employees. In terms of uniform intervals of 5 cents, the only noticeable concentration, in the group receiving from 32.5 to 37.5 cents, is not very pronounced, accounting for only 12.7 percent of the total.

TABLE 2.—*Percentage distribution of boot and shoe workers, by sex and average hourly earnings, first quarter of 1939*

Average hourly earnings (in cents)	Total	Males	Females	Average hourly earnings (in cents)	Total	Males	Females
Under 17.5	(1)	(1)	0.1	62.5 and under 67.5	5.2	8.0	1.8
17.5 and under 20.0	0.2	(1)	.3	67.5 and under 72.5	4.1	6.8	.9
20.0 and under 22.5	.1	(1)	.1	72.5 and under 77.5	3.2	5.4	.6
22.5 and under 25.0	.2	0.1	.3	77.5 and under 82.5	2.5	4.2	.4
Exactly 25.0	5.8	2.7	9.7	82.5 and under 87.5	1.9	3.3	.2
25.1 and under 27.5	3.5	1.4	6.0	87.5 and under 92.5	1.6	2.9	.1
27.5 and under 30.0	4.1	1.9	6.8	92.5 and under 100.0	1.3	2.3	.1
30.0 and under 32.5	6.3	3.2	10.1	100.0 and under 110.0	1.0	1.8	(1)
32.5 and under 35.0	5.8	2.8	9.5	110.0 and under 125.0	.5	1.0	(1)
35.0 and under 37.5	6.9	4.9	9.3	125.0 and under 150.0	.3	.5	(1)
37.5 and under 40.0	5.9	4.3	7.8	150.0 and over	.1	.1	-------
40.0 and under 42.5	6.2	4.9	7.7				
42.5 and under 47.5	10.1	9.1	11.4	Total	100.0	100.0	100.0
47.5 and under 52.5	9.3	10.0	8.3				
52.5 and under 57.5	7.7	9.7	5.3	Number of workers	61,560	33,752	27,808
57.5 and under 62.5	6.2	8.7	3.2				

[1] Less than a tenth of 1 percent.

The influence that these differences have on the industry's wage structure is readily apparent after an appraisal of the composition of the labor force. In terms of skill, 31.2 percent of all employees were skilled, 52.8 percent semiskilled, and 16.0 percent unskilled. In boot and shoe manufacturing, the total number of jobs were about equally divided between male and female wage earners. Of the total number of workers scheduled, 54.8 percent were males and 45.2 percent females. However, more than three-fourths (77.7 percent) of the jobs that were classed as skilled were held by males. By contrast, the female workers accounted for over one-half (54.1 percent) of the semiskilled and three-fifths (60.6 percent) of the unskilled employees.

Geographical variations.—Table 3 presents average hourly earnings by States. In some States the coverage of the survey was relatively small, which limits the significance of their averages. Moreover, in view of the wide spread in plant averages, the average hourly earnings by States should be used with caution. This table indicates that the level of hourly earnings in California (60.4 cents), the State with the highest average, was almost 60 percent above that prevailing in Maryland (37.9 cents), the State with the lowest average. There is also considerable variation in hourly earnings within each region. This leads to the conclusion that, on the whole, there are factors or combinations of factors other than mere geographical location which account for differences in wages within the industry. Chief among these factors are size of community, retail price of shoes, and unionization.

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TABLE 3.—*Average hourly earnings of boot and shoe workers, first quarter of 1939, by region and State*

Region and State	Average hourly earnings	Region and State	Average hourly earnings
United States	$0.489	Middle Western States, including California	$0.476
New England States	.491	California	.604
Connecticut	.408	Illinois	.454
Maine	.470	Indiana	.424
Massachusetts	.495	Michigan	.478
New Hampshire	.506	Minnesota [1]	.478
		Missouri	.461
Middle Atlantic States	.525	Ohio	.494
Maryland	.379	Wisconsin	.516
New Jersey	.552		
New York	.580	Southern States	.427
Pennsylvania	.427	Georgia	.418
		Tennessee [2]	.429
		Virginia	.427

[1] Includes 1 plant in Iowa.
[2] Includes 2 plants in Kentucky.

Influence of size of community and price of shoes.—The average hourly earnings of all workers in this industry varied directly with size of community. In rural areas, the average amounted to 37.3 cents, which may be compared with 56.5 cents in metropolitan areas with a population of 1,000,000 and over. This is a difference of as much as 19.2 cents. There was very little difference in hourly earnings between places of 2,500 and under 5,000 and those of 5,000 and less than 10,000, both averaging about 41 cents. On the other hand, each succeeding class of size of community shows an increase in the average over the class below it.

Another factor that should be considered in connection with hourly earnings in this industry is the retail price of shoes manufactured in various plants. In analyzing the data on the basis of retail price, however, it is necessary to exclude all establishments making slippers, as well as those engaged in manufacturing cut stock and findings for exclusive use by boot and shoe factories belonging to the same company. This reduces the total coverage to 241 plants with 56,249 wage earners, thus including only that part of the industry engaged in the production of boots and shoes.

An examination of the data shows conclusively that average hourly earnings increased with the retail price of shoes. For all workers, the averages were 44.1 cents for cheap, 47.5 cents for popular-priced, 52.6 cents for medium-priced, and 58.7 cents for fine shoes.

Earnings of union and nonunion workers.[3]—Of the 284 boot and shoe establishments included in the sample, 100 showed workers covered by an agreement entered into between the employer and a trade-union organization.[4] The number of wage earners affected by such agreements was 20,670, which was approximately one-third of the total employees included in the survey.

[3] In preparing the tabulations on unionization, the Bureau considered not the worker's membership in an organization but whether or not his occupation was covered by an agreement between the union and employer. In other words, all workers in occupations within the jurisdiction specified by the agreements in a given plant are considered trade-union workers, while those not covered by agreements are regarded as non-trade-union employees.
[4] Workers in establishments with employee-representation groups were included with the non-trade-union employees. There were relatively few plants with employee-representation plans covered in this survey.

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Trade-union organization in this industry, judged in terms of the number of workers covered by agreements, is largely concentrated in metropolitan areas with a population of 100,000 and over. The average hourly earnings were considerably higher for trade-union as compared with non-trade-union workers, as is evident from table 4. For all wage earners, the difference amounted to 7.6 cents, the respective averages being 54.0 and 46.4 cents.

TABLE 4.—*Average hourly earnings of boot and shoe workers, first quarter of 1939, by unionization, sex, and skill*

Sex and skill	Average hourly earnings			Number of workers		
	Total	Trade-union	Non-trade-union	Total	Trade-union	Non-trade-union
All workers	$0.489	$0.540	$0.464	61,560	20,670	40,890
Skilled	.615	.688	.581	19,236	6,388	12,848
Semiskilled	.454	.503	.429	32,474	11,084	21,390
Unskilled	.363	.386	.352	9,850	3,198	6,652
Males	.571	.636	.538	33,752	11,514	22,238
Skilled	.664	.737	.628	14,955	5,154	9,801
Semiskilled	.524	.584	.493	14,919	5,215	9,704
Unskilled	.401	.440	.385	3,878	1,145	2,733
Females	.390	.421	.375	27,808	9,156	18,652
Skilled	.444	.485	.428	4,281	1,234	3,047
Semiskilled	.394	.431	.376	17,555	5,869	11,686
Unskilled	.337	.356	.327	5,972	2,053	3,919

Comparisons with previous surveys.—Surveys of the boot and shoe industry have been made by the Bureau since 1903, with data for all occupations available every 2 years between 1914 and 1932, inclusive.

As indicated in table 5, the average hourly earnings of all workers in the boot and shoe industry were 24.3 cents in 1914. During the World War period, there was a rapid increase, the average amounting to 55.9 cents in 1920, which is the highest figure attained in the industry during the years 1914 to 1939. Dropping to 50.1 cents in 1922, the average showed a slow but steady rise to 53.0 cents in 1928. During the depression of the early thirties, the average hourly earnings dropped to 41.2 cents in 1932, which may be compared with 49.1 cents in 1939.

The average hourly earnings were 49.3 cents for males and 30.8 cents for females in 1932, as against 57.3 and 39.1 in 1939.

TABLE 5.—*Average hourly earnings of workers in the boot and shoe industry in the United States, by years, 1914 to 1939*

Year of survey	Coverage of survey		Average hourly earnings[1]
	Number of plants	Number of workers	
1914	91	49,376	$0.243
1916	136	60,692	.259
1918	143	58,321	.336
1920	117	51,247	.559
1922	104	47,361	.501
1924	106	45,460	.516
1926	154	52,697	.528
1928	157	48,658	.530
1930	161	55,158	.510
1932	164	49,666	.412
1939	284	61,560	.491

[1] Including earnings, at extra rates, from overtime work.

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Weekly Hours

Of the 284 plants covered in the survey of the boot and shoe industry, 147 had full-time hours of 40 per week, while 134 were on a 44-hour basis. The 3 remaining establishments operated, respectively, 43.75, 42.50, and 25 hours per week.

In the group of 147 plants with full-time hours of 40 per week, 76 had employees covered by agreements with trade-union organizations. On the other hand, of the 134 establishments with full-time hours of 44 per week, only 24 had workers included under trade-union agreements. None of the remaining 3 plants had an agreement with a trade-union organization.

The actual weekly hours of all workers in this industry averaged 39.4 during the first quarter of 1939, this being also the average for males and for females. There was very little variation in the averages among the different sex-skill groups, the figures ranging from 39.0 for skilled males to 40.8 for unskilled males (table 6).

Over six-tenths (61.6 percent) of all employees worked between 40 and 44 hours, inclusive, during the week scheduled. Employees covered by trade-union agreements worked somewhat shorter hours than other employees, the weekly averages being 38.7 for the former and 39.8 for the latter.

The average actual weekly hours decreased somewhat with an increase in size of community. The figures were 40.2 for communities with a population under 20,000, 40.0 for those between 20,000 and 100,000, 38.9 for metropolitan centers between 100,000 and 1,000,000, and 38.6 for those with 1,000,000 and over.

Average Weekly Earnings [5]

As indicated in table 6, the weekly earnings of all wage earners in the boot and shoe industry averaged $19.33 during the first quarter of 1939. Over one-half (51.7 percent) of the total received between $10 and $20 a week.

TABLE 6.—*Average weekly hours and earnings of boot and shoe workers, first quarter of 1939, by sex and skill*

Sex and skill	Average weekly hours	Average weekly earnings [1]
All workers	39.4	$19.33
Skilled	39.1	24.07
Semiskilled	39.5	18.00
Unskilled	39.7	14.49
Males	39.4	22.59
Skilled	39.0	25.95
Semiskilled	39.6	20.81
Unskilled	40.8	16.51
Females	39.4	15.37
Skilled	39.3	17.50
Semiskilled	39.5	15.60
Unskilled	39.1	13.18

[1] Including earnings, at extra rates, from overtime work.

[5] Unless otherwise specified, these figures include earnings due to extra rates paid for overtime work.

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On a sex-skill basis, the average earnings per week were $25.95 for skilled, $20.81 for semiskilled, and $16.51 for unskilled males, which may be compared with $17.50, $15.60, and $13.18, respectively, for females. As there was little variation in average weekly hours worked, these differences reflect largely those in average hourly earnings.

The average weekly earnings [6] increased with size of community, the figures amounting to $16.72 in places with a population under 20,000, $19.13 in those between 20,000 and 100,000, $19.92 in metropolitan areas between 100,000 and 1,000,000, and $21.81 in those with 1,000,000 and over.

Workers covered by trade-union agreements averaged $20.96 per week, which may be compared with $18.38 for other employees.

The average weekly earnings also increased with the retail price of shoes, the figures being $17.16 for cheap (under $2.51), $18.93 for popular-priced ($2.51–$4.50), $20.97 for medium-priced ($4.51–$7.50), and $23.30 for fine (over $7.50) shoes.

Manufacture of Boot and Shoe Cut Stock and Findings

Average Hourly Earnings [6]

As in the boot and shoe industry, the wage structure prevailing in factories manufacturing cut stock and findings is influenced strongly by the composition of the labor force. In this industry, males outnumbered the females considerably, the respective numbers constituting 63.8 and 36.2 percent of the total. As regards skill, the proportions were 18.5 percent skilled, 61.5 percent semiskilled, and 20 percent unskilled workers. There were relatively few skilled females, namely 3.5 percent of the total skilled employees. On the other hand, females comprised 45.1 percent of all semiskilled and 39.0 percent of all unskilled workers.

For males, the hourly earnings averaged 69.3 cents for skilled, 52.3 cents for semiskilled, and 41.7 cents for unskilled workers (table 7). The average of the relatively small number of skilled females, namely 47.3 cents, fell approximately midway between those of semiskilled and unskilled males.

TABLE 7.—*Average hourly earnings of cut-stock and findings workers, first quarter of 1939, by sex, skill, and region*

Sex and skill	United States	New England States	Other States
All workers	$0.487	$0.506	$0.466
Skilled	.685	.713	.649
Semiskilled	.455	.472	.438
Unskilled	.395	.399	.390
Males	.550	.567	.531
Skilled	.693	.725	.654
Semiskilled	.523	.535	.509
Unskilled	.417	.410	.425
Females	.365	.381	.351
Skilled	.473	(1)	(1)
Semiskilled	.365	.377	.354
Unskilled	.357	.381	.329

[1] Number of workers not sufficient to permit presentation of an average.

[6] Excluding earnings from extra rates paid for overtime work.

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Table 8 shows the distribution of employees according to average hourly earnings in this industry for the entire country. The effective range of hourly earnings for the entire labor force, which includes all but the extreme classes, covers a spread from 25.0 to 92.5 cents, within which limits are found 98.2 percent of the total number of workers.

TABLE 8.—*Percentage distribution of cut-stock and findings workers, by sex and average hourly earnings, first quarter of 1939*

Average hourly earnings (in cents)	Total	Males	Females	Average hourly earnings (in cents)	Total	Males	Females
17.5 and under 20.0	(1)	-------	0.1	62.5 and under 67.5	5.1	7.5	0.9
20.0 and under 22.5	(1)	-------	(1)	67.5 and under 72.5	4.8	7.3	.3
22.5 and under 25.0	0.2	0.1	.3	72.5 and under 77.5	2.9	4.6	.1
Exactly 25.0	5.1	2.4	9.8	77.5 and under 82.5	3.0	4.6	.2
25.1 and under 27.5	2.4	1.1	4.8	82.5 and under 87.5	2.4	3.7	-------
27.5 and under 30.0	2.6	1.0	5.5	87.5 and under 92.5	1.4	2.2	-------
30.0 and under 32.5	5.7	2.8	10.8	92.5 and under 100.0	.7	1.0	(1)
32.5 and under 35.0	6.5	2.5	13.6	100.0 and under 110.0	.5	.7	-------
35.0 and under 37.5	7.7	4.7	13.1	110.0 and under 125.0	.2	.3	-------
37.5 and under 40.0	6.7	3.4	12.5	125.0 and under 150.0	.2	.3	-------
40.0 and under 42.5	8.2	7.4	9.5	150.0 and over	(1)	.1	-------
42.5 and under 47.5	12.1	12.7	10.9				
47.5 and under 52.5	9.2	11.6	5.1	Total	100.0	100.0	100.0
52.5 and under 57.5	7.5	10.8	1.6				
57.5 and under 62.5	4.9	7.2	.9	Number of workers	6,210	3,960	2,250

[1] Less than a tenth of 1 percent.

Trade-union organization is not very extensive among establishments making boot and shoe cut stock and findings. In this survey only 13 out of 113 plants included in the sample were found to have agreements with labor unions. The number of workers covered by such agreements amounted to 775, which is 12.5 percent of the total coverage.

Moreover, the 13 establishments having agreements with trade-unions were highly concentrated geographically, as well as by size of community. Of the total, 7 were in Massachusetts, 3 in New York City, with the remaining 3 in other States. All but one of these plants were in communities with a population of 100,000 and over.

The average hourly earnings were considerably higher for trade-union than for non-trade-union employees (table 9). For all workers the averages amounted respectively to 56.3 and 47.6 cents, which is a difference of 8.7 cents.

TABLE 9.—*Average hourly earnings of cut-stock and findings workers, first quarter of 1939, by unionization, sex, and skill*

Sex and skill	Average hourly earnings			Number of workers		
	Total	Trade-union	Non-trade-union	Total	Trade-union	Non-trade-union
All workers	$0.487	$0.563	$0.476	6,210	775	5,435
Skilled	.685	.730	.679	1,146	131	1,015
Semiskilled	.455	.559	.439	3,819	512	3,307
Unskilled	.395	.419	.392	1,245	132	1,113
Males	.550	.632	.539	3,960	521	3,439
Skilled	.693	.730	.688	1,106	131	975
Semiskilled	.523	.646	.503	2,095	306	1,789
Unskilled	.417	.433	.415	759	84	675
Females	.365	.421	.358	2,250	254	1,996
Skilled	.473	-------	.473	40	-------	40
Semiskilled	.365	.427	.356	1,724	206	1,518
Unskilled	.357	.397	.352	486	48	438

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As is evident from table 10, the highest average hourly earnings for all workers were found in outsoles, the figure amounting to 61.7 cents. Establishments making welting, miscellaneous products, and counters, averaged approximately 54 to 56 cents. Those manufacturing top lifts, shanks, and insoles showed averages from 48 to 50 cents. The lowest figures were found in those producing ornaments, stays, and other trimmings, finished wood heels, and leather heels, which averaged about 41 to 42 cents.

TABLE 10.—*Average hourly earnings of cut-stock and findings workers, first quarter of 1939, by sex and product*

Product	Total	Males	Females
Counters	$0.556	$0.595	$0.391
Finished wood heels	.416	.494	.354
Insoles	.497	.542	.380
Leather heels	.422	.465	.360
Ornaments, stays and other trimmings	.410	.486	.353
Outsoles [2]	.617	.621	(1)
Shanks	.480	.520	.402
Top lifts	.480	.510	.354
Welting	.535	.549	.468
Miscellaneous	.549	.588	.395
Total	.487	.550	.365

[1] Number of workers not sufficient to permit presentation of an average.
[2] This product includes also some midsoles and taps.

Weekly Hours

Of the 113 plants covered in the boot and shoe cut-stock and findings industry, 56 were working on a 40-hour basis during the pay-roll period scheduled, while the full-time hours in 54 establishments amounted to 44. The remaining 3 plants operated respectively 42.5, 43.75, and 47 hours per week.

Among the 56 plants with full-time hours of 40 per week, 11 had agreements with trade-union organizations, while only 2 of the 54 with 44 hours had such agreements.

The average actual weekly hours of all wage earners in this industry amounted to 38.5, the figures being 39.7 for males and 36.4 for females. All skill groups for males averaged approximately the same. For females, the skilled workers showed an average of 42.2 hours, which may be compared with approximately 36–37 hours for semiskilled and unskilled females (table 11).

Over three-fifths (62.3 percent) of all wage earners worked between 40 and 44 hours, inclusive, during the week scheduled, with 29.9 percent working exactly 40 and 21.1 percent exactly 44 hours.

There are sharp differences in the distributions of workers according to actual weekly hours, between males and females. For males, as many as 68.3 percent of the total worked between 40 and 44 hours, inclusive, with 37.6 percent working exactly 40 and 21.6 percent exactly 44 hours. The corresponding figures for females were 51.5, 16.3, and 20 percent.

Employees covered by agreements with trade-unions averaged 37.9 hours per week, which may be compared with 38.6 hours for other workers. On a size-of-community basis, the averages were 40.4 hours in places with a population under 20,000, 37.1 in those between 20,000 and 100,000, 38.3 in metropolitan areas between 100,000 and 1,000,000, and 38.2 hours in those with 1,000,000 and over.

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Weekly Earnings

The average weekly earnings of all employees in the boot and shoe cut-stock and findings industry amounted to $18.79 during the first quarter of 1939. On a sex-skill basis, the averages were $27.62 for skilled males, $20.84 for semiskilled, and $16.55 for unskilled, which may be compared respectively with $19.94, $13.21, and $13.08 for females.

TABLE 11.—*Average weekly hours and earnings of cut-stock and findings workers first quarter of 1939, by sex and skill*

Sex and skill	Average weekly hours	Average weekly earnings [1]
All workers	38.5	$18.79
Skilled	39.9	27.35
Semiskilled	38.1	17.40
Unskilled	38.3	15.20
Males	39.7	21.91
Skilled	39.8	27.62
Semiskilled	39.7	20.84
Unskilled	39.4	16.55
Females	36.4	13.31
Skilled	42.2	19.94
Semiskilled	36.2	13.21
Unskilled	36.6	13.08

[1] Including earnings, at extra rates, from overtime work.

The average weekly earnings of workers covered by agreements with trade-union organizations amounted to $21.32, as against $18.37 for other employees. The averages were $17.09 for all wage earners in communities with a population under 20,000, $18.63 in those between 20,000 and 100,000, $18.55 in metropolitan areas between 100,000 and 1,000,000, and $19.53 in those with 1,000,000 and over.

Manufacture of Shoe Patterns

Average Hourly Earnings

The hourly earnings of the 225 wage earners [7] employed by the 20 shoe-pattern plants covered in this survey averaged 81.5 cents during the first quarter of 1939. The averages ranged from 55.2 cents in one plant to $1.014 in another. The skilled workers (all males), who constituted two-thirds of the total, averaged 97.1 cents an hour.

The average hourly earnings of the semiskilled and unskilled employees, all but 7 of whom were males, were 50.2 cents.

Of the 225 wage earners in this industry, only about one-sixth worked overtime during the period scheduled. If the earnings due to the extra rates paid for overtime work were included, the average for the industry would be 82.4 cents, which is about 1 cent higher than the figure with the extra overtime earnings excluded.

[7] All of these workers were paid on a straight-time basis.

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TABLE 12.—*Percentage distribution of shoe-pattern workers by skill and average hourly earnings, first quarter of 1939*

Average hourly earnings (in cents)	Total	Skilled workers	Semi-skilled and unskilled workers	Average hourly earnings (in cents)	Total	Skilled workers	Semi-skilled and unskilled workers
Exactly 25.0	1.8	.....	5.5	72.5 and under 77.5	3.1	3.3	2.7
25.1 and under 27.5	.9	.....	2.7	77.5 and under 82.5	5.8	5.9	5.5
27.5 and under 30.0	.....	.....	.....	82.5 and under 87.5	3.1	4.6	.....
30.0 and under 32.5	4.9	.....	15.1	87.5 and under 92.5	13.3	16.4	6.8
32.5 and under 35.0	1.8	.....	5.5	92.5 and under 100.0	2.2	3.3	.....
35.0 and under 37.5	.9	.....	2.7	100.0 and under 110.0	23.6	34.1	1.4
37.5 and under 40.0	1.3	.....	4.1	110.0 and under 125.0	10.7	15.8	.....
40.0 and under 42.5	.9	.....	2.7	125.0 and under 150.0	5.3	7.9	.....
42.5 and under 47.5	5.8	.....	17.9	150.0 and over	.4	.7	.....
47.5 and under 52.5	3.1	2.0	5.5				
52.5 and under 57.5	3.1	.7	8.2	Total	100.0	100.0	100.0
57.5 and under 62.5	1.3	.....	4.1				
62.5 and under 67.5	2.7	2.0	4.1	Number of workers	225	152	73
67.5 and under 72.5	4.0	3.3	5.5				

Weekly Hours and Earnings

Of the 20 plants covered in the survey, 9 had full-time hours of 40 per week, while 10 worked 44 hours. In the remaining establishment, the full-time hours amounted to 42.5 per week.

The actual weekly hours of all employees averaged 40.0. Of the total wage earners, 57.0 percent worked between 40 and 44 hours, inclusive, with 26.8 percent working exactly 40, and 25.8 percent exactly 44 hours. There were 24.8 percent working under 40 hours, while 18.2 percent worked over 44 hours.

The average weekly earnings of all wage earners in this industry amounted to $32.93, the figures being $38.82 for skilled and $20.59 for semiskilled and unskilled combined. Of the total, 36.9 percent received under $30 a week, 43.6 percent between $30 and $45, 16.0 percent between $45 and $60, and 3.5 percent $60 and over. These figures include the earnings due to the extra rates received for overtime work.

Soap Industry—Earnings and Hours, January 1938[1]

The soap industry, as defined by the Bureau of the Census, "consists in the manufacture, as a primary product, of soap in bars and cakes and in granulated, powdered, and liquid form, and of cleansers, scouring powders, and washing compounds containing soap made in the same factories." According to the Census of Manufactures there were 238 establishments (in 28 States) engaged primarily in this industry in 1935; these had 13,911 wage earners. Well over three-fourths of the total product, however, came from the few largest companies with plants scattered throughout the United States. There is little tendency toward specialization in the industry and practically all of the establishments covered in a study by the Bureau of Labor Statistics were found to be making various kinds of soap

[1] Abstract of article in the Monthly Labor Review for June 1938, prepared by J. Perlman, H. E. Riley, and George E. Votava, of the Bureau of Labor Statistics.

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products. The study covered 7,143 wage earners in 72 establishments engaged in the manufacture of soap, scouring powder, and washing compounds. In terms of the number of workers, this constituted approximately a 50 percent coverage of the industry.

Modern soap manufacture, especially in the larger plants, is highly mechanized, and the cost of labor represents but a small part of the price of soap. On the basis of the 1935 census figures, the total wages paid to wage earners in the industry amounted to somewhat over 6 percent of the total value of the product.

Average Hourly Earnings

The 7,143 employees of the soap industry included in this survey earned an average of 68.8 cents an hour in January 1938. Such a figure, however, conveys little information about the multiplicity of individual earnings, which may be seen from the distribution in table 1.

TABLE 1.—*Percentage distribution of employees in soap industry, by average hourly earnings and by skill, January 1938*

Average hourly earnings (in cents)	Both sexes				Males				Females		
	Total	Skilled	Semi-skilled	Un-skilled	Total	Skilled	Semi-skilled	Un-skilled	Total	Semi-skilled	Un-skilled
Under 27.5	0.2	-------	0.1	0.3	0.2	-------	0.1	0.3	0.6	-------	0.8
27.5, under 32.5	.9	0.1	.5	1.5					5.8	5.4	5.9
32.5, under 37.5	2.4	.1	1.6	4.1	1.0	-------	1.3	1.0	11.0	4.1	13.6
37.5, under 42.5	5.8	.4	3.7	9.6	3.9	0.3	2.9	6.5	16.7	10.2	19.2
42.5, under 47.5	5.3	.9	4.8	7.5	4.0	.7	3.7	6.0	12.9	15.3	11.9
47.5, under 52.5	8.3	.6	7.2	12.1	5.8	.3	5.8	8.4	22.3	19.1	23.6
52.5, under 57.5	7.3	2.0	7.8	8.7	6.2	1.7	6.2	8.3	13.5	22.5	10.1
57.5, under 62.5	5.9	2.2	5.9	5.2	4.4	2.0	5.3	4.7	8.1	12.2	6.6
62.5, under 67.5	10.3	3.2	7.3	15.6	11.1	2.8	7.6	18.8	5.9	6.8	5.5
67.5, under 72.5	11.0	3.4	10.8	14.1	12.5	3.5	11.6	18.1	2.1	2.4	2.0
72.5, under 77.5	12.3	7.3	14.9	11.8	14.2	7.5	16.4	15.3			
77.5, under 82.5	8.8	9.4	14.1	3.8	10.3	9.6	15.6	5.0			
82.5, under 87.5	5.6	12.6	6.6	2.1	6.5	12.7	7.3	2.8			
87.5, under 92.5	5.4	15.6	5.6	1.5	6.4	15.9	6.2	2.0			
92.5, under 97.5	3.4	8.9	4.0	.9	4.0	9.0	4.4	1.2			
97.5, under 102.5	3.0	11.8	2.2	.5	3.5	12.1	2.4	.7	1.1	2.0	.8
102.5, under 107.5	1.7	6.5	1.2	.4	2.0	6.6	1.3	.5			
107.5, under 112.5	1.4	5.7	1.0	.2	1.7	5.8	1.1	.3			
112.5, under 117.5	.8	3.6	.5	.1	1.0	3.6	.5	.1			
117.5, under 125.0	.5	2.6	.1	(1)	.6	2.7	.2	(1)			
125.0 and over	.6	3.1	.1	-------	.7	3.2	.1	-------			
Total, percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of employees	7,143	1,175	2,803	3,165	6,087	1,151	2,533	2,403	1,056	[2] 294	762

[1] Less than a tenth of 1 percent.
[2] Includes 24 forewomen who were classed as skilled.

The labor force of the industry consists largely of males. Of the total number scheduled, 85.2 percent were men and 14.8 percent women. Somewhat more than one-third (35.5 percent of the total) consisted of semiskilled males and about one-third (36.6 percent) were unskilled males. The skilled males constituted approximately one-sixth (16.1 percent) of the total number of employees. The majority of the women (10.7 percent of the total labor force) were in the unskilled group, while semiskilled females constituted only 4.1 percent of the

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total.[2] It will be noted that, taking both sexes, the proportion of unskilled workers (44.4 percent) exceeded that of the semiskilled workers (39.2 percent).

Differences Among Individual Plants

An outstanding characteristic of the industry is that it includes both very large companies and numerous small ones, hence significant differences appear when the averages of all workers in the individual plants are analyzed by size of company (table 2).

TABLE 2.—*Distribution of plants in soap industry, by average hourly earnings of all employees and size of company, January 1938*

Average hourly earnings	All plants	Plants of large companies	Plants of other companies		
			Total	Medium companies	Small companies
Total plants	72	13	59	16	43
Under 35.0 cents	1		1		1
35.0 and under 40.0 cents	3		3	1	2
40.0 and under 45.0 cents	6		6	1	5
45.0 and under 50.0 cents	7		7	1	6
50.0 and under 55.0 cents	8		8	2	6
55.0 and under 60.0 cents	12	1	11	4	7
60.0 and under 65.0 cents	7		7	2	5
65.0 and under 70.0 cents	9	3	6	3	3
70.0 and under 75.0 cents	9	2	7	2	5
75.0 and under 80.0 cents	3	2	1		1
80.0 and under 85.0 cents	4	2	2		2
85.0 cents and over	3	3			

The distribution of plants according to average hourly earnings shows that, whereas there was relatively little difference in the level of earnings between the medium- and small-sized companies, a considerable difference existed in the wage level between the plants of the large companies and the rest of the industry. This comparison is borne out by the averages covering all plants in each size of company, the figures being 76.2 cents an hour in the plants belonging to the large companies against 58.0 cents in the medium-sized and 55.6 in the small companies.

Even greater differences are shown by an analysis of the labor force as to skill and sex among the different size-groups of companies. Thus, skilled employees constituted 19.6 percent of the total labor force in large companies, 15.0 percent in the small, and only 9.6 percent in the medium-sized companies. The order was reversed in the case of unskilled workers, the percentages being 51.1 in small, 48.9 in medium-sized, and 41.2 in large companies.

The distribution for large companies, according to table 3, shows that 17.3 percent of the workers earned under 62.5 cents an hour. In the remainder of the industry, however, nearly two-thirds (63.4 percent) received less than that figure. On the other hand, 16.1 percent of all employees in large companies as against only 4.1 percent in the remaining companies averaged 92.5 cents or more.

[2] Includes 24 forewomen who were classed as skilled.

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TABLE 3.—*Distribution of employees in soap industry by average hourly earnings and size of company, January 1938*

Average hourly earnings	Large companies		Other companies	
	Number of employees	Percent of total	Number of employees	Percent of total
Total employees	4,375	100.0	2,768	100.0
Under 27.5 cents			13	.5
27.5 and under 32.5 cents			64	2.3
32.5 and under 37.5 cents			175	6.3
37.5 and under 42.5 cents	23	.5	388	14.1
42.5 and under 47.5 cents	79	1.8	303	10.9
47.5 and under 52.5 cents	252	5.8	338	12.2
52.5 and under 57.5 cents	205	4.7	314	11.3
57.5 and under 62.5 cents	196	4.5	160	5.8
62.5 and under 67.5 cents	524	12.0	212	7.7
67.5 and under 72.5 cents	550	12.6	239	8.6
72.5 and under 77.5 cents	651	14.8	224	8.1
77.5 and under 82.5 cents	501	11.5	126	4.6
82.5 and under 87.5 cents	351	8.0	48	1.7
87.5 and under 92.5 cents	338	7.7	49	1.8
92.5 and under 97.5 cents	203	4.6	42	1.5
97.5 and under 102.5 cents	196	4.5	20	.7
102.5 and under 107.5 cents	112	2.6	11	.4
107.5 and under 112.5 cents	91	2.1	11	.4
112.5 and under 117.5 cents	47	1.1	11	.4
117.5 and under 125.0 cents	32	.7	4	.1
125.0 cents and over	24	.5	16	.6

Weekly Hours

The average weekly hours actually worked by all employees in the soap industry amounted to 39.4 in January 1938. According to the distribution for the entire industry, as shown in table 4, nearly three-fifths (58.4 percent) of the employees worked exactly 40 hours. About one-fifth (19.6 percent) worked between 32 and 40 hours. Only 5.0 percent worked less than 32 hours, most of these employees having put in short time as a result of labor turn-over and absenteeism. Exactly 17 percent worked 40 hours or over, but only 3.2 percent worked as long as 48 hours or more.

TABLE 4.—*Distribution of employees in soap industry by weekly hours and sex, January 1938*

Weekly hours	Total		Males		Females	
	Employees	Percent of total	Employees	Percent of total	Employees	Percent of total
Total employees	7,143	100.0	6,087	100.0	1,056	100.0
Under 24 hours	108	1.5	75	1.2	33	3.1
24 and under 32 hours	251	3.5	172	2.8	79	7.5
32 and under 40 hours	1,398	19.6	1,086	17.8	312	29.5
Exactly 40 hours	4,171	58.4	3,618	59.5	553	52.4
40.01 and under 44 hours	380	5.3	363	6.0	17	1.6
44 and under 48 hours	313	4.4	287	4.7	26	2.5
Exactly 48 hours	290	4.1	255	4.2	35	3.3
48.01 and under 56 hours	160	2.2	159	2.6	1	.1
56 hours and over	72	1.0	72	1.2		

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Classified by size of company, the weekly hours averaged 38.8 for the large, 39.9 for the medium-size, and 41.7 for the small organizations.

Average Weekly Earnings

The average earnings of all employees in the soap industry amounted to $27.08 per week in January 1938. As table 5 indicates, more than three-fifths of the workers (62.7 percent) earned between $20 and $35 a week. Moreover, 86.7 percent were paid between $15 and $40. Only 6.4 percent received under $15, while 6.9 percent earned as much as $40 and over.

TABLE 5.—*Percentage distribution of employees in soap industry by weekly earnings and skill, January 1938*

Weekly earnings [a]	Both sexes				Males				Females		
	Total	Skilled	Semi-skilled	Un-skilled	Total	Skilled	Semi-skilled	Un-skilled	Total	Semi-skilled	Un-skilled
Under $5	0.3	0.1	0.3	0.4	0.2	0.1	0.2	0.1	1.1	0.7	1.3
$5 and under $10	1.3	------	1.2	2.0	.9	------	1.1	1.2	3.6	1.3	4.4
$10 and under $15	4.8	.3	2.6	8.4	1.7	.3	1.5	2.7	22.5	12.6	26.3
$15 and under $20	13.7	.5	11.0	21.0	9.7	.5	7.5	16.5	36.8	40.8	35.2
$20 and under $25	18.7	3.5	18.9	24.1	16.9	3.5	17.1	23.1	29.3	34.4	27.4
$25 and under $30	24.8	9.7	25.4	29.5	28.0	9.7	27.3	37.4	5.9	8.9	4.9
$30 and under $35	19.2	26.0	26.2	10.3	22.3	26.0	29.2	13.4	.8	1.4	.5
$35 and under $40	10.3	30.4	10.0	3.3	12.1	30.4	11.2	4.3	------	------	------
$40 and under $45	4.6	18.6	3.2	.8	5.4	18.6	3.6	1.1	------	------	------
$45 and under $50	1.2	5.0	1.0	.2	1.5	5.0	1.1	.2	------	------	------
$50 and under $55	.6	3.1	.2	(1)	.7	3.1	.2	(1)	------	------	------
$55 and under $60	.3	1.8	(1)	------	.4	1.8	(1)	------	------	------	------
$60 and over	.2	1.0	------	------	.2	1.0	------	------	------	------	------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	7,143	1,151	2,827	3,165	6,087	1,151	2,533	2,403	1,056	294	762

[a] It is evident that the very low weekly earnings were received by employees who worked part time during the week surveyed.
[1] Less than 1/10 of 1 percent.

Employees of plants belonging to large companies averaged $29.56 per week, or $6.40 more than the average for the remaining establishments ($23.16).

Steam Railroads—Hours and Earnings, 1932 to 1941

Information relating to the employment, hours, and earnings of railroad employees is reported to the Interstate Commerce Commission. The classification of railroad workers by the Commission makes possible an approximate separation of wage-earning groups from salaried employees, although the nature of railroad employment differs in vital respects from the nature of employment in manufacturing and some of the other nonmanufacturing industries. Weekly hours, hourly earnings, and weekly earnings for class I railroads are given by months from 1932 to August 1941 in the following table:

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Average hours worked per week, average hourly earnings, and average weekly earnings, class I steam railroads, by years and by months, 1932 to August 1941 [1]

Year and month	Average weekly hours	Average hourly earnings	Average weekly earnings
		Cents	
1932	39.1	59.1	$22.13
1933	38.9	58.7	22.84
1934	40.5	59.5	24.11
1935	41.2	64.3	26.49
1936	42.6	65.1	27.72
1937	43.2	66.9	28.93
1938	42.6	70.4	29.98
1939	43.5	70.7	30.71
1940	44.1	71.1	31.32
1932: January	38.6	65.3	25.19
February	40.1	59.7	23.93
March	40.8	58.5	23.85
April	40.2	58.3	23.47
May	38.8	58.0	22.50
June	39.9	57.7	23.02
July	37.6	58.3	21.93
August	39.1	57.7	22.58
September	38.7	58.7	22.70
October	38.8	58.7	22.77
November	38.6	59.2	22.85
December	38.1	59.2	22.53
1933: January	37.4	59.2	22.17
February	37.7	60.3	22.70
March	37.9	58.5	22.16
April	37.9	58.8	22.29
May	38.7	58.1	22.50
June	39.8	58.1	23.14
July	38.8	58.6	22.72
August	40.9	57.8	23.61
September	40.1	58.4	23.41
October	40.3	58.2	23.45
November	39.5	59.0	23.34
December	37.7	59.3	22.40
1934: January	39.9	59.1	23.55
February	40.5	60.4	24.49
March	41.4	58.9	24.36
April	40.4	58.8	23.74
May	41.0	57.9	23.78
June	41.7	57.8	24.08
July	40.0	59.7	23.86
August	41.2	59.1	24.40
September	39.8	60.5	24.04
October	41.7	59.5	24.80
November	40.2	60.8	24.44
December	38.8	61.2	23.74
1935: January	40.4	62.5	25.26
February	41.4	63.9	26.43
March	41.3	62.4	25.76
April	41.7	65.1	27.19
May	41.0	64.5	26.46
June	40.6	64.4	26.19
July	40.7	63.8	25.95
August	41.3	63.6	26.23
September	40.6	65.1	26.44
October	43.0	64.5	27.74
November	41.5	65.7	27.27
December	40.7	66.1	26.89
1936: January	41.5	65.9	27.36
February	42.0	66.7	28.00
March	41.3	65.4	27.01
April	42.8	64.7	27.70
May	41.5	64.6	26.82
June	43.0	64.0	27.50
1936: July	42.4	64.2	$27.23
August	42.2	64.3	27.12
September	43.2	64.8	28.00
October	44.5	64.6	28.80
November	42.8	66.2	28.35
December	43.5	66.1	28.80
1937: January	41.8	66.5	27.84
February	43.5	67.0	29.10
March	44.8	65.3	29.25
April	44.3	64.8	28.71
May	42.6	64.7	27.56
June	44.3	64.0	28.36
July	43.1	64.0	27.62
August	42.8	67.4	28.87
September	43.4	68.5	29.72
October	43.5	70.2	30.52
November	42.6	70.9	30.20
December	41.8	71.0	29.69
1938: January	41.0	71.1	29.20
February	42.6	72.0	30.67
March	43.2	70.1	30.29
April	42.4	70.3	29.81
May	41.2	70.3	28.97
June	43.2	69.6	30.09
July	41.5	70.1	29.06
August	43.4	69.1	29.99
September	42.9	70.2	30.09
October	43.4	70.2	30.47
November	43.2	71.1	30.68
December	42.7	71.2	30.43
1939: January	42.4	71.5	30.33
February	43.3	72.1	31.18
March	44.2	70.4	31.11
April	42.3	70.7	29.87
May	42.8	69.6	29.81
June	44.3	69.5	30.82
July	42.2	70.0	29.52
August	44.2	69.2	30.63
September	43.7	70.7	30.89
October	44.9	70.8	31.79
November	44.4	71.6	31.78
December	42.6	72.0	30.67
1940: January	44.1	72.0	31.78
February	43.4	72.4	31.45
March	43.5	71.2	30.99
April	44.4	70.7	31.44
May	43.8	70.2	30.77
June	43.7	70.4	30.77
July	44.1	70.1	30.87
August	44.8	69.8	31.30
September	43.6	71.2	31.05
October	45.9	70.5	32.36
November	44.0	71.8	31.60
December	43.3	72.4	31.37
1941: January	44.8	72.0	32.24
February	45.6	73.1	33.30
March	45.4	72.2	32.77
April	45.3	71.1	32.21
May	45.5	71.0	32.26
June	45.8	71,2	32.60
July	45.6	70.7	32.27
August	45,7	70.7	32.34

[1] Computed from Wage Statistics of Class I Steam Railroads in the United States, published monthly by the Bureau of Statistics, Interstate Commerce Commission. The employees included are all employees who are paid on an hourly basis, and in addition, messengers and office boys and crossing and bridge flagmen and gatemen, who are paid on a daily basis. The hours used are the hours paid for.

Before 1933, the Interstate Commerce Commission reported the number of employees on the pay rolls at the middle of the month and thereafter also the number who received pay during the month. The computations in this table make use of the number who received pay during the month, the number for 1932 being computed by using the average of the 1933–37 ratios of the number receiving pay during the month to the number at the middle of the month.

Switching and terminal companies are excluded. In 1932, the Interstate Commerce Commission published different sets of figures which both included and excluded employees of switching and terminal companies for all groups combined, but the figures for the separate groups of employees did not exclude employees of switching and terminal companies. Data relating to these employees were excluded for 1932 from the groups here covered by using the ratios of all groups combined including switching and terminal companies to all groups combined excluding switching and terminal companies.

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Street and Sewer Construction—Wages and Hours, 1936[1]

A general survey of wage rates and hours in three major branches of the construction industry was undertaken in 1936 by the Bureau of Labor Statistics in cooperation with the Works Progress Administration. The three branches studied were building construction, street and road construction, and sewer and water-line construction. The results of the survey of building construction are presented in another article.[2] The present article gives the results for the other two branches, together with certain comparisons of all three branches.

The building-construction study was conducted in 105 cities. The study of wages and hours in street and road construction was conducted in 41 [3] of these 105 cities, and that of sewer and water-line construction in 40 cities.[4]

Comparison of Three Branches of Construction Industry

A comparison of the wages and hours worked in building construction, street and road construction, and sewer and water-line construction revealed marked differences among them.

A larger proportion of all employees in street and road construction consisted of unskilled and semiskilled workers than was the case in building construction.

Only 8 occupations were found to occur in all three classes of construction. These are given in table 1. In 2 of the 8 occupations the highest rates were found in building construction (bricklayers $1.304, and engineers hoisting 2 or more drums $1.343). In 5 of the occupations the highest rates were found in sewer and water-line construction (carpenters, $1,104; cement finishers, $1.208; common laborers, 60.3 cents; reinforcing-steel workers, $1.19; and truck drivers, 72.7 cents). In one occupation, that of mixer operators, the highest rate was found in street and road construction ($1.025).

There were wide differences in the number of union members in the three classes of construction. In general, it appears that skilled workers in building construction were 33.5 percent better organized than workers in sewer and water-line construction, and 28.5 percent better organized than workers in street and road construction.

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[1] Abstract of article in the Monthly Labor Review for December 1938, prepared by Edward P. Sanford, of the Bureau of Labor Statistics.

[2] See p. 52.

[3] The cities covered were: Akron, Ohio; Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Brockton, Mass.; Casper, Wyo.; Charleston, W. Va.; Chicago, Ill.; Dallas, Tex.; Detroit, Mich.; Elizabeth, N. J.; Fargo, N. Dak.; Flint, Mich.; Gary, Ind.; Green Bay, Wis.; Greensboro, N. C.; Jackson, Miss.; Little Rock, Ark.; Los Angeles, Calif.; Louisville, Ky.; Minneapolis, Minn.; Montgomery, Ala.; New Orleans, La.; New York, N. Y.; Philadelphia, Pa.; Phoenix, Ariz.; Portland, Maine; Portland, Oreg.; Providence, R. I.; Rochester, N. Y.; Sacramento, Calif.; St. Louis, Mo.; St. Petersburg, Fla.; Salt Lake City, Utah; San Antonio, Tex.; San Francisco, Calif.; Schenectady, N. Y.; Sioux City, Iowa; Syracuse, N. Y.; Tacoma, Wash.; and Wichita, Kans.

[4] The cities covered were: Akron, Ohio; Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Brockton, Mass.; Casper, Wyo.; Chicago, Ill.; Dallas, Tex.; Detroit, Mich.; Elizabeth, N. J.; Fargo, N. Dak.; Flint, Mich.; Gary, Ind.; Green Bay, Wis.; Greensboro, N. C.; Jackson, Miss.; Little Rock, Ark.; Los Angeles, Calif.; Louisville, Ky.; Minneapolis, Minn.; Montgomery, Ala.; New Orleans, La.; New York, N. Y.; Philadelphia, Pa.; Phoenix, Ariz.; Portland, Maine; Portland, Oreg.; Providence, R. I.; Rochester, N. Y.; Sacramento, Calif.; St. Louis, Mo.; St. Petersburg, Fla.; Salt Lake City, Utah; San Antonio, Tex.; San Francisco, Calif.; Schenectady, N. Y.; Sioux City, Iowa; Syracuse, N. Y.; Tacoma, Wash.; and Wichita, Kans.

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TABLE 1.—*Average hourly rate in 8 identical occupations in 3 branches of the construction industry, 1936*

Occupation	Building trades	Sewer and water-line	Street and road
Bricklayers	$1.304	$1.207	$1.147
Carpenters	1.048	1.104	1.047
Cement finishers	1.119	1.208	1.042
Engineers, hoisting 2 or more drums	1.343	1.338	1.282
Laborers, common	.516	.603	.547
Mixer operators	.871	1.006	1.025
Reinforcing-steel workers	1.089	1.190	1.131
Truck drivers	.637	.727	.666

In each of the three branches of the construction industry studied, the rates paid to white workers exceeded those paid to Negro workers.

TABLE 2.—*Difference in wage rates paid to white and Negro workers in the 3 branches of the construction industry, by degree of skill, 1936*

Branch of industry	Skilled workers			Semiskilled workers			Unskilled workers		
	White	Negro	Difference	White	Negro	Difference	White	Negro	Difference
Building construction	$1.156	$0.791	$0.365	$0.714	$0.575	$0.139	$0.572	$0.431	$0.141
Sewer and water-line construction	1.028	.676	.352	.850	.758	.092	.632	.446	.186
Street and road construction	1.078	.714	.364	.748	.590	.158	.579	.413	.166

A greater number of workers in street and road construction had full-time hours of more than 48 per week than was noted in building construction or in sewer and water-line construction. In street and road construction 8.1 percent of all workers had a full-time week of more than 48 hours; in the building trades, 2.6 percent; and in sewer and water-line construction, 3.9 percent.

Street and Road Construction

Average Hourly Wages

Data as to street and road construction were obtained for 486 projects, valued at $70,001,000. For the 28,875 workers on street and road construction the average hourly wage rate paid was 70.2 cents.

Wide differences occurred within occupations between average hourly wage rates paid to union and to nonunion workers in street and road construction. An unusually wide spread was found among bricklayers (manhole and sewer)—$1.268; but this figure is not particularly significant because so few nonunion workers were reported. When bricklayers were treated as one occupation, it was found that the spread was 58.9 cents per hour. With this minor exception, the widest spread was found among the asphalt heaters and driers (74.1 cents per hour), and the next among mixer operators (less than 5-bag capacity)—63.4 cents. The least difference was among the teamsters (2.4 cents per hour).

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TABLE 3.—*Union and nonunion wages in selected occupations in street and road construction, 1936*

Occupation	Number of employees			Average wage rate per hour		
	Total	Union	Non-union	Total	Union	Non-union
All occupations	28,875	9,601	19,274	$0.702		
Air-compressor operators	142	61	81	.931	$1.185	$0.739
Asphalt heaters and dryers	89	3	86	.634	1.350	.609
Blacksmiths	14	3	11	.832	1.000	.786
Blasters	36	7	29	.698	1.082	.605
Bricklayers:						
Manhole and sewer	18	14	4	1.486	1.768	.500
Paving	533	236	297	1.127	1.440	.879
Not elsewhere classified	15	11	4	1.502	1.648	1.103
Bridgemen (structural steel)	513	469	44	1.324	1.349	1.065
Carpenters, rough (form builders)	1,003	619	384	1.017	1.124	.845
Carpenters, not elsewhere classified	347	182	165	1.137	1.224	1.040
Carpenters' helpers	139	90	49	.660	.721	.547
Cement finishers	660	321	339	1.042	1.272	.824
Concrete puddlers, asphalt rakers, etc	2,015	766	1,249	.725	.918	.607
Concrete workers, not elsewhere classified	862	488	374	.709	.735	.675
Crane operators	44	19	25	1.164	1.389	.993
Curb setters	237	120	117	1.014	1.283	.737
Engineers, hoisting 2 or more drums	94	72	22	1.282	1.339	1.096
Firemen	199	84	115	.773	.923	.664
Form setters, steel and wood	286	132	154	.828	1.010	.673
Form setters, not elsewhere classified	18	1	17	.912	1.000	.907
Grader operators and elevating-grader operators	499	82	417	.761	1.117	.691
Helpers, not elsewhere classified	2,099	688	1,411	.690	.806	.633
Jackhammer operators (including drillers)	247	139	108	.741	.814	.648
Laborers, common	13,304	3,279	10,025	.547	.750	.480
Mixer operators (less than 5-bag capacity)	70	23	47	.956	1.382	.748
Mixer operators (5-bag capacity and over)	133	51	82	1.061	1.352	.880
Pile-driver operators	106	39	67	1.163	1.341	1.060
Pipe layers (terra cotta and steel)	32	7	25	.697	.922	.634
Pipe layers' helpers	5		5	.625		.625
Pump operators	7	4	3	.686	.713	.650
Reinforcing-steel setters	318	210	108	1.131	1.235	.930
Roller operators	402	147	255	1.050	1.403	.847
Shorers (including bracers, bottom men, and sheathers)	(1)					
Shovel operators	326	147	179	1.263	1.468	1.095
Teamsters, without team	276	27	249	.514	.536	.512
Tractor operators	572	193	379	.875	1.148	.737
Trench-machine operators	(1)					
Truck drivers	3,203	858	2,345	.666	.859	.596
Welders, acetylene and electric	8	7	1	1.253	1.324	.750

[1] Fewer than 5 employees; data included in total.

Full-Time Hours of Labor

In view of the fact that 44.4 percent of all the employees in street and road construction were working on PWA projects, it is not surprising that 43.6 percent of these workers had a full-time workweek of 30 hours. For the next largest group (26.3 percent) the hours of labor were 40 per week; for 4.4 percent the hours were 44 per week; and for 16.7 percent the hours were 48 per week.

For all employees in street and road construction the full-time week of 70.2 percent was 40 hours or less, and for 29.8 percent it was over 40 hours per week.

Sewer and Water-Line Construction

Average Hourly Wages

Data on sewer and water-line construction were obtained from the pay-roll records of 265 projects valued at $73,370,000. For the 25,252 workers on sewer and water-line construction the average hourly rate of wages paid was 75.1 cents (table 4).

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TABLE 4.—*Union and nonunion wages in selected occupations in sewer and water-line construction, 1936*

Occupation	Number of employees			Average wage rate per hour		
	Total	Union	Nonunion	Total	Union	Nonunion
All occupations	25,252	10,326	14,926	$0.751		
Air-compressor operators	200	107	93	1.091	$1.413	$0.720
Asphalt heaters and dryers	10		10	.750		.750
Blacksmiths	46	6	40	.791	1.175	.733
Blasters	34	23	11	1.437	1.683	.924
Bricklayers (manhole and sewer)	232	99	133	1.206	1.467	1.012
Bricklayers (paving)	(1)					
Bridgeman (structural steel)	155	121	34	1.440	1.523	1.144
Carpenters, not elsewhere classified	223	159	64	1.332	1.432	1.083
Carpenters, form builders	746	451	295	1.041	1.174	.836
Carpenters' helpers	141	30	111	.584	.896	.500
Cement finishers	131	77	54	1.208	1.365	.983
Concrete puddlers, asphalt rakers, etc	37	37		.801	.801	
Concrete workers, not elsewhere classified	1,050	755	295	.840	.913	.653
Crane operators	176	101	75	1.357	1.530	1.124
Engineers (hoisting 2 or more drums)	299	210	89	1.338	1.483	.996
Firemen	147	85	62	.808	.923	.649
Form setters, steel and wood	245	132	113	.915	1.024	.788
Form setters, not elsewhere classified	(1)					
Grader operators	121	58	63	1.166	1.455	.900
Helpers, not elsewhere classified	2,151	938	1,213	.805	.886	.742
Jackhammer operators (including drillers)	860	634	226	1.208	1.394	.688
Laborers, common	12,788	4,457	8,331	.603	.818	.488
Mixer operators (less than 5-bag capacity)	27	9	18	.694	.840	.621
Mixer operators (5-bag capacity and over)	77	42	35	1.115	1.303	.888
Pile-driver operators	51	48	3	1.365	1.388	1.000
Pipe layers (terra cotta and steel)	1,762	329	1,433	.718	1.061	.639
Pipe layers' helpers	805	138	667	.539	.624	.522
Pump operators	165	35	130	.780	.842	.764
Reinforcing-steel setters	313	227	86	1.190	1.375	.701
Shorers (bracers, sheathers)	538	203	335	.795	1.022	.657
Shovel operators	213	144	69	1.311	1.424	1.076
Teamsters, without team	21		21	.456		.456
Tractor operators	115	78	37	1.031	1.184	.708
Trench-machine operators	159	40	119	1.085	1.317	1.007
Truck drivers	1,128	516	612	.727	.873	.604
Welders, acetylene and electric	80	32	48	1.237	1.383	1.140
Others	(1)					

[1] Fewer than 5 employees; data included in total.

Wide differences were found within occupations between average hourly wage rates paid to union and nonunion workers in sewer and water-line construction. The widest range was in the occupation of blasters (union rate $1.683, nonunion rate 92.4 cents per hour—a difference of 75.9 cents). Next in line were the jackhammer operators, with a difference of 70.6 cents; then came the air-compressor operators, with a difference of 69.3 cents, and reinforcing-steel setters, with a difference of 67.4 cents per hour. The least difference (7.8 cents) was in the occupation of pump operators.

Full-Time Hours of Labor

A large number of workers in sewer and water-line construction were engaged on projects financed from Public Works Administration funds; thus, 53.1 percent of all workers scheduled were working the 30-hour week specified for such work. For the next largest group (26.1 percent) the full-time hours of labor were 40 per week, and for the next largest group (9 percent) the full-time hours of labor were 48 per week.

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For all employees combined, the full-time workweek of 83.3 percent was 40 hours or less, and 16.7 percent had a full-time week of more than 40 hours.

Street-Railway Employees—Union Wages and Hours, 1940[1]

The average hourly wage rate of union motormen, conductors, and bus operators in 55 cities was 76.1 cents on June 1, 1940. This average covers motormen, conductors, and bus operators employed on city lines and also those employed on city-suburban lines, when those lines also furnish city service. Employees of strictly intercity lines are not included.

The hourly wage-rate index on June 1, 1940, was 110.4 (1929=100). This represented the sixth consecutive yearly increase in the index. In 1934, after 3 years of declining wage rates, the index had dropped to 96.1. The 1940 index represents an advance of 14.9 percent from the 1934 low point.

TABLE 1.—*Indexes of union hourly wage rates of street-railway motormen, conductors, and bus drivers, 1929 to 1940*

[1929=100.0]

Year	Index	Year	Index
1929	100.0	1935	99.8
1930	101.0	1936	100.6
1931	101.0	1937	105.3
1932	99.0	1938	108.3
1933	(1)	1939	109.2
1934	96.1	1940	110.4

[1] Not available.

Hourly Wage Rates

Hourly wage rates in street-railway and bus operations are generally graduated on the basis of an employee's length of service with the company. Most frequently the agreements provide for an entrance rate, an intermediate rate, and a maximum rate. A considerable number, however, specify several intermediate periods, each with successively higher rates. The specified time for the rate steps varies widely from city to city. The entrance-rate period is usually 3, 6, or 12 months. The maximum rate most frequently applies after 1 year of service, but many agreements provide for longer periods, ranging up to 5 years and including as many as 12 progressive rate steps.

The differences between the entrance rate and the maximum rate ranged from 4 to 32 cents per hour in 1940, the most frequently reported difference being 5 cents.

Rates for operators of 2-man cars were reported in only 19 of the 55 cities included in the survey. In each of these cities the agreements provided higher rates for 1-man-car operators and bus drivers than for motormen and conductors on 2-man cars. Generally the rates for

[1] Abstract of article in the Monthly Labor Review for January 1941, prepared by Frank S. McElroy, of the Bureau of Labor Statistics.

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bus drivers were the same as for 1-man-car operators. The differences in favor of 1-man-car operators ranged from 3 to 10 cents per hour, the most frequent being 7 cents.

The entrance rates for 2-man-car operators ranged from 48 cents per hour in Salt Lake City to 75 cents per hour in Chicago and Detroit, the great majority being between 50 and 70 cents per hour. For 1-man car and bus operators the range of entrance rates was from 42 cents per hour in North Little Rock to 81 cents per hour in Pittsburgh, nearly half being between 60 and 70 cents per hour.

Maximum rates for 2-man-car operators ranged from 56 cents per hour in Salt Lake City to 83 cents per hour in Detroit. Excepting only the 80-cent rate in Chicago, all other maximum 2-man rates were at least 63 cents but not over 78 cents per hour. For 1-man car and bus operators the maximum rates ranged from 50 cents in New Orleans to 95.5 cents per hour in Pittsburgh, with 61 percent of the operators in this classification having rates between 70 and 80 cents per hour.

As streetcar and bus operators generally remain permanently in the employ of one company, a very great majority of the union members reported were receiving the maximum rates provided in their respective agreements. Only 2.2 percent of the total membership were receiving less than 60 cents per hour. Nearly 16 percent had rates between 60 and 70 cents per hour; 45.7 percent, between 70 and 80 cents; 29.5 percent, between 80 and 90 cents; and 6.9 percent, between 90 cents and $1 per hour.

TABLE 2.—*Distribution of union street-railway employees by hourly-rate groups, June 1, 1940*

Classified hourly rates	1940
Average rate per hour	$0.761
Percent of members whose rates were—	
40 and under 50 cents	.1
50 and under 60 cents	2.1
60 and under 70 cents	15.7
70 and under 80 cents	45.7
80 and under 90 cents	29.5
90 cents and under $1	6.9

Overtime Rates

Overtime work in street-railway operations is generally defined, not as time worked in excess of a specified number of hours, but rather as time worked in excess of that required to complete the particular individual's regular run or assignment. Because it is customary in street-railway agreements to require that all work outside the regular assignments be given to men on the extra list, whenever such men are available, overtime work as so defined is not frequently required.

The overtime rates provided and the number of members affected are shown in the following statement:

	Number of quotations	*Percent of union members affected*
No rate provided	100	8.3
Time and one-half	336	86.8
Specified amounts, not a multiple of regular rate	13	4.9

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Hours per Day and Days per Week

Because it is impossible to arrange assignments in street-railway and bus operations to make all runs of equal length, few agreements specify an exact number of hours as constituting either a day's or a week's work. The hour provisions in the agreements reported in 1940 commonly specified a basic number of hours per day, with the proviso that a majority of the regular runs should be arranged to approximate that figure. A basic day of 8 hours was reported in a considerable majority of the quotations. Nine hours constituted the most common basic day in those reports showing other than the 8-hour day.

The 6-day week prevailed generally for street-railway and bus operators in the cities covered by the survey. The 5-day week, however, was reported as being generally observed in Erie, Pa., Manchester, N. H., New Orleans, La., Pittsburgh, Pa., Providence, R. I., San Antonio, Tex., and South Bend, Ind. In Rock Island, Ill., the agreement provided that regular operators should have every sixth day off duty, while the Des Moines, Iowa, agreement provided for 6 days' work to be followed by 2 days off.

Scope of Survey

This study is one of a series of annual surveys, started in 1921. In 1940 the Bureau's agents visited 72 cities [2] and obtained reports of effective union scales for street-railway or bus operators in 55 of those cities.

Woolen and Worsted Industry—Average Hourly Earnings, 1938

A survey of wages in the woolen and worsted industry, conducted by the Bureau of Labor Statistics, revealed that hourly earnings in that industry averaged 52.2 cents in the latter part of June 1938.

The survey included 195 establishments and 44,384 wage earners, or about one-fourth of the industry. A majority (59 percent) of the employees were men. Two-fifths (40.6 percent) of the workers were in skilled occupations, 47.9 percent in semiskilled jobs, and only 11.5 percent in unskilled jobs. Of the total working force, 27.3 percent were skilled male employees, 21.7 percent were semiskilled males, and 10 percent were unskilled males.

The relatively high level of earnings in the woolen and worsted branch of the textile industry is accounted for by several factors, among which the degree of skill of the workers and the geographic location of the industry are most important. In contrast with the cotton-textile industry, for example, in which about one-fourth of the labor force comes within the skilled category, over 40 percent of the wage earners in the woolen and worsted mills are employed in skilled occupations.

In addition to being an industry of relatively highly skilled workers, the woolen and worsted industry is chiefly concentrated in the high-wage Northern States. Of the total wage earners covered by

[2] See footnote 2, p. 46, for list of cities covered in 1940.

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the Bureau's survey, less than 9 percent were found in the Southern States. In the cotton-textile industry, by contrast, virtually three-fourths of the wage earners were employed in Southern mills. Table 1 summarizes the average hourly earnings figures for the principal wage districts.

TABLE 1.—*Average hourly earnings in the woolen and worsted industry, 1938, by district, sex, and skill*

District and sex	All workers	Skilled workers	Semiskilled workers	Unskilled workers
United States	$0.522	$0.632	$0.451	$0.430
Males	.575	.692	.491	.439
Females	.446	.510	.418	.366
Northern New England	.510	.623	.426	.402
Males	.541	.659	.446	.412
Females	.450	.534	.403	(3)
Southern New England	.539	.665	.463	.444
Males	.595	.727	.505	.451
Females	.456	.528	.427	.379
Middle Atlantic [1]	.527	.644	.460	.450
Males	.608	.710	.541	.470
Females	.447	.532	.417	.370
East North Central [2]	.453	.498	.412	.400
Males	.480	.550	.426	.399
Females	.420	.440	.396	(3)
South Atlantic	.466	.546	.398	.365
Males	.503	.607	.409	.369
Females	.385	.398	.379	(3)

[1] Includes Delaware.
[2] Includes Minnesota.
[3] Number of workers not sufficient to justify computation of an average.

The variation in hourly earnings according to skill and sex of the employees is shown by the distribution presented in table 2.

TABLE 2.—*Percentage distribution of woolen and worsted workers according to average hourly earnings for the country as a whole, skill, and sex, 1938*

Average hourly earnings	All workers			Skilled workers			Semiskilled workers			Unskilled workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 17.5 cents	0.1	(1)	0.1	(1)	(1)	0.1	(1)	------	(1)	0.4	0.1	2.2
17.5 and under 22.5 cents	.2	0.1	.4	0.2	(1)	.4	0.1	(1)	0.2	1.0	.4	4.7
22.5 and under 25.0 cents	.1	.1	.2	.1	(1)	.3	.1	(1)	.2	.2	.1	.6
25.0 and under 27.5 cents	.7	.5	.9	.3	0.1	.6	.8	0.7	.8	1.6	1.2	4.3
27.5 and under 30.0 cents	.5	.3	.8	.5	.3	.9	.5	.2	.8	.5	.4	1.2
30.0 and under 32.5 cents	.9	.5	1.4	.6	.4	1.1	1.0	.5	1.4	1.2	.8	3.5
32.5 and under 35.0 cents	2.2	1.7	3.0	1.5	.8	2.7	2.4	1.7	3.0	3.8	3.7	4.3
35.0 and under 37.5 cents	9.2	3.9	16.8	3.0	.9	7.5	13.5	4.7	20.7	13.4	10.5	32.4
37.5 and under 40.0 cents	8.4	4.6	14.0	2.7	1.1	5.9	12.7	6.4	18.0	11.0	10.0	17.3
40.0 and under 42.5 cents	11.9	9.1	16.0	4.1	1.9	8.6	16.9	13.1	19.8	19.1	19.9	15.0
42.5 and under 47.5 cents	16.1	14.7	18.0	9.0	4.8	17.4	20.6	23.0	18.6	22.3	24.3	10.2
47.5 and under 52.5 cents	11.7	12.3	10.8	10.0	7.3	15.7	13.0	18.3	8.7	11.6	12.9	3.2
52.5 and under 57.5 cents	9.4	11.3	6.6	10.1	9.1	12.4	8.6	14.0	4.1	9.8	11.2	.3
57.5 and under 62.5 cents	6.2	7.8	3.8	9.3	10.1	7.6	4.4	7.4	2.0	2.3	2.5	.7
62.5 and under 67.5 cents	5.1	7.0	2.3	9.5	11.5	5.7	2.3	4.3	.7	1.1	1.3	------
67.5 and under 72.5 cents	4.3	6.2	1.7	9.0	11.4	4.4	1.3	2.5	.4	.5	.5	.1
72.5 and under 77.5 cents	3.8	5.6	1.4	8.5	10.9	3.6	.8	1.4	.3	.1	.1	------
77.5 and under 82.5 cents	2.8	4.1	.9	6.5	8.4	2.6	.3	.6	.1	.1	.1	------
82.5 and under 87.5 cents	2.2	3.4	.4	5.0	6.9	1.1	.3	.5	.1	(1)	(1)	------
87.5 and under 92.5 cents	1.4	2.2	.2	3.1	4.3	.5	.2	.4	.1	(1)	(1)	------
92.5 and under 100.0 cents	1.3	2.0	.2	3.1	4.3	.5	.1	.2	(1)	------	------	------
100.0 and under 110.0 cents	.9	1.5	.1	2.2	3.1	.2	.1	.1	(1)	------	------	------
110.0 and under 120.0 cents	.3	.5	(1)	.8	1.1	.1	(1)	(1)	------	------	------	------
120.0 and under 140.0 cents	.2	.4	(1)	.6	.8	.1	(1)	(1)	------	------	------	------
140.0 cents and over	.1	.2	------	.3	.5	------	(1)	(1)	------	------	------	------
Total	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] Less than a tenth of 1 percent.

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Average hourly earnings by type of mill, department, and type of product are shown in table 3. The highest general wage level was found in the independent woolen yarn mills, whose employees averaged 58.3 cents an hour. When considered in terms of department, process, and product, however, the data reveal that employees in weaving departments of integrated mills that were producing woolen women's-wear fabrics received the highest earnings, averaging 63.6 cents an hour.

TABLE 3.—*Average hourly earnings of woolen and worsted workers for the country as a whole, by type of mill, department, kind of yarn, and product, 1938*

Type of mill and department	Kind of yarn and product								
	Woolen					Worsted			
	All	Men's wear	Women's wear	Blankets	Miscellaneous	All	Men's wear	Women's wear	Miscellaneous
All mills	$0.539	$0.543	$0.560	$0.420	$0.516	$0.502	$0.515	$0.523	$0.527
Yarn	.523	.524	.518	.429	.506	.459	.459	.470	.484
Weaving	.584	.583	.636	.437	.543	.567	.565	.577	.570
Dyeing and finishing	.485	.498	.499	.380	.476	.524	.510	.538	.556
Integrated mills	.536	.543	.560	.420	.516	.514	.506	.523	.527
Yarn	.513	.524	.518	.429	.506	.465	.459	.470	.484
Weaving	.584	.583	.636	.437	.543	.574	.573	.577	.570
Dyeing and finishing	.485	.498	.499	.380	.476	.524	.510	.538	.556
Independent mills	.583					.479	.553		
Yarn	.583					.450			
Weaving						.553	.553		
Dyeing and finishing [1]	.535								

[1] Includes both woolen and worsted products.

Other surveys by the Bureau of hourly earnings in the woolen and worsted industry covered pay-roll periods in 1932, 1933, and 1934. The advances in average hourly earnings over the period 1932 to 1938 are indicated by the comparatively distributions which are shown in table 4. It will be observed, for example, that only 22.9 percent of the employees averaged 47.5 cents or more in 1932. By 1938, however, nearly one-half (49.7 percent) of the wage earners received as much as 47.5 cents and over.

TABLE 4.—*Percentage distribution of woolen and worsted workers according to average hourly earnings for the country as a whole, by sex, 1932–38*

Average hourly earnings	Total				Males				Females			
	1932	1933	1934	1938	1932	1933	1934	1938	1932	1933	1934	1938
Under 25.0 cents	11.9	0.1	0.1	0.4	4.2	0.1	0.1	0.2	20.7	(1)	(1)	0.8
25.0 and under 27.5 cents	6.6	.1	.1	.7	3.3	.1	.1	.5	10.2	0.1	0.1	.9
27.5 and under 30.0 cents	7.1	.1	(1)	.5	3.0	.1	.1	.3	11.7	.1	(1)	.8
30.0 and under 32.5 cents	8.4	.3	.1	.9	6.8	.2	.1	.5	10.3	.3	.1	1.4
32.5 and under 35.0 cents	9.6	2.8	2.5	2.2	7.1	2.9	2.3	1.7	12.5	2.7	2.6	3.0
35.0 and under 37.5 cents	9.8	29.9	20.8	9.2	10.2	15.2	11.6	3.9	9.3	44.4	32.9	16.8
37.5 and under 40.0 cents	8.7	12.1	12.6	8.4	10.7	8.9	9.6	4.6	6.4	15.1	16.6	14.0
40.0 and under 42.5 cents	6.7	9.4	10.3	11.9	7.5	9.7	10.0	9.1	5.8	9.2	10.6	16.0
42.5 and under 47.5 cents	8.3	12.5	13.3	16.1	10.8	11.9	11.9	14.8	5.4	13.1	15.1	17.9
47.5 cents and over	22.9	32.7	40.2	49.7	36.4	50.9	54.2	64.4	7.7	15.0	22.0	28.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of workers	38,509	41,427	31,984	44,384	20,407	20,530	18,091	26,175	18,102	20,897	13,893	18,209

[1] Less than a tenth of 1 percent.

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Hourly Earnings in 105 Selected Industries, by States, 1937[1]

In connection with the 1937 Census of Manufactures special reports on man-hours worked were obtained for a sample of 4,161,934 wage earners in 105 industries. In each industry, only establishments which reported usable or satisfactory figures on the number of man-hours worked were included in the man-hour tabulations.

A summary of the man-hour analysis by individual industries is shown in table 1. Items covered in the table other than wages per hour are number of establishments, number of hours worked per wage earner per month, value of products produced per man-hour, value added per man-hour, and the number of kilowatt-hours of electric energy[2] used per man-hour.

TABLE 1.—*Averages per man-hour, by industries, for selected establishments in 105 industries, 1937*

Industry	Establishments	Wage earners[1]	Hours per wage earner per month	Averages per wage-earner man-hour			
				Wage earnings	Value of products	Value added	Electric energy used
				Cents			*Kwh.*
105 selected industries	**24,411**	**4,161,934**	**161.1**	**64.8**	**$4.17**	**$1.53**	**5.44**
Food and tobacco industries	**3,445**	**314,301**	**170.6**	**58.8**	**9.67**	**2.12**	**3.59**
Food industries	2,938	227,964	177.4	64.1	10.23	2.15	4.55
Flour milling	847	20,660	191.9	52.7	15.44	2.37	11.83
Feeds, prepared	603	11,759	189.0	49.5	13.74	2.45	5.24
Cereal preparations	76	7,887	170.3	65.6	9.72	4.13	8.14
Meat packing, wholesale	723	119,283	177.9	63.0	10.23	1.46	2.78
Sugar, beet	83	9,024	195.0	53.3	4.86	1.72	5.49
Sugar refining, cane	23	14,024	164.3	57.8	15.36	2.24	7.16
Liquors, distilled	104	5,471	172.2	58.9	9.02	3.14	6.04
Liquors, malt	479	39,856	168.0	84.7	5.86	3.65	3.54
Tobacco industries	507	86,337	152.6	42.5	7.97	2.02	.65
Cigars	392	50,442	153.1	37.4	1.70	.82	.30
Cigarettes	34	26,149	152.7	50.5	20.23	4.12	1.28
Tobacco (chewing, smoking) and snuff	81	9,746	150.0	47.9	7.60	2.58	.75
Textile mill products and apparel	**6,046**	**1,195,004**	**149.9**	**46.8**	**1.92**	**.84**	**2.71**
Textile mill products	4,161	972,841	152.3	46.4	1.92	.83	3.22
Cotton manufactures	1,401	464,475	154.5	41.9	1.68	.76	4.91
Cotton yarn and thread	316	76,706	148.1	37.9	1.72	.70	5.53
Cotton woven goods	586	318,283	154.5	41.1	1.56	.72	5.31
Cotton narrow fabrics	118	11,002	161.0	45.8	1.80	.89	1.19
Dyeing and finishing of cotton yarn	61	5,358	156.2	49.6	1.53	1.05	2.46
Dyeing and finishing of cotton fabrics	195	46,904	162.2	50.8	2.12	1.00	2.91
Batting, padding, etc	80	4,168	161.4	49.5	4.04	1.44	2.74
Processed cotton waste	45	2,054	173.0	35.7	2.48	.93	2.30
Wool manufactures	730	189,212	148.8	56.7	2.96	1.10	2.13
Wool combing—commission	11	3,252	157.5	57.9	1.68	.93	2.41
Woolen yarn	35	2,397	155.2	55.1	2.85	1.02	2.02
Worsted yarn	64	15,478	142.1	50.9	3.09	.83	2.72
Woolen woven goods	284	58,109	152.8	55.5	2.59	1.04	2.02
Worsted woven goods	147	68,443	145.9	57.7	3.24	1.04	2.36
Woolen and worsted dyeing and finishing	34	1,743	154.8	56.9	2.50	1.31	1.33

See footnotes at end of table.

[1] Abstract of article by A. F. Hinrichs and Arthur F. Beal, of the Bureau of Labor Statistics, in the Monthly Labor Review for June 1940.

[2] Both the quantity purchased and that generated in the reporting establishments.

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TABLE 1.—*Averages per man-hour, by industries, for selected establishments in 105 industries for 1937*—Continued

Industry	Establishments	Wage earners [1]	Hours per wage earner per month	Averages per wage-earner man-hour			
				Wage earnings	Value of products	Value added	Electric energy used
Textile mill products—Continued.							
Wool manufactures—Continued.				*Cents*			*Kwh.*
Recovered wool fiber	52	2,772	168.4	49.9	$3.50	$1.00	2.20
Felt goods	35	3,349	176.6	56.1	3.62	1.35	2.91
Woolen and worsted carpet yarn	12	2,385	150.1	61.8	3.68	1.13	2.03
Wool carpets and rugs	47	30,496	143.8	60.6	3.07	1.49	1.50
Paper-fiber and grass carpets and rugs	9	788	173.5	46.8	1.92	1.18	1.21
Rayon manufactures	488	81,494	151.0	48.5	2.02	.83	2.33
Rayon throwing—commission	22	1,770	154.6	33.7	.68	.54	3.54
Rayon yarn and thread (regular throwing)	38	4,847	149.9	37.0	2.15	.71	3.21
Rayon broad-woven goods—commission [2]	50	2,610	153.7	38.9	.65	.55	1.21
Rayon broad-woven goods—regular [2]	144	50,497	150.8	47.0	2.24	.78	2.55
Rayon narrow fabrics	93	5,001	162.8	43.5	1.69	.93	.69
Dyeing, finishing of rayon (and silk) yarn	31	1,100	146.8	56.5	1.64	1.20	1.64
Dyeing, finishing of rayon and silk fabric	110	15,669	147.7	61.4	1.78	1.07	2.01
Silk manufactures	319	40,714	151.2	41.2	1.51	.67	2.33
Silk throwing—commission	75	12,072	142.1	35.1	.68	.53	3.51
Silk yarn and thread (regular throwing)	41	9,452	154.6	41.0	2.07	.67	2.73
Silk broad-woven goods—commission [2]	43	2,179	153.5	38.5	.60	.51	1.55
Silk broad-woven goods—regular [2]	97	12,752	157.0	43.7	1.90	.70	1.67
Silk narrow fabrics	63	4,259	150.7	51.5	1.67	1.00	.73
Knit goods	1,223	196,946	151.3	47.8	1.55	.78	.74
Hosiery	507	125,958	150.4	50.8	1.34	.74	.67
Knitted cloth	135	9,907	159.0	48.0	3.01	1.06	1.96
Knitted gloves and mittens	15	3,182	139.3	39.9	1.09	.65	.31
Knitted outerwear—contract factories	108	2,241	146.9	43.2	.91	.77	.38
Knitted outerwear—regular factories	316	19,630	154.4	45.0	2.14	.93	.41
Knitted underwear	142	36,028	151.8	39.5	1.62	.77	.84
Apparel (men's clothing)	1,885	222,163	139.2	48.8	1.90	.86	.23
Work clothing, including work shirts	376	47,325	142.5	35.7	1.80	.63	.26
Trousers (semidress) and washable service apparel	119	9,712	147.7	33.9	1.61	.62	.21
Leather and sheep-lined clothing	45	2,948	138.1	56.5	3.11	.99	.30
Shirts (except work shirts), collars, nightwear:							
Contract factories	65	6,391	131.4	33.1	.49	.44	.16
Regular factories	200	40,905	146.0	36.5	1.61	.73	.23
Men's underwear—contract factories	9	1,424	133.7	27.3	.40	.33	.13
Men's underwear—regular factories	36	6,410	149.8	28.7	1.34	.45	.19
Men's furnishing goods—contract factories	17	456	132.2	48.2	.76	.69	.17
Men's furnishing goods—regular factories	147	7,031	150.3	45.9	2.63	1.06	.22
Men's and boys' clothing not elsewhere classified:							
Contract sponging, examining, etc., of material [3]	35	725	168.6	85.6	1.90	1.82	.62
Contract factories	401	22,145	123.3	60.8	.84	.78	.18
Regular factories	435	76,691	135.5	66.3	2.53	1.19	.24
Chemical industries	**3,246**	**489,439**	**162.1**	**68.2**	**6.19**	**2.14**	**14.15**
Chemical industries other than rubber	2,883	363,656	167.1	66.1	6.89	2.30	16.36
Paper	573	104,112	177.8	60.2	4.06	1.65	24.75
Pulp	173	25,680	175.9	58.4	4.31	1.65	45.68
Rayon and allied products	33	55,098	160.7	61.4	2.40	1.64	11.22
Drugs and medicines	548	21,336	168.6	54.1	7.22	5.25	.95
Insecticides and fungicides	265	2,821	171.1	52.7	8.01	4.05	1.47
Perfumes, cosmetics, and other toilet preparations	266	9,242	167.5	46.5	6.75	4.00	.48
Soap	165	13,764	166.4	68.6	10.84	4.17	3.78
Cleaning and polishing preparations	165	2,852	175.7	56.1	8.62	5.99	1.52

See footnotes at end of table.

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TABLE 1.—*Averages per man-hour, by industries, for selected establishments in 105 industries for 1937*—Continued

Industry	Establishments	Wage earners [1]	Hours per wage earner per month	Averages per wage-earner man-hour			
				Wage earnings	Value of products	Value added	Electric energy used
Chemical industries other than rubber—Con.				*Cents*			*Kwh.*
Blackings, stains, and dressings	75	1,336	162.3	49.5	$6.47	$3.81	.51
Petroleum refining	292	79,622	155.9	90.4	16.19	3.10	16.15
Leather tanning—contract factories	51	2,190	156.5	62.1	1.51	1.02	1.28
Leather tanning—regular factories	277	45,603	164.4	61.6	4.10	1.15	2.06
Rubber industries	363	125,783	147.6	75.1	3.88	1.61	6.90
Rubber boots and shoes	12	18,356	153.0	60.6	1.91	1.10	2.07
Rubber tires and inner tubes	46	63,290	134.8	94.5	5.63	2.04	10.73
Other rubber goods	305	44,137	163.8	57.9	2.58	1.31	4.26
Stone, clay, glass	1,523	187,865	164.2	59.9	2.17	1.41	9.66
Cement	148	24,808	165.8	64.0	3.47	2.16	48.85
Lime	158	8,797	179.9	45.7	1.66	1.03	4.75
Clay products, other than pottery	803	46,769	170.1	49.3	1.38	.96	2.05
Pottery and porcelain	189	28,264	169.7	57.3	1.46	1.06	1.26
Nonclay refractories	36	5,230	150.8	62.9	2.58	1.47	3.77
Glass	189	73,997	156.8	68.4	2.60	1.64	5.53
Nonferrous metal industries	1,742	153,236	172.8	66.7	6.60	1.68	7.51
Aluminum products	115	23,337	165.9	67.6	3.51	1.46	4.29
Copper smelting and refining	23	14,514	194.6	61.8	21.11	2.07	19.84
Lead smelting and refining	14	4,036	183.1	62.6	28.60	2.20	13.05
Zinc smelting and refining	25	11,265	170.5	72.8	5.02	1.74	27.51
Scrap smelting and refining	78	4,526	175.6	56.9	10.77	1.65	3.26
Nonferrous-metal alloys and products, except aluminum	680	77,694	170.8	68.5	3.88	1.64	4.46
Sheet-metal work, not specifically classified	807	17,864	171.5	61.9	3.49	1.57	.67
Iron and steel and their products, including machinery	8,409	1,822,089	165.2	75.9	3.98	1.68	4.48
Iron and steel	463	495,795	166.8	81.4	4.00	1.62	10.53
Blast-furnace products	83	22,580	183.4	75.3	13.44	2.55	14.15
Steel-works and rolling-mill products	380	473,215	166.0	81.7	3.50	1.57	10.34
Iron-steel products except machinery	1,498	196,087	164.4	61.3	3.22	1.41	2.31
Cast-iron pipe and fittings	61	15,909	158.9	54.2	1.86	1.08	1.88
Wrought pipe	47	13,635	149.3	76.6	4.49	1.78	4.28
Plumbers' supplies, other than pipe, etc	171	23,417	165.3	61.5	2.26	1.29	2.26
Steel barrels, kegs, and drums	49	6,140	165.6	59.4	3.88	1.45	1.73
Tin cans	192	32,248	168.3	56.1	5.42	1.72	1.57
Stamped metal products: enameling, etc	540	54,840	166.9	59.9	2.39	1.18	1.86
Wire drawn from purchased rods	84	24,052	160.9	71.7	3.85	1.73	4.92
Wirework not elsewhere classified	354	25,846	167.6	58.5	2.56	1.33	1.39
Electrical machinery	1,212	289,850	165.5	68.1	3.14	1.84	2.61
Electrical machinery, apparatus, supplies	1,088	243,513	167.4	69.9	3.16	1.92	2.87
Radios, radio tubes, phonographs	124	46,337	155.4	58.2	3.02	1.36	1.16
Machinery other than electrical	4,429	371,187	179.2	70.4	2.90	1.73	1.80
Machine tools	249	45,875	193.9	71.3	2.37	1.66	1.32
Machine-tool accessories	586	28,977	181.7	79.4	2.28	1.63	1.36
Machinery, not elsewhere classified	1,708	126,663	184.0	67.5	2.99	1.82	1.50
Machine-shop products	1,192	89,519	173.3	69.1	2.94	1.74	2.27
Machine-repair shops	391	3,787	181.1	66.5	1.97	1.31	.92
Engines, turbines, and water wheels	107	28,723	174.8	74.5	2.77	1.54	1.95
Refrigerators and ice-making apparatus	196	47,643	164.7	72.6	3.68	1.71	2.58
Motor-vehicle industries	807	469,170	152.7	86.6	5.89	1.73	2.22
Motor-vehicle bodies and motor-vehicle parts	689	278,847	154.7	83.7	3.96	1.53	2.22
Bodies	336	84,597	152.4	88.4	4.87	1.54	1.81
Parts and accessories	255	189,071	155.2	82.3	3.59	1.53	2.43
Trailers	98	5,179	170.8	61.0	2.88	1.22	1.11
Motor vehicles	118	190,323	149.9	90.9	8.81	2.05	2.21

[1] Average for the year.
[2] The broad-woven goods industry, as classified, has been tabulated in two branches, "commission" and "regular."
[3] A branch of the contract-factory industry.

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Averages by States, for the same items as shown in table 1 by industries, are presented in table 2.

TABLE 2.—*Averages per man-hour, by States, based upon selected establishments in 105 industries, 1937*

Geographic district and State	Establishments	Wage earners [1]	Hours per wage earner per month	Averages per wage-earner man-hour			
				Wage earnings	Value of products	Value added	Electric energy used
				Cents			*Kwh.*
United States (105 selected industries)	24,411	4,161,934	161.1	64.8	$4.17	$1.53	5.44
The North (First 4 districts below)	17,899	3,147,826	161.6	69.1	4.10	1.59	4.87
The South (Next 3 districts)	4,013	860,698	158.4	47.8	3.73	1.20	6.30
The West (Last 2 districts)	2,499	153,410	166.8	69.7	7.86	2.19	12.17
New England	2,830	503,010	160.7	58.8	2.71	1.24	4.28
Middle Atlantic	7,225	1,082,481	161.2	66.3	3.81	1.55	4.97
East North Central	6,278	1,411,036	161.6	75.6	4.45	1.72	4.93
West North Central	1,566	151,299	166.4	61.8	7.38	1.81	5.47
Upper South	2,289	486,305	156.9	49.8	3.68	1.27	5.42
Lower South	1,092	308,840	158.4	41.4	2.45	.91	6.66
Southwest	632	65,553	169.5	62.0	9.74	2.03	10.77
Mountain	452	32,724	180.7	63.1	8.76	2.10	16.50
Pacific	2,047	120,686	163.0	71.7	7.59	2.22	10.87
New England:							
Maine	160	37,404	163.4	53.7	2.75	1.13	14.05
New Hampshire	149	22,601	163.9	50.9	2.43	.99	9.61
Vermont	80	9,371	167.4	54.4	2.89	1.22	4.24
Massachusetts	1,530	243,987	157.9	59.8	2.81	1.26	3.34
Rhode Island	335	72,400	157.2	55.9	2.51	1.11	2.85
Connecticut	576	117,247	166.8	61.9	2.67	1.37	2.92
Middle Atlantic:							
New York	3,027	303,829	163.5	64.6	4.21	1.68	5.09
New Jersey	1,385	208,358	160.6	64.4	4.42	1.66	3.76
Pennsylvania	2,813	570,294	160.2	67.9	3.36	1.43	5.35
East North Central:							
Michigan	1,148	451,241	155.1	84.9	4.86	1.73	3.69
Ohio	1,979	419,994	160.6	75.7	4.03	1.70	5.82
Indiana	659	182,236	166.4	71.1	4.37	1.79	6.46
Illinois	1,753	250,992	167.4	67.7	4.75	1.75	4.28
Wisconsin	739	106,573	171.1	65.7	3.88	1.57	5.37
West North Central:							
Minnesota	403	33,751	166.3	64.1	7.04	1.86	6.46
Iowa	210	21,145	169.7	58.7	7.35	1.64	5.34
Missouri	600	68,015	162.2	62.0	6.07	1.83	4.12
North Dakota	17	610	201.5	54.3	11.47	1.75	3.94
South Dakota	21	2,050	175.8	59.6	9.49	1.24	4.52
Nebraska	115	8,143	175.5	59.7	10.60	1.75	6.23
Kansas	200	17,585	172.3	62.3	10.85	1.88	8.47
Upper South:							
Delaware	67	9,192	169.9	60.5	3.06	1.27	4.38
Maryland	482	78,898	164.7	60.6	4.34	1.50	6.28
District of Columbia	17	515	180.7	[2]	[2]	[2]	[2]
West Virginia	186	53,202	158.6	67.9	3.00	1.35	7.01
Virginia	308	61,824	157.5	46.5	5.01	1.59	7.26
North Carolina	626	181,839	151.1	41.6	3.34	1.06	4.15
Kentucky	254	34,685	152.7	55.0	4.88	1.51	4.15
Tennessee	349	66,150	161.6	42.5	2.61	1.08	5.50
Lower South:							
South Carolina	222	97,678	155.6	39.8	1.67	.71	6.13
Georgia	297	92,267	154.1	39.6	2.26	.82	5.19
Florida	99	11,736	170.2	38.0	2.25	1.01	5.39
Alabama	220	72,564	161.4	44.7	2.47	1.04	7.37
Mississippi	45	9,915	160.9	28.7	1.64	.63	4.71
Louisiana	149	20,221	171.2	[2]	[2]	[2]	[2]
Arkansas	60	4,459	166.3	[2]	[2]	[2]	[2]

See footnotes at end of table.

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TABLE 2.—*Averages per man-hour, by States, based upon selected establishments in 105 industries, 1937*—Continued

Industry	Establishments	Wage earners [1]	Hours per wage earner per month	Averages per wage-earner man-hour			
				Wage earnings	Value of products	Value added	Electric energy used
Southwest:				*Cents*			*Kwh.*
Oklahoma	143	13,520	167.5	65.2	$8.85	$2.15	10.72
Texas	489	52,033	170.0	(2)	(2)	(2)	(2)
Mountain:							
Montana	71	5,577	183.3	68.6	10.68	2.16	43.08
Idaho	44	1,686	202.3	57.4	9.70	1.94	28.69
Wyoming	27	1,986	167.2	79.4	9.86	2.90	14.64
Colorado	170	13,525	171.7	64.3	5.34	1.72	6.72
Utah	83	6,237	182.4	55.9	11.17	1.90	10.20
Nevada	13	506	214.9	69.4	12.65	7.01	3.99
New Mexico	13	197	178.7	43.8	7.38	1.61	4.52
Arizona	31	3,010	203.5	57.4	12.27	2.57	18.00
Pacific:							
Washington	328	18,866	164.0	71.2	7.16	2.32	26.57
Oregon	205	10,215	160.1	64.5	5.23	1.79	14.68
California	1,514	91,605	163.1	72.5	7.93	2.25	7.21

[1] Average for the year.
[2] Man-hour averages for four States—Arkansas, Louisiana, Texas, and the District of Columbia—are omitted here as being not sufficiently representative in each case of manufacturing in all industries in the State.

The difference in annual earnings between the industries and establishments covered by the man-hour sample and by the entire census is small enough to give assurance that the average hourly earnings in all manufacturing in the United States were in fact close to the figure of 64.8 cents. In individual States, however, the differences in annual earnings are so large as to invalidate a comparison of hourly earnings between States. In the case of 4 States—Arkansas, Louisiana, Texas, and the District of Columbia—the average hourly earnings for the establishments reporting man-hours are probably not representative of all manfacturing in these States. In four additional States—North Dakota, Wyoming, New Mexico, and Arizona—averages for the man-hour sample are shown, but they should be used with caution. In each of the latter group of States the total number of wage earners engaged in manufacturing is small.

The reason for the differences between the man-hour establishments and the grand total in each of these eight States lies in the fact that, in every case except the District of Columbia, the man-hour sample included an important high-wage industry of the State (frequently petroleum refining), or omitted an important low-wage industry of the State (generally lumber). In either event, therefore, the omitted industries would, in general, naturally have wages below the average for the entire census, thereby causing the average wage of the man-hour sample to be above the average for the entire census. For the District of Columbia, the reverse was the situation; the important industries omitted from the sample paid high wages, thereby causing the average wage for the sample to be below the average for the entire census.

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Frequency of Pay Days in American Industry[1]

The frequency of pay periods in private industry in the United States is governed in some cases by State laws regulating the payment of wages and salaries, in others by the general practice of the industry concerned, and in still others solely by the policy of the individual employer.

Available information, covering 137,735 reporting establishments in manufacturing and certain nonmanufacturing industries employing 7,038,816 workers in the month of August 1938, revealed that the weekly pay period was the most common in private employment, notwithstanding the fact that legislation enacted by the majority of States gives employers the privilege of semimonthly payments. Of the total number of workers covered, more than 66 percent received their wages or salaries each week. Nearly 24 percent were paid every half month, approximately 8 percent were paid on a biweekly basis, and those paid monthly, every 10 days, or for some other period, represented less than 3 percent of the total.

The industries covered in compiling these data were those for which the Bureau of Labor Statistics publishes monthly employment statistics, namely, the 92 individual manufacturing industries including steam and electric railroad repair shops, which were later discontinued as manufacturing industries, the mining industries, public utilities, wholesale and retail trade, personal and financial service industries, and private building construction. The employment figures shown for the manufacturing, mining, laundry, and dyeing and cleaning industries relate to wage earners only, except for crude petroleum producing in the mining group which includes also the clerical field force. In public utilities both wage earners and salaried employees are covered, and in building construction wage earners of all classes are included. Both office and service personnel are covered for hotels. Employment in the other three industries shown consists largely of salaried workers.

Length of Pay Periods of Employees, by States

The effect of regulatory legislation on the payment of wages and salaries each week can be seen in the figures for the New England States shown in the table on page 366. In these States employers, with few exceptions, are required by law to pay their workers by the week. For the region as a whole, 98.2 percent of the employees were paid by the week. By States, the range was from 99.1 percent in Massachusetts to 95.6 percent in Vermont.

The reports from firms in the Middle Atlantic area, which covered the largest number of workers, showed no such consistency, for while New York firms paid 91.0 percent of their employees by the week, Pennsylvania firms paid only 41.4 percent by the week and a slightly greater proportion, 45.4 percent, semimonthly. Employers in New Jersey paid 81.5 percent of their workers by the week.

[1] Abstract of article in the Monthly Labor Review for August 1939, prepared by Alice Olenin, of the Bureau of Labor Statistics.

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Employees, by States, in reporting manufacturing and nonmanufacturing establishments in August 1938, and percentage distribution by length of pay period

State and geographical division	Total number of employees	All periods	Percent of employees whose pay period covered—					
			1 week	2 weeks	Half month	1 month	10 days	Other periods
United States	7,038,816	100.0	66.3	7.6	23.8	1.8	0.2	0.3
New England	788,493	100.0	98.2	.1	1.4	.3	.....	(1)
Maine	56,450	100.0	98.9	.....	.6	.3	.....	.2
New Hampshire	40,993	100.0	97.5	(2)	[3].6	1.8	.....	.1
Vermont	16,845	100.0	95.6	(2)	[3]4.1	.1	.....	.2
Massachusetts	407,108	100.0	99.1	.....	.7	.2	.....	(1)
Rhode Island	78,225	100.0	98.9	.....	1.0	.1	(4)	(4)
Connecticut	188,872	100.0	96.2	.3	3.4	.1	.....	(1)
Middle Atlantic	1,956,965	100.0	70.8	6.4	20.2	2.2	.3	.1
New York	886,928	100.0	91.0	1.3	3.7	3.9	.1	(1)
New Jersey	338,185	100.0	81.5	9.2	9.1	.2	(4)	(1)
Pennsylvania	731,852	100.0	41.4	11.3	45.4	1.0	.7	.2
East North Central	1,862,178	100.0	61.0	13.4	24.2	.9	.3	.2
Ohio	510,810	100.0	59.6	13.3	26.1	.6	.2	.2
Indiana	238,851	100.0	58.7	7.8	32.6	.3	.3	.3
Illinois	540,064	100.0	64.5	9.9	24.9	.4	.2	.1
Michigan	350,171	100.0	61.8	18.9	16.1	2.3	.7	.2
Wisconsin	222,282	100.0	57.0	19.6	21.9	1.2	.....	.3
West North Central	434,745	100.0	57.5	6.5	33.1	1.8	.1	1.0
Minnesota	103,997	100.0	49.0	10.4	36.9	2.9	(4)	.8
Iowa	64,262	100.0	60.3	3.7	33.1	1.5	(4)	1.4
Missouri	167,897	100.0	64.3	7.2	26.9	1.1	(4)	.5
North Dakota	6,140	100.0	37.9	5.1	45.0	4.3	.....	7.7
South Dakota	8,964	100.0	37.6	8.1	47.4	3.3	.....	3.6
Nebraska	30,575	100.0	54.4	2.0	40.3	1.7	(4)	1.6
Kansas	52,403	100.0	57.1	2.2	37.5	2.1	(4)	1.1
South Atlantic	814,649	100.0	68.1	7.5	22.3	1.8	.1	.2
Delaware	16,786	100.0	83.7	7.9	6.8	1.4	.....	.2
Maryland	134,994	100.0	77.6	14.2	7.4	.8	(4)	(1)
District of Columbia	42,311	100.0	83.0	(2)	[3]16.3	.7	.....	(4)
Virginia	110,506	100.0	68.4	10.1	20.2	1.1	(4)	.2
West Virginia	131,280	100.0	14.7	3.7	75.4	6.1	(4)	.1
North Carolina	157,251	100.0	77.2	11.0	10.5	1.1	(1)	.2
South Carolina	67,503	100.0	93.0	1.7	4.1	1.0	.....	.2
Georgia	110,658	100.0	82.1	5.0	11.6	.8	(4)	.5
Florida	42,579	100.0	73.4	.6	23.6	1.7	.4	.3
East South Central	278,565	100.0	56.3	11.6	30.1	1.4	.2	.4
Kentucky	80,095	100.0	44.8	8.1	45.8	1.1	(4)	.2
Tennessee	100,094	100.0	68.2	14.5	16.1	.7	(4)	.5
Alabama	79,392	100.0	52.8	10.9	33.4	2.4	(4)	.5
Mississippi	18,608	100.0	57.8	13.5	24.8	3.1	(4)	.8
West South Central	247,942	100.0	49.5	3.5	42.1	4.0	(1)	.9
Arkansas	26,327	100.0	52.3	5.5	32.2	9.4	.....	.6
Louisiana	55,286	100.0	61.6	7.1	29.2	1.7	.2	.2
Oklahoma	42,895	100.0	40.7	2.5	51.3	4.2	(4)	1.3
Texas	123,434	100.0	46.6	1.8	46.8	3.8	.....	1.0
Mountain	128,579	100.0	36.2	1.6	55.8	4.9	(1)	1.5
Montana	15,455	100.0	49.1	.3	43.9	4.8	.....	1.9
Idaho	11,159	100.0	31.9	4.1	44.0	17.7	.....	2.3
Wyoming	9,278	100.0	20.9	.3	73.0	4.4	.....	1.4
Colorado	44,990	100.0	43.7	1.7	49.1	4.2	.2	1.1
New Mexico	7,306	100.0	25.7	(3)	[3]67.6	4.2	.....	2.5
Arizona	13,431	100.0	24.1	1.0	71.0	2.4	.....	1.5
Utah	23,689	100.0	33.1	2.3	60.7	2.6	(4)	1.3
Nevada	3,271	100.0	24.9	.5	72.0	2.5	.....	.1
Pacific	526,269	100.0	46.1	4.7	44.3	4.2	.2	.5
Washington	89,963	100.0	35.5	2.4	52.1	8.3	.7	1.0
Oregon	52,191	100.0	32.3	3.7	52.6	10.4	.2	.8
California	384,115	100.0	50.5	5.3	41.3	2.5	(1)	.4

[1] Less than a twentieth of 1 percent.
[2] Combined with semimonthly data. (See footnote 3.)
[3] The figures from which this percentage has been computed include a number of employees paid on a biweekly basis. These data were combined in order to avoid disclosing information for less than 3 reporting establishments.
[4] Data reported are withheld to avoid disclosing information for less than 3 establishments. They are, however, included in the United States totals and where possible in the totals of the geographic area.

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Over two-thirds (68.1 percent) of the employees in the Southern States along the Atlantic Seaboard were paid by the week. In the individual States in this region, however, the proportions differed considerably, ranging from 93.0 percent in South Carolina to 14.7 percent in West Virginia, the semimonthly pay period taking precedence in the latter State. In fact, of all the States, West Virginia had the largest percentage of workers (75.4 percent) who were paid by the half month; this was due primarily to the policy of the bituminous-coal mining companies, although the majority of the wage earners in the manufacturing industries in this State were also paid semimonthly.

While the major portion of the workers in the vast central areas from the northern boundary to the Gulf of Mexico received their remuneration weekly, semimonthly pay days were quite common, predominating over the 1-week periods in five of the States (North and South Dakota, Kentucky, Oklahoma, and Texas). The Dakotas also registered the largest percentages of employees who were paid for some "other" length of pay period than the five more usual methods.

More than half of the workers covered by reports from the Mountain States were paid semimonthly, with Montana the only State in this region in which the weekly pay envelope was slightly more prevalent.

In the Pacific States the weekly and semimonthly pay days were almost evenly divided, the weekly period leading by about 2 percent. The individual Pacific States did not, however, show the same ratio. In California 50.5 percent of the employees were paid by the week as against 41.3 semimonthly, while in Washington and Oregon 52.1 and 52.6 percent, respectively, of the workers received semimonthly pay.

Annual Wage and Guaranteed Employment Plans[1]

Plans for guaranteeing income or employment on an annual basis are rare in the United States. This article describes the plans in effect in three large companies at the end of 1938. The companies are the Procter & Gamble Co., Cincinnati, soap manufacturers, employing about 3,000 workers; Nunn-Bush Shoe Co., Milwaukee, manufacturers of men's shoes, employing about 1,000 workers; and George A. Hormel & Co., Austin, Minn., a meat-packing firm employing about 3,000 persons.

In addition, The Columbia Conserve Co. might be included in the number of companies having annual wage plans, as all its regular employees are on a salary basis 52 weeks a year. However, as the employees own a majority of the stock of this company and manage its affairs, the salary payments are a part of its general profit-sharing plan, and for this reason it is not included in the following discussion of annual wage plans.

[1] From the Monthly Labor Review for July 1938. An article in the August 1940 issue, entitled "Annual Wage and Guaranteed Employment Plans in Union Agreements," also describes the Nunn-Bush and Hormel Co. plans, as well as a few other plans of similar character provided for in union agreements. The number is relatively small, annual wage or guaranteed employment provisions being contained in only 14 of the several thousand union agreements on file in the Bureau of Labor Statistics and affecting only some 5,000 employees.

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The plans of the three companies cited above are of two general types—those which guarantee employment for a specified minimum period, and those which guarantee annual incomes or regular weekly pay regardless of fluctuations in production.

Proctor & Gamble Guaranty of Regular Employment

The Procter & Gamble Co. guarantees employment rather than wages. All regular employees having at least 2 years' service with this company are assured not less than 48 weeks' employment in each calendar year. The week's vacation with pay is included in the guaranteed employment. Time lost by reason of holiday closing, sickness, or voluntary absence is deductible from the guaranty. The Procter & Gamble Co. plan has been in effect, with certain modifications, since 1923. The most important modifications have been with reference to the weekly hours of work to which the employees are entitled by their 48-week guaranty. The plan simply specifies that regular employment shall be understood to mean employment for not less than the "standard" hour week established from time to time by the company. When the plan was first established the workweek was set at 50 hours. In 1932 it was reduced to 45 hours, and in 1933 the standard week was reduced to a 40-hour, 5-day week. Another modification in the Procter & Gamble plan was the gradual extension of the length-of-service requirement for participation from 6 months to the 2 years now in effect.

Nunn-Bush Yearly Salary

The Nunn-Bush plan, inaugurated in 1935, provides for 52 weekly pay checks based on two factors: (1) The estimated number of working hours per year during which the factory will operate; (2) the proportion of labor costs to wholesale value of shoes sold.

Each individual's annual salary is initially determined by multiplying his hourly rate by the number of hours it is estimated the factory will operate. At the present time this is 1,920 hours—based on 40 hours a week minus legal holidays and customary vacations. The yearly salary is then divided into 52 weekly payments of equal amounts, with the exception that absences due to personal reasons are deducted and overtime is paid for. Weekly pay rolls are taken from the group salary fund set up by the company at the beginning of each year. This fund is the agreed-upon percentage of the wholesale value of the estimated volume of business. The percentage represents the ratio of labor costs to wholesale prices, as determined from experience over a number of years. If the total weekly salaries exceed this percentage of wholesale value, and it is apparent that the fund will not be automatically balanced before the end of the year, the weekly payments are revised downward. Any surplus after the 52 weekly payments are paid is distributed on a pro-rata basis as additional earned compensation.

All workers on the permanent employment list when the plan went into effect participate. Temporary employees taken on during busy seasons do not participate until they become eligible for permanent employment on a seniority basis. These so-called class B or temporary workers constituted about 5 percent of the working force during 1937.

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The chief merits of this plan, as cited by the sponsors, are that it gives security of employment and regularity of pay, although no guaranteed amount for the year. It allows for flexibility of prices, with automatic adjustments of wage levels. As prices rise, workers' compensation rises; and as prices fall, wages are automatically reduced.

George A. Hormel & Co. Straight-Time Plan

Under the Hormel straight-time arrangement the year's prospective volume of business for each department is estimated at the beginning of each year. The labor cost for this amount of work is budgeted into 52 weekly allotments for the number of workers which past experience has indicated would be required to do the work. Yearly working time is based on a 40-hour week, with vacation and sick leave allowed. Absences for other causes are deducted.

If at the end of the year a department has produced less than its budgeted volume, the members of the department individually and collectively become indebted to the company for producing that much work at the first opportunity. If the production exceeds the budgeted volume, bonuses are paid. These bonuses are based on what it would have cost if extra employees had been added to the staff.

If members of the department are absent, the company allots the equivalent of the absent workers' pay to the department in either men or money. In turn, a majority in the department determines whether a replacement man shall be employed or whether the absent person's work will be absorbed by the gang. If the latter is decided, a majority vote in the department determines how the replacement money will be distributed. The management, however, reserves the right to insist on replacements if tonnage production falls below the business requirements.

The Hormel straight-time salary plan has been endorsed by the local union of the United Packing House Workers (C. I. O.) with which the company has an agreement. Acceptance of the plan, however, is on a department basis, and any department or the company may cancel the plan on 30 days' notice at the end of the fiscal year. At the present time 90 percent of the company's 3,000 employees are under the plan. The union is of primary importance in the operation of the plan, particularly with respect to the establishment of the work budgets for a given number of persons, assignment of work within the department, additions or transfers of persons when adjustments in work budget are made, allocation of bonuses, and settlement of misunderstandings and grievances arising under the plan.

A straight-salary plan was first inaugurated by Mr. Hormel in one department in 1931. It was gradually extended until, in July 1933, it included the entire plant. Shortly thereafter the plant became unionized and the union demanded a return to hourly wages. Several months later, however, the men asked for restoration of the straight-salary basis and gradually it has been reinstated in one department after another. This experience proves, the company says, "that the plan should never be put in effect with any group of employees until they have understood it so well that they are seeking it."

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Wage and Hour Regulation

Bureau of Labor Statistics Bulletin No. 694
Handbook of Labor Statistics: 1941 edition

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Aftermath of the NRA

Effects of NRA on Later Legislation

After the code provisions established under the National Industrial Recovery Act were held unconstitutional by the United States Supreme Court in the *Schechter case*[1] (decided May 27, 1935), the President, by Executive order of December 21, 1935, formally terminated the NRA and transferred certain of its functions to other branches of the Government. However, certain of the basic principles of the N. I. R. A. continued to be the subject of very active public and congressional discussion and in a number of cases these were incorporated in new legislation. Thus, the Bituminous Coal Act of 1937 (see p. 418) was a direct application to a single industry of the "fair trade practice" idea of the N. I. R. A.; and the National Industrial Relations Act of 1935; with its guaranty to workers of the right of collective bargaining, was, in essence, an expansion of section 7a of the N. I. R. A. Furthermore, the minimum-wage and maximum-hour concept of the N. I. R. A. was carried over into the Public Contracts Act of 1936 governing labor conditions on public works (see p. 387) and into the Fair Labor Standards Act of 1938, applicable to industry generally (see p. 395).

Also, it is to be noted that the labor standards established in various industries under the NRA codes were not necessarily discontinued when the NRA itself was terminated. In many cases the code labor standards were continued, and in two States—Wisconsin and New Jersey—industrial code standards were favored by State legislation. These developments are briefly discussed below and summaries given of the accomplishments of the NRA and the resulting effects on wages and hours.

Accomplishments of NRA[2]

Following the termination of the NRA in 1935 the President created a special committee to study and report on the accomplishments of that agency. This committee, known as the President's Committee of Industrial Analysis, was appointed by authority of an Executive order of April 1, 1936. Regarding the effects of the NRA upon labor, the committee concluded that approximately 2 million workers secured employment under the National Industrial Recovery Act.[3] Total employment increased by 2,462,000, or 6.8 percent, from June to October 1933, when the President's Reemployment Agreement was op-

[1] See 1936 edition of Handbook of Labor Statistics (p. 563) for account of this decision.

[2] Summary of article, Report of President's Committee on the NRA, in Monthly Labor Review for April 1937.

[3] United States Congress, House of Representatives, Document No. 158 (75th Cong., 1st sess.): The National Recovery Administration; Message of the President of the United States transmitting a report on the operation of the National Recovery Administration, which has been prepared by those members of the Committee of Industrial Analysis who have no official relationship to the Government. Washington, 1937.

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erative. The percent of increase in the industries operating under the agreement was estimated as considerably higher—11.4. Job gains under codes were attributed to the spreading of work rather than to increased industrial activity. Hours were shortened by 12.7 percent. The committee believed that the shorter hours were substantially maintained during the subsequent code period, up to the time they became inoperative, but little further reemployment was observable, after the first general extension, that could be attributed to the hours provisions. The report stated that shortened hours in some cases led directly to increased man-hour output, a tendency that would reduce the work-spreading effect but also preclude increasing manufacturing costs.

The 40-hour week was the standard in the great majority of the codes. Experience proved that provisions allowing for flexibility, by permitting averaging of hours over given periods of weeks or months, minimized the amount of reemployment possible, and were extremely difficult to enforce. Where definite tolerances with overtime pay were provided, the situation was found to be somewhat better as regards compliance. Nevertheless, the establishment of a flat maximum did not work undue hardship, for in industries applying this method, variation in hours below the maximum served to stabilize competitive conditions. Experience indicated that seasonality in industries did not constitute proof that tolerances were needed, as in some instances these were the particular industries which operated successfully on fixed-hours schedules.

Total wage distributions increased markedly under the NRA, but an indeterminate proportion of this rise was offset by increased prices. While the average wage increase was not large, substantial increases for those with the lowest wages resulted from the minimum rates established by codes. The lowest-paid groups received more, both on an hourly and on a weekly basis. Among the higher-paid groups, some merely maintained their weekly earnings and others actually suffered a decrease. As between industries the greatest proportionate rise in earnings was in those where wages had been lowest, and in this way inequalities were reduced.

Differentials in wages based on geographic area were large or small, depending upon the amount of regional competition and the bargaining power of labor in its efforts to secure uniform rates. Even taking into account the differentials introduced under many codes, the NRA rates agreed upon for most southern plants tended to reduce the previously existing geographic differentials between North and South.

Abuses arising from subminimal rates for special groups, such as learners, became apparent to all groups as code making progressed.

The child-labor regulations under the NRA, barring young persons of given ages from employment, according as the industries were hazardous or otherwise, were regarded by the committee as one of the major pieces of social progress effected under the law. It was also believed that by establishing age limits below which minors could not be employed, administration of the wages and hours provisions was facilitated, since children were shut off from the possibility of undercutting wages for adults. The prohibition of child labor proved practicable not only as social legislation but also in factory operation.

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Fundamentally the provision in section 7 (a) of the National Industrial Recovery Act, dealing with the right of labor to organize for collective bargaining, was believed by the committee to have been of greater significance than wage and hour regulation in its effect on labor relations in American industry. This section "definitely formulated for labor generally what had been no more than an imperfectly expressed part of public policy in the United States."

Voluntary compliance was in the final analysis the crux of success, whether brought about by the pressure of public opinion, or from within the industry, or from organized employee groups.

Extent of Voluntary Continuance of NRA Labor Standards

Report of Robert Committee[4]

In an official study of the extent to which the labor standards of NRA codes were still being observed in the latter part of 1935—i. e., 6 months after the formal termination of the NRA—it was found that such standards had been continued in a considerable proportion of the industries surveyed, notably in cotton and wool textiles, iron and steel, and can manufacturing.

The study was undertaken upon a request made by the President of the Acting Administrator of the National Recovery Administration, on June 17, 1935. The President directed that a committee be appointed to obtain and report "accurate information concerning the extent to which changes occur in the maintenance of labor standards for fair-practice provisions of codes of fair competition, following the abolition of such codes." The Committee was organized in June, reconstituted in August, and instructed to make a report by the end of 1935. W. P. Robert was chairman. Others serving were Ernest G. Draper, Assistant Secretary of Commerce; Isador Lubin, Commissioner of Labor Statistics; Francis J. Haas, representative of labor; and H. Ferris White, representative of management. The field survey was made between August and November.

In all, 44 separate industries were surveyed. The proportion of industry covered by the sample ranged in the various branches from 5 to 50 percent. The report stated, however, that where the coverage was small the number of individual establishments included was large and might therefore be regarded as reasonably representative.

In all but 11 of the industries for which data were obtained more than half of the establishments reported complete observance of the wages and hours provisions of codes. These establishments employed a majority of the workers surveyed in the industries in question. In establishments in which departures from either the wages or hours provisions occurred there were no data available to show what proportion of the working personnel was affected. However, there were instances in which the failures to meet code standards applied to only a fraction of the total employees of establishments, while in other cases the standards may have been revised to change the general requirements for entire plants.

[4] U. S. Department of Commerce. Office of the Secretary. [Report on departures from labor and trade-practice standards of NRA codes following their abolition.] Released Mar. 17, 1936. 210 pp. (Mimeographed.) For a more extended discussion of this report see article, Departures From NRA Standards by Manufacturing Industries, in May 1936 Monthly Labor Review.

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Report Made for Committee on Public Contracts Bill, 1936[5]

Another study, similar to the one just reviewed and made about the same time, was limited to the extent of NRA code observance by Government contractors. This study showed that of 3,507 Government contractors employing 1,515,486 persons in the post-code period, 1,912 firms with 977,414 employees were observing the code provisions governing hours and wages, 1,448 firms with 405,373 employees were not maintaining such standards, and 147 firms with 132,699 employees failed to furnish complete information regarding labor standards.

The study was made by the Government Contracts Division of the National Recovery Administration for the use of the House Judiciary Subcommittee in connection with the Walsh bill (S. 3055, 74th Cong., 2d sess.), by the terms of which Government contractors would be required to observe the labor provisions of codes. Factual material was obtained by investigators who visited firms that were bidding on or had been awarded Government contracts. Where possible the figures were substantiated by books and pay rolls. Findings of the investigation were made public in three mimeographed tables early in 1936.

Of the 977,414 employees in 1,912 firms where wages and hours were not reduced below code limitations, 56,987 (in 118 firms) received an increase in wages while hours remained constant, and 2,774 (in 16 firms) benefited by a reduction in hours without any loss in wages. Departures from the maximum-hours provisions of codes affected 137,650 (in 439 firms) as compared with 41,046 (in 176 firms) who received lower wages than those fixed by the codes; departures from both wages and hours affected the largest number of workers, that is 210,834 (in 777 firms).

Departures from code standards affected the highest percentages of total employees in the rubber products; forest products; transportation equipment, air, land, and water; miscellaneous and textile industries. They were of least importance in the petroleum and coal and nonferrous metals and their products industries.

Hours and Earnings Before and After the NRA[6]

A special tabulation of reports to the Bureau of Labor Statistics from 16 manufacturing industries was undertaken in 1936 for the purpose of analyzing by establishments and by States the changes in average weekly hours, average hourly earnings, and volume of employment before and after the nullification of the National Industrial Recovery Act. Comparison was made between conditions in May 1935, just prior to the termination of the NRA, and conditions in May 1936. Some of the conclusions of the study follow:

(1) In all of the 16 industries average weekly hours increased substantially, and the number of employees with hours in excess of code hours was much larger after nullification than before. In blast furnaces, steel works, and rolling mills, for example, in May 1935 the number of employees in establishments with average weekly hours in

[5] Summary of article. Departures from NRA Labor Standards by Government Contractors, in Monthly Labor Review for April 1936.

[6] Abstract of article by Witt Bowden, of the Bureau of Labor Statistics, in the Monthly Labor Review for January 1937.

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excess of industrial code hours was only 3.1 percent of the total, while in May 1936 the number was 67.7 percent.

(2) There was also an increase in the proportion of employees with average hours in excess of the peak hours permitted by the codes. Many of the codes, as, for example, the code covering structural and ornamental metalwork, provided for a peak maximum of 48 hours, but before nullification there were negligible numbers of workers with hours above 48. After nullification, on the other hand, the numbers were much larger. In structural and ornamental metalwork, for example, before nullification only 1.3 percent of the employees were in establishments with average weekly hours above 48, while after nullification the proportion increased to 18.3 percent.

(3) In 13 of the industries with uniform NRA code hours, approximately 120,000, or 6 percent, more workers would have been employed in the spring of 1936 if the establishments with average weekly hours in excess of code hours had maintained the average at the code level, assuming that the maintenance of code hours would not have affected total man-hours. The above is an underestimate due to the fact that average weekly hours are lower than full-time hours.

(4) Variations in average weekly hours by States show no consistent regional differences. Average hours before the nullification of the National Industrial Recovery Act and the changes in hours thereafter varied primarily by industries and for the most part appear to have been regional only, as a result of different industrial conditions in the different areas. A noteworthy exception is the sawmill industry, in which comparatively long hours are observable in the Southern States.

(5) Establishments which made the largest increases in average weekly hours usually fell below the general average of hourly earnings, thus forcing employees to depend more largely on a longer working week than on rates of pay for maintaining weekly income. After nullification the establishments with average hours in excess of code hours made either a smaller increase or a greater decrease in average hourly earnings than establishments with average hours not in excess of code hours.

(6) With few exceptions, average weekly hours were somewhat longer and average hourly earnings were materially lower in small than in large establishments before nullification; and, with few exceptions, average weekly hours were increased more and average hourly earnings were either reduced more or increased less in small than in large establishments.

(7) In general there was a greater gain in business (as measured by total man-hours) in small than in large establishments; a greater gain in establishments which lengthened average hours beyond code hours than in establishments which kept average hours within code hours; and a greater gain in establishments which tended to break down NRA standards of earnings than in establishments which maintained these standards.

The evidence of extent of departures from NRA standards is accentuated by the fact that scheduled hours of shifts or of plant operation, in plants conforming to codes, were substantially the same as code hours, while average weekly employee-hours were materially lower than scheduled hours.

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State Industrial Codes

Wisconsin "Little NRA"

The State of Wisconsin in 1933, shortly after the Federal N. I. R. A. was adopted, enacted a similar law applicable to industries within the State.[7] This act was held unconstitutional by the Supreme Court of Wisconsin on the ground that the legislation had improperly delegated certain of its powers. An amended act, however, was passed by the legislature in 1935,[8] after the United States Supreme Court had held the Federal act unconstitutional. The new act was for a limited period.

Under the provisions of the new act, unfair methods of competition and unfair trade practices in business were prohibited. In order to eliminate such practices, the Governor was given the power to investigate and prescribe reasonable codes or standards of fair competition and trade practices for the various trades and industries in the State. Among other things, the codes were required to establish standards of maximum hours of labor, minimum rates of pay, and working conditions. It was also stipulated that each code should contain a condition that (*a*) employees shall have the right to organize and bargain collectively through representatives of their own choosing, and (*b*) no workman shall be required, as a condition of employment, to join any company union.

In holding this act constitutional, the court did so by distinguishing the new recovery act from the old act passed in 1933. The old act was very similar to the N. I. R. A. enacted by Congress, and in the *Gibson case* the court held the law void on the ground that the legislature had improperly delegated some of its powers. The decision in the *Schechter case*, which was rendered by the United States Supreme Court at a later time, was in many ways similar.

In distinguishing the new act from the old act, the court said:

> In the *Gibson case*, the defect pointed out was that the power to declare whether or not there should be a law was vested in the preponderant majority of a trade or industry. Such a power could not be delegated and therefore the act was void. It is quite evident that the legislature met this situation in chapter 182 of the laws of 1935 by making it the duty of the Governor "to investigate, ascertain, declare, and prescribe reasonable codes or standards of fair competition and trade practices for the various trades and industries in the State."

In further discussing the case, the court called attention to the statement made by the United States Supreme Court in the *Schechter case* that "The Constitution has never been regarded as denying to Congress the necessary resources of flexibility and practicality, which will enable it to perform its function in laying down policies and establishing standards, while leaving to selected instrumentalities the making of subordinate rules within prescribed limits and the determination of facts to which the policy as declared by the legislature is to apply."

As a result of this decision and the decision in the *Gibson case* the court reached the conclusion that the legislature may properly delegate to the Governor the power to eliminate unfair methods of competition in business and unfair trade practices. This is true even though it gives to the Governor the power to prescribe a code or stand-

[7] See Monthly Labor Review for March (p. 628) and May 1936 (p. 1238) for account of the Wisconsin act and the decisions of the State supreme court thereon.
[8] See Monthly Labor Review for June 1935 (p. 1466).

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ard of fair competition. "The power to prescribe a code or a standard of fair competition," said the court, "is the power to eliminate unfair methods of competition in business and unfair trade practices in business."

At the end of 1935, codes for 11 service trades and industries had become effective under the Recovery Act of the State of Wisconsin, all having been adopted after the code-making powers of the President under the National Industrial Recovery Act had been declared unconstitutional by the United States Supreme Court in May 1935. These State codes established the workers' right to collective bargaining through representatives of their own choosing, fixed minimum wages, maximum hours, and the minimum wages for employment of minors. The terms of the Wisconsin codes closely resemble those of the national codes that were effective during 1933–35, summaries of which were given in the Monthly Labor Review, issues of December 1933 to May 1935, inclusive.

The procedure in approving codes for Wisconsin trades was substantially the same as that followed by the Federal Government through the National Recovery Administration. After holding public hearings, the terms submitted by the employers in any particular trade were subjected to scrutiny and revision by the Wisconsin Recovery Administration, and later transmitted to the Governor of the State for his approval, with the recommendations of the administrator.

In making some of his reports to the Governor the administrator drew attention to the fact that there was a need for restrictions and a tendency to revert to pre-code standards after the Federal codes ceased to operate, and sometimes even earlier.

The industries for which codes were adopted were barber shops; bottled soft drinks; bowling; cleaning and dyeing; crushed stone, sand, gravel; highway construction; mason, concrete, and carpenter division of the construction industry; painting, paperhanging, and decorating; shoe rebuilding; tavern industry; and window cleaning.

The Wisconsin act remained in effect until October 19, 1939, when it was repealed by legislative action (Acts of 1939, ch. 514).

New Jersey: Code for Cleaning and Dyeing Industry[9]

A code following NRA principles was adopted by the State Trade Board for the Cleaning and Dyeing Trade of New Jersey and became effective on December 20, 1935. This was after the National Industrial Recovery Act was declared unconstitutional, and in consequence the Federal code for the cleaning and dyeing industry was no longer in legal effect. The New Jersey code established labor standards for employees in more than 4,500 plants and retail outlets in the State and fixed minimum prices as well. The State cleaning and dyeing board, consisting of three members, was created in 1935 by legislative action and empowered to establish a code in response to a request from members of the industry seeking relief from price cutting and racketeering. The labor standards agreed upon were:

Minimum wages.—Clerks in processing plants and retail outlets may not be paid less than $14 a week by the terms of the agreement. For skilled labor the minimum hourly rate of pay is fixed at 45 cents and for unskilled labor at 35 cents.

[9] See January (p. 71) and April 1936 (p. 933) issues of the Monthly Labor Review for more detailed description of the New Jersey act.

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Maximum hours.—The working week is limited to a maximum of 44 hours per week for employees in general, except that in peak periods, not to exceed 9 weeks in two seasons, the maximum week is raised to 48 hours so long as the average of 44 hours per week is not exceeded. For engineers, firemen, and maintenance men and clerks a 48-hour week is established with a 50-hour maximum for these groups, excluding clerks, in the same 9-week peak periods, with the provision that the average of 48 hours per week is maintained. Peak periods are defined as 9 weeks from March 15 of each year and 9 weeks from September 1, except at the coast resorts where the peak period is from June 1 to September 10. Overtime pay at one and one-third times the hourly rate is authorized for emergency maintenance and repair work. No employee may work more than 6 days in 7.

On March 11, 1936, the United States District Court of the District of New Jersey declared that the act regulating the cleaning and dyeing industries of the State was unconstitutional (*Kent Stores of New Jersey* v. *Wilentz*). The court, which consisted of three judges, held that even though the legislature had declared that an emergency existed, this in itself did not validate the act. The court also held that the cleaning and dyeing industry was not a business affected with a public interest, therefore the price-fixing provisions of the act could not be sustained. While the court considered that the unfair trade practices and sanitary regulations of the act were constitutional, they were, however, only parts of a plan of which price fixing was one part and therefore could not be considered separately. The court in determining the case reviewed many decisions of State and Federal courts, and finally concluded that the act, which attempted to set up a price-fixing policy, should not be sustained in New Jersey.

Wage and Hour Legislation, Federal and State

General Scope

The most far-reaching legislation in the United States regulating wages and hours of work in private employment is that contained in the Fair Labor Standards Act of 1938 and the Public Contracts Act of 1936. Each of these laws fixes both a lower limit to wages and an upper limit to hours for all persons, irrespective of sex or age, covered by the laws. Previously (with the exception of the NRA codes) there had been no Federal [1] attempt to fix minimum wages in private employment and none to fix maximum hours, except in special cases involving public safety and in cases in which work was being done for the Government. Also, while there had been considerable State legislation on minimum wages and maximum hours for women and minors, there had been little attempt to apply such legislation to men in private employments. Indeed, prior to the Federal Fair Labor Standards (1938) and the Public Contracts (1936) laws, wage legislation and hours legislation had, for the most part, developed independently of each other. For this reason the two are treated separately in the following discussion.

[1] Other than the Adamson law applicable to railroads only, which is discussed later in this section.

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Hours of Labor—Federal Legislation[2]

Fair Labor Standards Act, 1938

The Federal Government, in the Fair Labor Standards Act of 1938,[3] assumed general jurisdiction over maximum working hours as well as over minimum wages in private employment on work of an interstate character. Certain industries are specifically exempt. The minimum-wage provisions are, with limited exceptions, absolute, i. e., employees cannot be paid less than the applicable minimum wage. By the provisions of the act the maximum basic workweek was fixed at 44 hours for the first year, 42 hours for the second year, and 40 hours on and after October 24, 1940. These limitations do not prohibit the worker from working in excess of the prescribed hours, provided he is paid at time and a half for his overtime work. It may also be noted that these limitations apply only to the workers and not to the establishment itself, as there is no limitation of any kind on the working hours of the plant or establishment. (The wage provisions of this act are presented on p. 386.)

Public Contracts and Public Works

The so-called Walsh-Healey Public Contracts Act,[4] passed by Congress in 1936, provides for a basic 8-hour day and 40-hour week on all contracts entered into by the United States or the District of Columbia for the manufacture or furnishing of materials, supplies, etc., in excess of $10,000. The act authorizes the Secretary of Labor to permit overtime at one and one-half times the regular rate of pay. In 1940 the act was amended (Public, No. 671, 76th Cong.) so as to authorize the President to suspend the substantive provisions of the law when the public interest so requires, but up to July 1941 there had been no suspension of these provisions. (The minimum-wage features of this act are discussed on p. 386.)

As early as 1892 the Congress of the United States passed a law[5] which provided for an 8-hour day for all laborers and mechanics employed on public works of the United States or the District of Columbia. The act was materially strengthened by amendatory legislation of March 3, 1913, which brought the dredging of rivers and harbors of the United States under the operation of the law. In cases of extraordinary emergencies the law makes an exception. Under this provision the President on December 31, 1940, suspended the 8-hour-day law for employees engaged in the construction of leased bases.[6]

In 1912 Congress also enlarged the scope of the 8-hour law so that it would apply to Government contracts in general.[7] The statute provides that every contract to which the United States is a party, which may require or involve the employment of laborers or mechanics, shall contain a provision that no laborer or mechanic in the employ of the contractor or any subcontractor shall be required or permitted to work more than 8 hours in any one calendar day upon such work. The President was empowered to suspend the 8-hour law in case of na-

[2] From the Monthly Labor Review for April and September 1940.
[3] Supp. V to U. S. Code, 1934, title 29, secs. 201–219.
[4] Idem, title 41, secs. 35–45.
[5] U. S. Code, 1934, title 40, secs. 321–322.
[6] See Monthly Labor Review for February 1941, p. 327.
[7] U. S. Code, 1934, title 40, secs. 324–326.

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tional emergency, with pay at the rate of time and a half for all work in excess of 8 hours. The National Defense Act (Public, No. 671, 76th Cong.) provides for the suspension of the law prohibiting more than 8 hours' labor in any 1 day for persons engaged on work covered by Army, Navy, or Coast Guard contracts. This section of the act has been interpreted to include the 8-hour law and the Walsh-Healey Public Contracts Act. However, it should be noted that the act specifically reserves the application of the remaining provisions of the Walsh-Healey Act, including the 40-hour week, to all negotiated contracts. In another act (Public Act No. 703, 76th Cong.) the Congress has provided for the payment of overtime at time and a half for hours worked in excess of the basic 40-hour week for persons employed directly by the War Department in the production of war materials.

Interstate Commerce

By an act of 1907 [8] Congress limited the hours of labor of persons "engaged in or connected with the movement of any train" on interstate lines to 16 a day. The act also limited the hours of labor of telegraph or telephone dispatchers to 9 a day in places operated continuously day and night, and to 13 hours in places operated only during the daytime. On September 3, 1916, the so-called Adamson Law [9] was approved, providing a basic 8-hour day for railroad trainmen. The law provides that 8 hours shall be deemed a day's work and the measure of a day's work for the purpose of computing the wages of certain railroad employees. It does not forbid such employees from working more than 8 hours. In general, the regulating of overtime work and stipulations as to the rate of overtime wages are governed by agreements between the unions and the railroads. In 1935 Congress extended the field of hours regulation in interstate commerce by adopting the Motor Carrier Act, which granted to the Interstate Commerce Commission the power to make requirements as to qualifications and maximum hours of service of bus and truck employees.[10]

Hours of Labor—State Legislation

Limitations on Working Hours of Men

For the most part, State laws regarding the working hours of men have applied only to those engaged on public works, or in the transportation industry where public safety is directly affected, or in those employments considered particularly dangerous or unhealthy to the workmen. In addition, however, a very few States have limited the hours of labor of men in employments in which the elements of public safety or special hazard to the workers do not seem to apply.

Laws limiting the hours of labor on public works have now been enacted by more than one-half of the States,[11] the District of Columbia, and the Territories of Alaska, Hawaii, Puerto Rico, and the

[8] U. S. Code, 1934, title 45, secs. 61–64.
[9] Idem, title 45, secs. 65, 66.
[10] See Monthly Labor Review, September 1938 (p. 544), and Monthly Labor Review, July 1941 (p. 165).
[11] Arizona, California, Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Texas, Utah, Washington, West Virginia, Wisconsin, Wyoming.

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Philippines. These laws provide for an 8-hour day, and cover all laborers, workmen, and mechanics. In Delaware the law regulating the hours of labor on public works is applicable only to the city of Wilmington, while the Maryland law applies to the cities of Baltimore and Cumberland. In Missouri the hours of labor on public works are limited to cities of the second class. The Louisiana act applies only to city work. The majority of the laws in this field permit overtime work in case of emergency, in time of war, or for the protection of property or human life. In some instances extra compensation is to be paid for overtime work.

Approximately two-thirds of the States have adopted hour laws covering employees engaged in transportation. However, these laws are effective only on railroads engaged exclusively in intrastate commerce. In this type of law the element of public safety is involved.

As a result of the increasing use of motor vehicles in commercial transportation, most of the States now have adopted legislation limiting the working hours of bus and truck drivers. These laws fix a maximum number of hours of continuous work, generally 10 or 12, and require a period of rest before resumption of duty.

In private employments where public safety is not directly concerned, hour laws for men are limited principally to workers in mines, smelters, and related industries. At the present time over a dozen States have enacted laws regulating the hours of labor of some or all classes of work in these industries. The majority of the laws limit the hours to 8 a day; however, the law of Maryland establishes a 10-hour day for employees in mines in certain counties only, and Washington provides for a daily limit of 10 hours for persons employed in transporting men in and out of the mines. Louisiana, Maine, New Jersey, and New York have enacted laws regulating the hours of labor of employees working under compressed air, and similar limitations have been established by the respective Labor Departments in Arizona, Indiana, Massachusetts, Pennsylvania, and Wisconsin.

In recent years a number of States have enacted hour laws for men in certain private employments in which the questions of the workers' health or public safety are not so immediately involved as in the legislation described above. Arizona has a law providing for an 8-hour day and a 48-hour week for employees working in laundry establishments. The same State has established an 8-hour day for employees of electric light and power plants. Georgia and Maryland have placed a 10-hour limit on the working day of employees of cotton and woolen manufacturing establishments. In Oregon a 10-hour law has been adopted for persons employed in any mill, factory, or manufacturing establishment, while in Mississippi the same limitation has been placed on the working hours of employees in mills, canneries, workshops, factories, or manufacturing establishments. An 8-hour day for employees of cement-manufacturing plants has been established in Arizona, Colorado, Montana, and Nevada, and, in addition the 8-hour limitation is applicable to plaster-manufacturing plants in Colorado and Nevada. The work of employees of saw and planing mills is limited to 10 hours a day in Arkansas. Montana has enacted a law providing for an 8-hour day and 48-hour week for employees of retail stores in cities having a population of 2,500 or over.

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In 1939, the same limitation was placed on the working hours of employees of restaurants, etc. In 1937, North Carolina enacted a 10-hour law for all employments; but its coverage is rather limited. The majority of these laws allow overtime work only in cases of emergency, where life or property is in imminent danger.

In general, laws regulating hours of labor exempt agricultural and domestic labor. However, in 1937 the Legislature of Washington passed a law limiting the hours of labor of domestic employees to 60 a week. The Puerto Rico law, passed in 1935, regulates the hours of labor of employees in agriculture as well as in commercial and industrial establishments.

Limitations on Working Hours of Women

In contrast with the limited regulation of hours of labor of men, there are extensive regulations affecting the hours of labor of women workers. Only four States (Alabama, Florida, Iowa, and West Virginia) have failed to adopt some legislation fixing such hours. However, the law of Indiana merely prohibits the employment of women at night in factories and does not otherwise limit working hours.

Approximately one-half of the States,[12] the District of Columbia, and the Territories of Puerto Rico and the Philippines, have adopted laws limiting the working hours of women to 8 a day. Twenty States [13] have enacted 9-hour laws, while 13 States [14] fix the daily hours of labor at 10. In some of these States there are varying limitations on the hours of employment, depending on the type of industry. In Oregon the law fixing maximum hours at 10 a day and 60 a week has been superseded to a great extent by orders of the Oregon State Welfare Commission which have provided for an 8-hour day and a 44-hour week for women in practically all industries. The number of industries or occupations included in these laws varies greatly and the weekly hour limitations are also far from uniform. An order of the Utah Industrial Commission, in 1938, established a 7-hour day, 42½-hour week for women employed in retail trade in that State. North Dakota limits the working hours of women to 8½ a day in specified industries and occupations, and New Hampshire permits a 10¼-hour day and 54-hour week in employment other than manufacturing. A 10½-hour day and 57-hour week for women has been established in Tennessee, while Texas provides for an 11-hour day and 54-hour week in cleaning and pressing establishments.

In a number of the States the laws contain some provision for overtime work. These provisions, for the most part, allow overtime during the seasonal rushes in fruit and vegetable canneries, or the week before Christmas in retail stores. Overtime is sometimes permitted in emergencies or to make up time lost because of stoppage of

[12] Arizona, California, Colorado, Connecticut, Illinois, Kansas, Louisiana, Montana, Nevada, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Washington, Wyoming.

[13] Arkansas, Connecticut, Idaho, Kansas, Louisiana, Maine, Massachusetts, Michigan, Missouri, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, Texas, Vermont, Virginia, Wisconsin.

[14] Delaware, Georgia, Kentucky, Maryland, Mississippi, New Hampshire, New Jersey, North Carolina, Oklahoma, Oregon, Pennsylvania, South Dakota, Wisconsin.

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machinery. Most laws limit the amount of overtime, and in some States the laws provide for special overtime rates.

Regulation of Night Work for Women

About 16 States prohibit night work for women in designated industries or occupations. However, in no case is there an all-inclusive night-work prohibition. For example, the law of Indiana covers manufacturing only, that of Ohio is applicable to ticket sellers only, and that of Washington to elevator operators only. South Carolina prohibits the employment of women after 10 p. m. in mercantile establishments. There is no statute in Oregon, but the Industrial Commission by administrative order forbids night work in certain occupations.

The most common period during which night work is prohibited is from 10 p. m. to 6 a. m., such regulation existing in California, Connecticut, Delaware, Indiana, Massachusetts, New York, Ohio, Pennsylvania, and the Territory of Puerto Rico. The Oregon Welfare Commission, however, has issued orders prohibiting women from working in needlecraft, laundry, cleaning, and dyeing occupations between the hours of 6:30 p. m. and 7:30 a. m. In Nebraska women may not be employed in manufacturing, mechanical, or mercantile establishments, laundries, hotels, restaurants, or offices in certain cities from 12:30 a. m. to 6 a. m. North Dakota, by order of the Minimum Wage Department, prohibits work in laundries before 6 a. m. In Massachusetts, the law prohibiting the employment of women in the manufacture of textile goods or leather from 6 p. m. to 6 a. m. has been suspended by successive acts of the legislature which authorize the Commissioner of Labor and Industries to permit the employment of women over 21, until 10 p. m., in textile manufacturing. Maryland limits the hours that a woman may work at night to 8 in certain occupations, if any work is performed between 10 p. m. and 6 a. m.; while New Hampshire limits the daily hours of women performing manual or mechanical labor to 8 if any work is performed between 8 p. m. and 6 a. m. on more than 2 nights a week.

No prohibition of night work for men exists anywhere in the United States.

Wage Legislation[15]

As of June 1, 1941, minimum-wage laws applicable to private employments had been enacted in 26 States, the District of Columbia, and the Territories of Alaska and Puerto Rico, as well as by the Federal Congress. Most of these laws affect only women and minors.

Wage Legislation for Women and Minors

The early wage legislation in the United States was limited to women and children. The history of this legislation and of the changed attitude of the United States Supreme Court toward such laws is described in a later article (p. 400) dealing with State minimum-wage legislation.

[15] From the Monthly Labor Review for April 1940. A summary table in this issue of the Labor Review shows the principal provisions of State and Federal minimum-wage laws as of January 1, 1940.

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As a result of minimum-wage legislation being held valid for women and minors by the United States Supreme Court, in 1937 many States again considered legislation in this field. During 1937 four States (Arizona, Nevada, Oklahoma, and Pennsylvania) passed new minimum-wage laws, and two States (Massachusetts and New York) reenacted their statutes, while Colorado, Connecticut, Minnesota, and Wisconsin passed amendatory legislation. In three jurisdictions (Arkansas, District of Columbia, and Puerto Rico), laws which had been on the statute books for many years without being enforced were revived and made effective. Kentucky and Louisiana enacted new minimum-wage laws in 1938; in Kansas the minimum-wage law which had been inoperative since 1925 was revived, and Massachusetts amended its law. In 1939, new minimum-wage laws were passed by the Legislatures of Alaska and Maine, and Massachusetts, Minnesota, Nevada, and New York amended their laws. The Alaska law fixes the minimum wage; the Maine act is applicable only to the industry of packing fish and fish products in oil, mustard, or tomato sauce, and is of the "wage board" type.

Status of Legislation for Men

The first State minimum-wage law to include men as well as women and minors was the Oklahoma law of 1937. The supreme court of that State, however, held this act void, insofar as it applied to wages for men, because of the insufficiency of the title of the act, but declared that the invalidity of these provisions did not affect the validity of its regulation of the hours of labor of men and of the hours and wages of women.[16] Connecticut reenacted its law in 1939 so as to extend the provisions to men.

As previously indicated, the major portion of the State minimum-wage legislation in the United States has been limited to women and minors engaged in private employments. Owing in part to constitutional objections, men have generally been excluded from the scope of the laws. At present, Connecticut is the only State that includes men within the purview of the minimum-wage law; thus far no test has been made as to the legality of this legislation.

The first major attempt to establish minimum wages broadly, covering all employees, took place under the codes of fair competition established by the National Industrial Recovery Act of 1933. Many industrial employees were thus provided a minimum wage for a period of approximately 2 years, until the United States Supreme Court declared the act unconstitutional.

Federal legislation.—As already noted, the Walsh-Healey Public Contracts Act (Supp. V to U. S. Code, title 41, secs. 35–45) provided for the establishment of minimum labor standards for Government contracts. The act sets standards of minimum wages as well as a maximum normal workweek for the performance of Government contracts in excess of $10,000. The minimum wages required are those which have been determined by the Secretary of Labor.

The Federal wage and hour law, known as the Fair Labor Standards Act of 1938, provides for a minimum wage as well as a maximum

[16] *Associated Industries of Oklahoma* v. *Industrial Welfare Commission*, 90 Pac. (2d) 899; see also Monthly Labor Review, May 1939, p. 1105.

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workweek for employees engaged in interstate commerce or in the production of goods for interstate commerce. Certain industries are specifically exempt. During the first year, beginning October 24, 1938, every employer subject to the act was required to pay to the employees engaged in interstate commerce or in the production of goods for such commerce not less than 25 cents an hour; during the next 6 years not less than 30 cents an hour; and, after the expiration of 7 years, not less than 40 cents an hour, or the rate (not less than 30 cents an hour) prescribed by the Administrator.

Wages on public works.—Thirty-five States,[17] the Congress of the United States, and the Territories of Alaska, Hawaii, Puerto Rico, and the Philippines have enacted legislation relative to the payment of wages of employees engaged in the construction of public works. The laws include those statutes which provide for the payment of not less than the current or prevailing rate of wages in the locality where the work is performed, and those which fix a stated minimum rate. In 1931 Congress passed the original Davis-Bacon Act, providing for the payment of the prevailing rate of wages in contracts in excess of $5,000, involving the construction, alteration, and repair of public buildings of the United States or the District of Columbia. This law was amended in 1935 [18] so as to cover all contracts in excess of $2,000 made by the United States or the District of Columbia, involving the construction, alteration, or repair of public works, including contracts for painting and decorating. Under the provisions of the amended act, the United States Secretary of Labor must predetermine the prevailing rates of wages to be paid to each class of mechanics and laborers.

Operations Under Federal Public Contracts Act, 1936-41 [19]

Under the terms of the Public Contracts Act of 1936—known as the Walsh-Healey Act—employees engaged on any Government contract which exceeds $10,000 in value must be assured of basic hours of not more than 8 per day and 40 per week and be paid not less than the prevailing minimum wage of the industry and locality as determined by the Secretary of Labor. Through misunderstanding it is sometimes stated that the Public Contracts Act definitely limits working hours, but this is not true. No time limitation is imposed, provided that the prescribed rate is paid for overtime hours of work. Males under 16, females under 18, and convict labor may not be employed on Government orders. All Government contractors must guarantee that their employees will work under safe and healthful conditions. They are also required to observe the safety, sanitary, and factory-inspection laws of the State in which the work is performed.

[17] Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Washington, West Virginia, and Wisconsin.

[18] Supp. V to U. S. Code, 1934, title 40, sec. 276a.

[19] This article is based on publications of the Public Contracts Division and on information furnished to the Bureau of Labor Statistics by that Division. For a more extended discussion see Monthly Labor Review for October 1940: "Four Years of the Public Contracts Act."

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In enacting the Public Contracts Act, Congress exercised its powers to regulate conditions of employment when the Federal Government is the purchaser of the goods produced. Although earlier laws under this authority prescribed certain limitations for employees of Government contractors, the standards set were less far reaching in their coverage and the workers who benefited were limited to those engaged on public works.

The Walsh-Healey Act became effective in 1936. The National Industrial Recovery Act of 1933 (which provided for the establishment of codes fixing minimum labor standards) had been declared unconstitutional in 1935 and the Fair Labor Standards Act [2] (affording protection to workers engaged in interstate commerce or in the production of goods for interstate commerce) was not adopted until 1938.

Three groups profit from the passage of the Walsh-Healey law. They are the workers engaged directly in the performance of work on Government contracts; other labor engaged in similar employments, since the standards for Government work tend to become general; and employers who customarily maintain equitable standards and who formerly were adversely affected by the competition of firms observing lower working standards. The provisions of the act make for fairer competition than previously existed under the system of competitive bidding, when orders went to the lowest bidder regardless of the terms of employment of his force. Each cut in the price quotation to the Government was likely to entail a reduction in the wage rate to the workers engaged in producing the goods. It was also common for the person who secured the contract to sublet it. Both of these evils are now eliminated, but there is considerable evidence that the minimum wage and other requirements have not increased the price paid by the Government.[3]

Results of Operations

Some of the important results of operations under the Walsh-Healey Act during approximately 4 years are shown below.

In the period from September 28, 1936, to January 1, 1941, contracts to a total of $4,039,042,692 were let, representing 35,122 awards. About 96.64 percent of the value of contracts was for purchases by the executive departments, including the Navy and War Departments, and the remaining 3.36 percent consisted of contracts for independent establishments, such as the Tennessee Valley Authority. The industries affected by agreements to comply with the terms of the Walsh-Healey law in supplying goods are shown in the following statement, with the percent of total value of contracts obtained in each case. About 47 percent of the value of contracts was for transportation equipment alone, followed by textiles and their products, representing over 12 percent.

[2] For a discussion of the Fair Labor Standards Act, see p. 395.
[3] This statement is based on studies in the apparel trades, made by the Division of Public Contracts, comparing prices paid for identical orders.

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	Value of contracts as percent of total
Transportation equipment	46.55
Textiles and their products	12.47
Iron and steel products	7.74
Asphalt, coal, and petroleum products	5.01
Other machinery	5.73
Electrical apparatus	5.67
Stone, clay, and glass products	2.15
Chemicals and allied products	2.02
Nonferrous metals and alloys	2.30
Paper and allied products	1.35
Food and kindred products	1.33
Forest products	1.22
Leather and its manufactures	1.01
Rubber products	.73
Printing and publishing	.05
Tobacco manufactures	.04
Miscellaneous	4.63
Total	100.00

In the 4 years of operations ended December 31, 1940, 35,122 contracts were reported as having been awarded and approximately 12,437 contracts were investigated. For the 14,037 individual investigations on the 12,437 contracts, full compliance was found in 58.13 percent of the total. Monetary adjustments were necessary in 28.92 percent of the total. For the remaining 12.95 percent consisting of nonmonetary violations, that is inadequate records, unsafe and unsanitary working conditions, and failure to post stipulations in a plant, the contractors were notified of their violations by the Division of Public Contracts.

The hourly prevailing minimum wages range as high as 70 cents in one geographic division of the cement industry, 67½ cents in the men's hat and cap industry, and 62½ cents in one area of the iron and steel industry. For various other clothing industries the determinations established rates of 32½ to 50 cents an hour. The wage provisions of the 40 determinations, including amendments and extensions up to the middle of October 1941, are given in the following table. For fuller information, including industry definitions, tolerances, etc., see the Monthly Labor Review for October 1940 (p. 809) and later issues.

Minimum-wage determinations of the Secretary of Labor pursuant to the Public Contracts Act of June 30, 1936

Industry and effective date	Minimum-wage determination
Cotton garments and allied industries. (Aug. 2, 1937.)	37½ cents an hour; $15 a week (40 hours). Wages may be arrived at on either a time or piecework basis. No differentials.
Leather and sheep-lined jackets (May 13, 1938.)	42½ cents an hour; $17 a week (40 hours). Wages may be arrived at on either a time or piecework basis. No differentials.
Work glove (Aug. 2, 1937.)	35 cents an hour; $14 a week (40 hours). Wages may be arrived at on either a time or piecework basis. No differentials.
Seamless hosiery (Aug. 2, 1937.)	35 cents an hour; $14 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.

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Minimum-wage determinations of the Secretary of Labor pursuant to the Public Contracts Act of June 30, 1936—Continued

Industry and effective date	Minimum-wage determination
Men's neckwear (Aug. 2, 1937.)	50 cents an hour; $20 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Men's raincoat (Aug. 2, 1937.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Men's hat and cap (Aug. 2, 1937.)	67½ cents an hour; $27 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Men's underwear (Aug. 2, 1937.)	North (all states, including D. C., except those listed below for South): 35 cents an hour; $14 a week (40 hours). South (Virginia, Tennessee, Georgia, North Carolina, Florida, South Carolina, Alabama, Mississippi, Arkansas, Louisiana, Texas, Oklahoma): 32½ cents an hour; $13 a week (40 hours). Wages may be arrived at on either a time or piece-work basis
Men's welt shoe (Jan. 5, 1938.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Dimension granite (Jan. 15, 1938.)	(1) Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York: 57½ cents an hour; $23 a week (40 hours). (2) Pennsylvania, Maryland, Wisconsin, Minnesota, South Dakota, all other States not included in (1) and (3): 42½ cents an hour; $17 a week (40 hours). (3) North Carolina, Virginia, South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky, Mississippi, Louisiana, Arkansas, Texas: 32½ cents an hour; $13 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Handkerchief (Jan. 26, 1938.)	35 cents an hour; $14 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Envelope (May 12, 1938.)	42½ cents an hour; $17 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Vitreous or vitrified china (May 19, 1938.)	42¾ cents an hour; $17.10 a week (40 hours). Wages may be arrived at either on a time or piece-work basis. No differentials.
Flint glass (July 12, 1938.)	42½ cents an hour; $17 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Luggage and saddlery (July 27, 1938.)	(1) Northeast and Far West (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Maryland, Delaware, Washington, Oregon, California, Idaho, Nevada, Arizona, Montana, Wyoming, Utah, Colorado, New Mexico): 40 cents an hour; $16 a week (40 hours). (2) The remaining 26 States and the District of Columbia: 37½ cents an hour; $15 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Wool carpet and rug (Oct. 15, 1938.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Fireworks (Oct. 15, 1938.)	(1) Commercial fireworks division: 31¼ cents an hour; $12.50 a week (40 hours). (2) Fusee division: 37½ cents an hour; $15 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Tag (Oct. 31, 1938.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Aircraft (Dec. 29, 1938.)	50 cents an hour; $20 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Bobbinet (Feb. 13, 1939.)	37½ cents an hour; $15 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Iron and steel (Mar. 1, 1939.)	(1) Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (except the counties of Brooke, Hancock, Harrison, Marshall, Monongalia, and Ohio): 45 cents an hour; $18 a week (40 hours). (2) Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming: 60 cents an hour; $24 a week (40 hours). (3) Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and the area in and about East St. Louis, Illinois: 58½ cents an hour; $23.40 a week (40 hours).

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Minimum-wage determinations of the Secretary of Labor pursuant to the Public Contracts Act of June 30, 1936—Continued

Industry and effective date	Minimum-wage determination
Iron and steel (Mar. 1, 1939.)	(4) Connecticut, Delaware, District of Columbia, Illinois (except the area in and about East St. Louis, Illinois), Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin, and that portion of the State of West Virginia comprised within the counties of Brooke, Hancock, Harrison, Marshall, Monongalia and Ohio: 62 ½ cents an hour; $25 a week (40 hours).
Tobacco (May 2, 1939.)	32½ cents an hour; $13 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Furniture (May 13, 1939.)	(1) Wood furniture branch: *a.* Virginia, Kentucky, North Carolina, Georgia, South Carolina, Florida, Alabama, Tennessee, Arkansas, Louisiana, Oklahoma, Texas and Mississippi: 30 cents an hour; $12 a week (40 hours). *b.* California, Washington, and Oregon: 50 cents an hour; $20 a week (40 hours). *c.* All other States and the District of Columbia: 35 cents an hour; $14 a week (40 hours). (2) Public seating branch: 37½ cents an hour; $15 a week (40 hours). No differentials. (3) Metal furniture branch: 45 cents an hour; $18 a week (40 hours). No differentials. Wages may be arrived at on either a time or piece-work basis.
Drug and medicine (Aug. 3, 1939.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Specialty accounting supply manufacturing. (Aug. 9, 1939.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Soap (Aug. 14, 1939.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Photographic supplies (Aug. 14, 1939.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Fertilizer (Sept. 12, 1939.)	(1) New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, California, Oregon, and Washington: 50 cents an hour; $20 a week (40 hours). (2) Virginia, Tennessee, Kentucky, the Eastern Shore of Maryland (consisting of Cecil, Kent, Queen Annes, Talbot, Caroline, Dorchester, Wicomico, Worcester, and Somerset Counties), and Kent and Sussex Counties of Delaware; North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas: 30 cents an hour; $12 a week (40 hours). (3) The District of Columbia and all other States or counties not enumerated above: 40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Paper and pulp (Oct. 15, 1939.)	(1) California, Oregon, and Washington: 50 cents an hour; or $20 a week (40 hours). (2) Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas: 35 cents an hour; or $14 a week (40 hours). (3) The District of Columbia and all other States not enumerated above: 39 cents an hour; or $15.60 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Small-arms ammunition, explosives, and related products. (Oct. 19, 1939.)	Small-arms ammunition: 42½ cents an hour; or $17 a week (40 hours). Blasting caps: 47½ cents an hour; or $19 a week (40 hours). Explosives: 57½ cents an hour; or $23 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Cement (Mar. 2, 1940.)	(1) Pennsylvania, New York, New Jersey, Maryland, West Virginia, Ohio, Delaware, Massachusetts, Connecticut, Rhode Island, Vermont, New Hampshire, and the District of Columbia: 57 cents an hour; or $22.80 a week (40 hours). (2) Maine: 50 cents an hour; or $20 a week (40 hours). (3) Michigan, Indiana, and Kentucky: 50 cents an hour; or $20 a week (40 hours).

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Minimum-wage determinations of the Secretary of Labor pursuant to the Public Contracts Act of June 30, 1936—Continued

Industry and effective date	Minimum-wage determination
Cement (Mar. 2, 1940.)	(4) Illinois: 63½ cents an hour; or $25.40 a week (40 hours). (5) Wisconsin, Minnesota, Iowa, and Missouri: 55 cents an hour; or $22 a week (40 hours). (6) South Dakota, Nebraska, Kansas, and North Dakota: 50 cents an hour; or $20 a week (40 hours). (7) Colorado, Wyoming, Utah, Idaho, Oregon, Nevada, Arizona, and New Mexico: 55 cents an hour; or $22 a week (40 hours). (8) Washington: 70 cents an hour; or $28 a week (40 hours). (9) California: 62½ cents an hour; or $25 a week (40 hours). (10) Oklahoma and Texas: 47 cents an hour; or $18.80 a week (40 hours). (11) Arkansas, Louisiana, Alabama, Tennessee, Virginia, Georgia, Florida, Mississippi, North Carolina, and South Carolina: 40 cents an hour; or $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Blueprint paper coating (Oct. 11, 1940.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Structural clay products (Jan. 10, 1941.)	(1) Maryland, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, and the District of Columbia: 34 cents an hour; $13.60 a week (40 hours). (2) All other States: 40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Uniform and clothing (Feb. 25, 1941.)	(1) Suit and coat branch: 60 cents an hour; $24 a week (40 hours). (2) Outdoor jackets branch: 40 cents an hour; $16 a week (40 hours). (3) Wool trousers branch: 40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Die casting manufacturing (Apr. 5, 1941.)	50 cents an hour; $20 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Scientific, industrial, and laboratory instruments. (Sept. 23, 1941.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Surgical instruments and apparatus. (Sept. 23, 1941.)	40 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Dental goods and equipment manufacturing (Sept. 23, 1941.)	(1) Durable-goods branch: 40 cents an hour; $16 a week (40 hours). (2) Consumable-goods branch: 35 cents an hour; $14 a week (40 hours). Wages may be arrived at on either a time or piece-work basis. No differentials.
Evaporated milk (Nov. 3, 1941.)	(1) Washington, Oregon, California: 50 cents an hour; $20 a week (40 hours). (2) Idaho, Montana, Nevada, Utah, Arizona, New Mexico, Colorado, Wyoming, North and South Dakota, Nebraska, Minnesota, Iowa, Wisconsin, Michigan, Ohio: 40 cents an hour; $16 a week (40 hours). (3) All other States and the District of Columbia: 32½ cents an hour; $13 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.
Paint and varnish (Nov. 6, 1941.)	(1) Virginia, North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas: 40 cents an hour; $16 a week (40 hours). (2) All other States and the District of Columbia: 50 cents an hour; $16 a week (40 hours). Wages may be arrived at on either a time or piece-work basis.

Administration and Procedure

A Division of Public Contracts was established in the United States Department of Labor to administer the Walsh-Healey law, in accordance with the provision empowering the Secretary of Labor to

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"appoint without regard to the provisions of the civil-service laws but subject to the Classification Act of 1923, an administrative officer, and such attorneys and experts, and shall appoint such other employees with regard to existing laws applicable to the employment and compensation of officers and employees of the United States as he may find necessary, to assist in the administration" of the act. This Division is headed by an Administrator who is responsible solely to the Secretary. A Public Contracts Board studies conditions in industry and holds hearings. It is subordinate to the Administrator in problems of policy, personnel, and legal interpretation which arise in connection with the Board's activities.

Either the Secretary of Labor or an impartial representative designated by the Secretary has the power to determine whether there have been violations of the act. It is the Secretary, likewise, who makes rules under this legislation and final determinations as to the prevailing minimum wages in individual industries which must be observed by Government contractors.

Regulations and Determinations

Under the statute the Secretary of Labor is authorized "from time to time to make, amend, and rescind such rules and regulations as may be necessary to carry out the provisions"; to "provide reasonable limitations"; and to "make rules and regulations allowing reasonable variations, tolerances, and exemptions to and from any or all provisions * * * respecting minimum rates of pay and maximum hours of labor * * *." The procedure for promulgating regulations is not prescribed. When the need for a regulation or amendment comes to the attention of the Administrator or a member of the staff, it is discussed at a staff conference and a draft proposal is prepared by the legal staff, but any ruling is promulgated at the discretion of the Secretary.

The first series of regulations issued on September 14, 1936, provided that, with certain exceptions indicated in the act, specifications for every contract over $10,000 should have inserted the stipulations set out in the first section of the act. (This section includes the labor provisions.) It was also in these regulations that the Secretary, under authority granted by the terms of the law, fixed the overtime rate of pay for hours worked in excess of 8 per day and 40 per week at one and one-half times the basic hourly rate or piece rate received by the employee, until otherwise ordered.

Other regulations establish the procedure to be followed by contracting officers and bidders in applying for exceptions and exemptions, in reporting awards of contracts, and in notifying the appropriate agencies of complaints of violations. The regulations follow the policy of the law itself, namely, of leaving to the discretion of the Secretary the manner and the order in which minimum-wage determinations are to be made.

An amendment to the original text of the regulations authorized the maintenance of general records of employment covering all employees, in lieu of separate files for those engaged on Government work. This privilege is granted only on the understanding that all employees

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will then be deemed to be engaged in the production of the Government's purchase during the period in which the employer is fulfilling a contract with the Government. Another change was necessary, owing to the widespread attempts to evade the law through the supplying of the Government by manufacturers on the orders of regular dealers unable to fill the contract from stock on hand. Any manufacturer shipping goods direct to the Government on a dealer's order is deemed to be the principal party to the contract and subject to the act. The dealer becomes an agent unless he furnishes the goods himself by supplying them from his own stock.

Where an employee works for any part of a day in a given pay-roll period or workweek on a Government contract in an industry for which a wage determination has been issued, he is entitled to at least the determined minimum wage for all hours worked in that pay-roll period or workweek.

For learners engaged on contracts in industries for which a tolerance has been included in the applicable wage determination of the Secretary, it must be demonstrated that a training period is required, and the employee may not have been an experienced operator in that industry. If a tolerance has been authorized for apprentices under a determination, a training period of not less than 4,000 hours (2 years) is contemplated. Compliance with the regulations of a State or Federal apprenticeship committee is satisfactory evidence of the existence of a bona fide apprenticeship agreement. Generally, the period of instruction of apprentices must be considered in computing hours of employment, and they are entitled to overtime pay for hours in excess of the statutory basic workday and workweek just as are other employees.

The law prescribes that Government contracts in excess of $10,000 must specify that the pay of employees working on the contracts shall be "not less than the minimum wages as determined by the Secretary of Labor to be the prevailing minimum wages for persons employed on similar work or in the particular or similar industries or groups of industries currently operating in the locality in which the materials, supplies, articles, or equipment are to be manufactured or furnished under said contract." However, contractors supplying goods covering the manufacture and supply of which the Secretary of Labor has not made a determination are not required to maintain a specified wage minimum but must observe the other labor provisions of the law during the life of the contract.

Before a determination is made by the Secretary, a great deal of preliminary work is necessary. In establishing a definition of industrial coverage for each such determination, the Administrator and his staff consult other divisions of the Department of Labor and representatives of industry. The Public Contracts Board holds public hearings, takes testimony, and publishes its findings and recommendations. Interested parties are given an opportunity to file exceptions to the wage proposals. The final determination of the prevailing minimum wage is made by the Secretary of Labor and may be revised from time to time.

Applications for exceptions and exemptions under the terms of the Walsh-Healey legislation are considered by the Administrator. At

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times he requests the Board to hear arguments and make recommendations to the Secretary of Labor regarding the validity of the claims for relief. The Secretary makes the final decision.

Operations Under Federal Fair Labor Standards Act, 1938-41[1]

Congress, on June 25, 1938, enacted the Fair Labor Standards Act, which became effective 120 days later—October 24, 1938.

The declared purpose of the law is to correct and eliminate labor conditions that are detrimental to the maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers, without substantially curtailing employment or earning power. Under its terms a minimum wage and a maximum workweek are established for employees engaged in interstate commerce or the production of goods for interstate commerce. As the Federal Government may not, under the Constitution, exercise control over conditions of employment of employees whose work is of an intrastate character, some persons in a given plant may be subject to the terms of the wage and hour law while others engaged in the same processes are not affected. Certain industries, notably farming, are specifically exempt. Employment of children under 16 years of age is prohibited and in hazardous occupations the minimum age limit is 18.

The act provided for a progressive shortening of the basic workweek. On October 24, 1938, the effective date of the act, the 44-hour week became the normal maximum. This was reduced to 42 hours on the same date of the following year and to 40 hours as of October 24, 1940. All hours worked by any covered employee in excess of the maximum schedule in any week must be paid for at the rate of not less than one and one-half times the regular hourly rate. There is no limit on the amount of overtime which may be worked, provided the prescribed overtime rate of wages is paid.

The initial minimum hourly wage rate of 25 cents, effective October 24, 1938, was automatically raised to 30 cents on October 24, 1939. This 30-cent minimum remains in effect until 1945, when the minimum becomes 40 cents, unless in the meantime, rates above 30 cents (but not more than 40 cents) are established by the Administrator for particular industries, in accordance with a prescribed procedure. Under this procedure, committees study the wage structure of particular industries, hearings are held, and recommendations are made to the Administrator, who is empowered to fix minimum rates (i. e., above 30 cents an hour but not more than 40 cents).

Coverage of Act

In a survey made by the Bureau of Labor Statistics in April 1939 it was estimated that the Fair Labor Standards Act covered 12,652,700 persons and that 690,000 workers in continental United States and

[1] From the Monthtly Labor Review for September 1940, with later data added.

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Puerto Rico would benefit when the hourly wage was raised to 30 cents on October 24, 1939. It was further estimated that 2,382,500 employees in continental United States were working more than 42 hours weekly, the maximum workweek permissible without overtime payments after October 24, 1939. Of this total nearly 70 percent (that is, 1,663,500) were not being paid at overtime rates for time worked in excess of 42 hours. When the 40-hour week became effective on October 24, 1940, the Administrator stated that nearly 2,000,000 wage earners were affected by the hours standard, in any week of average activity.

More than three-fifths of the workers subject to the terms of the act were engaged in manufacturing industries. Others were employed in mining, quarrying, and crude-petroleum production, on railroads and motor carriers, or by public utilities, wholesale trade, mail-order houses, and insurance and brokerage firms. State estimates of employees covered and of those affected by the wage and hour provisions of the law indicated that when the 1939 changes in working standards were made there would be marked effects in 36 States. The remaining 12 States had relatively small numbers of employees who were directly affected.

In general, there was a sharp difference in coverage between wage earners and salaried workers. In manufacturing about 63 percent, and in the extractive industries about 60 percent of the salaried workers were estimated to be subject to the act. Among wage earners in both the manufacturing and extractive industries it was estimated that all but 5 or 6 percent were covered. However, it should be noted that these figures are based on employer estimates as to their coverage under the law, before definitive decisions as to coverage had been made in the courts.

The lowest ratios of wage earners subject to the act occurred in wholesale trade, insurance and brokerage, motor carriers, and electric light and power.

Wage Orders

By the end of September 1941, wage orders had been issued by the Administrator covering the majority of industries in which a substantial number of workers were earning less than 40 cents an hour. The number of workers employed in industries subject to wage orders aggregated approximately 4 million, and of this number many hundreds of thousands of workers had received direct wage increases as the result of the industry-committee program.

Table 1 shows the industries for which wage orders had been issued by late September 1941. Wage orders for Puerto Rico are excluded, as they are discussed later. In a number of important instances a second wage order had been issued for an industry during the period. In the textile industry, for example, a minimum rate of 32½ cents an hour originally established by wage order was superseded by a rate of 37½ cents. This latter wage order alone resulted in direct wage increases to approximately 300,000 workers. In the important apparel industry, new wage orders were issued for several major divisions, raising the hourly rates from the level of between 30 and 40 cents to 40 cents.

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TABLE 1.—*Minimum-wage orders by industry, effective date, wage rates and coverage, as of the end of September 1941*[1]

Industry	Date effective	Minimum hourly wage rate (cents)	Coverage	
			Wage earners in industry[2]	Wage earners directly affected
Textiles	Oct. 24, 1939	32½	668,000	175,000
Wool	June 17, 1940	36	159,000	12,600
Apparel	July 15, 1940		719,257	190,603
Men's and boys' clothing		40	138,446	10,374
Sportswear and other odd outerwear		40	18,827	7,644
Leather and sheep-lined garments		40	5,115	1,059
Rainwear		40	3,471	1,463
Cloaks, suits, and separate skirts		40	52,813	1,162
Caps and cloth hats		40	3,710	1,447
Belts		40	4,675	725
Single pants and breeches other than those of 100-percent cotton fabric		37½	10,192	4,658
Dresses		35	110,761	26,250
Blouses, shirtwaists, neckwear, and scarfs		35	12,390	1,908
Corsets and allied garments		35	20,714	4,101
Underwear, nightwear, and negligees		35	33,800	12,878
Infants' and children's outerwear		35	24,418	10,158
Robes		35	5,920	2,315
Washable service apparel		35	[3]	[3]
Covered buttons and buckles		35	774	[3]
Garters, suspenders, and armbands		35	2,861	924
Ladies' handbags		35	15,001	5,145
Artificial flowers and feathers		35	7,180	2,535
Men's neckwear and scarfs		35	10,385	2,389
Gloves and mittens other than work gloves and mittens		35	20,121	7,106
Single pants of 100-percent cotton fabric, overalls, coveralls, and work shirts:				
Single pants of 100-percent cotton fabric		32½	[3]	[3]
Overalls, coveralls, etc.		32½	37,817	13,463
Work shirts		32½	14,015	10,371
Dress shirts, collars, and sleeping wear		32½	73,432	31,649
Men's and boys' underwear		32½	6,805	4,539
Work gloves and mittens		32½	9,284	4,893
Handkerchiefs		32½	5,111	2,499
Hosiery—Seamless	Sept. 18, 1939	32½	61,100	29,800
Full-fashioned	Sept. 18, 1939	40	35,000	16,500
Hat	July 1, 1940	35, 40	25,000	5,500
Millinery	Jan. 15, 1940	40	20,800	3,400
Shoe manufacturing and allied industries	Apr. 29, 1940	35	234,000	60,000
Knitted outerwear	July 1, 1940	35	26,000	8,500
Knitted underwear and commercial knitting	May 6, 1940	33½	62,000	17,000
Railroad carrier	Mar. 1, 1941	33, 36	1,067,000	69,400
Leather	Sept. 16, 1940	40	48,900	2,800
Pulp and primary paper	do	40	129,000	8,400
Carpet and rug—Wool	Mar. 17, 1941	40	31,100	1,100
Other than wool	Mar. 17, 1941	35		
Luggage and leather goods	Jan. 6, 1941	35	17,000	4,700
Converted paper products	Sept. 30, 1941	36, 38, 40	200,000	31,000
Embroideries	Jan. 27, 1941	37½	15,200	4,400
Portable lamp and shade	July 1, 1941	40	10,300	4,500
Enameled utensils	Apr. 21, 1941	40	6,100	1,200
Drugs, medicines, and toilet preparations	July 7, 1941	40	44,600	9,400
Single pants, shirts, and allied garments[4]	Sept. 29, 1941	40	146,000	99,000
Seamless hosiery[4]	Sept. 15, 1941	36	63,300	28,100
Rubber products	July 28, 1941	40	131,500	9,900
Clay products	Sept. 1, 1941	34	39,000	7,000
Textile[4]	Sept. 30, 1941	37½	661,000	300,000
Women's apparel[4]	Sept. 29, 1941	40	256,000	63,500

[1] Since the Census of Manufactures does not include home workers, all of the following figures are based on factory workers only. Insofar as home work is important in a particular industry, the estimates are incorrect.

[2] Based on Census of Manufactures data for plants whose major product is included in the definition of the industry shown.

[3] Not available.

[4] Industry covered by previous wage order.

Source: Based on estimates made by the Research and Statistics Branch of the Wage and Hour Division, at the time of the industry-committee meetings except for apparel which is based exclusively on 1939 preliminary releases of the Census of Manufactures.

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In establishing wages above the statutory minimum of 30 cents an hour, an exception was made for workers in Puerto Rico. Under a resolution of Congress (No. 88, ch. 432, 76th Cong., 3d sess.) it was provided that no industry committee may recommend hourly wage rates above the statutory minimum for workers in Puerto Rico and the Virgin Islands, but the Administrator may appoint a special committee or committees to make recommendations for a rate which may be below the statutory limit, provided such wage rate does not give employers a competitive advantage over employers in the United States. Also, under this resolution workers in these Territories were exempted from previous wage orders of the Administrator. Following this action of Congress, a special industry committee was appointed for Puerto Rico. On the basis of its findings and recommendations the Administrator had issued 12 wage orders up to late September 1941 fixing hourly rates of 12½ to 25 cents. The largest group affected consists of needleworkers. One recommendation, for the leaf-tobacco industry, was pending approval by the Administrator at that time.

The special committees for the industries for which wage orders have been issued either have been or will be disbanded in accordance with established procedure. As need arises they may be reconvened, to survey conditions in the respective industries and to recommend further changes in wages (as long as they are between 30 and 40 cents an hour).

In addition to industries for which wage orders had been issued, a number of recommendations were awaiting decision by the Administrator in the latter part of September 1941. The more important of these recommendations related to the lumber and timber products industry, the wood-furniture industry, and the property motor carrier industry, none of which had been previously subject to wage order, together with shoe manufacturing and allied industries where a second recommendation had been made. If these recommendations are put into effect, many thousands of additional workers will have had their wages increased through the industry committee procedure provided for in the act. The industries for which industry committees had made recommendations late in September 1941 are shown in table 2.

TABLE 2.—*Minimum wages recommended by industry committees as of end of September 1941* [1]

Industry	Minimum hourly wage rate (cents)	Coverage	
		Wage earners in industry [2]	Wage earners directly affected
Gray iron jobbing foundry	40	100,000	5,200
Jewelry	40	35,000	11,500
Knitted and men's woven underwear and commercial knitting [3]	40	68,000	15,000
Wood furniture	40	121,000	43,100
Lumber and timber products	35	384,500	168,300
Miscellaneous apparel [3]	40	21,150	7,259
Knitted outerwear [3]	40	23,500	6,000
Passenger motor carrier	40	36,000	4,000
Property motor carrier	40	600,000	70,000
Shoe manufacturing and allied industries [3]	40	228,000	88,000

[1] Since the Census of Manufactures does not include home workers, all of the following figures are based on factory workers only. Insofar as home work is important in a particular industry, the estimates are incorrect.

[2] Based on Census of Manufactures data for plants whose major product is included in the definition of the industry shown.

[3] Industry covered by previous wage order.

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Administration of Fair Labor Standards Act

A special division—the Wage and Hour Division of the United States Department of Labor—administers the wage-and-hour law, with the exception of the child-labor provisions which are administered by the Children's Bureau. In addition to the central office maintained in Washington, D. C., there are 14 regional offices in the following cities: Boston, New York, Philadelphia, Richmond, Charlotte, Atlanta, Birmingham, Nashville, Cleveland, Chicago, Minneapolis, Kansas City (Mo.), Dallas, and San Francisco. A territorial office operates in Puerto Rico.

The Wage and Hour Division's functions are to issue regulations under the terms of the act, to determine the exemptions that may be granted under its terms and to grant them, and to enforce the provisions of the law.

Interpretations are also issued by the Administrator but with the understanding that the courts alone are able to render final decisions as to the intent of Congress in framing the provisions of this law. Pending court decisions as to the meaning of the terms, however, the law is being enforced in accordance with the best judgment of the Division as expressed in interpretations and regulations. The Administrator issues wage orders after study of the recommendations of industry committees. Such orders also are subject to review by the courts.

Comparison of Davis-Bacon and Walsh-Healey Acts[1]

Contracts awarded by the Federal Government in connection with the national defense program have given a new impetus and direction to the productive activities of the Nation in recent months. The Davis-Bacon Act (Prevailing-Wage Act) and the Walsh-Healey Act (Public Contracts Act) stipulate the Government's measures of control over the conditions of labor in the performance of the contracts it awards. Because of the volume and diversity of goods being currently produced under Federal contracts, the coverage and provisions of these acts are here reviewed.

The points of similarity and difference in the principal labor provisions of the two acts can be summarized briefly. The Davis-Bacon Act applies to Federal contracts in excess of $2,000 for construction and repair of public buildings and public works. The Walsh-Healey Act, on the other hand, is applicable to contracts in excess of $10,000 awarded for the manufacture or furnishing of materials and equipment. By a special statute, contracts for the construction of naval vessels for the Navy Department were placed under the Walsh-Healey Act.

A laborer or mechanic is covered by the Davis-Bacon Act only if he is actually employed at the site of construction. A worker is covered by the Walsh-Healey Act if he is employed by the contractor, if he is employed by a manufacturer supplying materials directly to the Government under a contract awarded to a dealer, or if he is employed by one manufacturer performing work required under a

[1] Abstract of an article by Arthur Dadian, Bureau of Labor Statistics, in the Monthly Labor Review for July 1941.

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contract awarded to another manufacturer which in the normal course of business the contracting manufacturer would have done in his own plant. Thus, employees of subcontractors are not subject to the Walsh-Healey provisions unless the subcontract is for work which, under the usual practice of the industry involved, is not subcontracted.

The Davis-Bacon Act stipulates that the Secretary of Labor shall determine the hourly rates prevailing in the immediate neighborhood of the construction site for each occupation and that these shall be the minimum rates for the various classes of laborers and mechanics. Under the Walsh-Healey Act, the Secretary of Labor determines only the prevailing minimum rate for an industry, rather than for each of the various occupations, and in most instances a single minimum rate has been in effect for an entire industry, regardless of where the goods were being produced.

No mention is made of hours of labor, extra pay for overtime, child or convict labor, nor working conditions in the Davis-Bacon Act. Under the Walsh-Healey Act not less than time and a half must be paid for all work in excess of 8 hours a day or 40 hours in any one week; this act also prohibits the employment of convict and child labor and requires that safe and sanitary working conditions be maintained.

State Minimum-Wage Legislation[1]

The Federal Government, 26 States, the District of Columbia, Alaska, and Puerto Rico have on their statute books minimum-wage laws applicable to wages paid in private industry. The Federal laws apply equally to both sexes, but the State laws, with the exception of Connecticut, apply specifically to women and, in most cases, minors. The constitutionality of both Federal and State legislation has now been upheld by the Supreme Court. This article deals with the State minimum-wage legislation for women. The general Federal legislation is discussed in another article.

Historical Background

The history of State minimum-wage legislation closely parallels the interpretation of such legislation in the courts. Massachusetts in 1912 was the first State to enact a minimum-wage law covering women and minors in private employment. In 1913 eight States—California, Colorado, Minnesota, Nebraska, Oregon, Utah, Washington, and Wisconsin—passed minimum-wage laws. Arkansas and Kansas passed such laws in 1915, followed in 1917 by Arizona.

The first minimum-wage case to go to the United States Supreme Court was one involving the Oregon law (*Stettler* v. *O'Hara*, 243 U. S. 629). In this case an equally divided court affirmed a decision of the highest court of Oregon upholding the constitutionality of the Oregon law. Mr. Justice Brandeis, who had played an important part in the preparation of the brief for the State court, did not take part in the

[1] Prepared by Louise Stitt and Alice Angus, of the Women's Bureau, U. S. Department of Labor.

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decision. Although, as a consequence, this case had not the weight of a clear-cut majority decision, it nevertheless served as an impetus for other States to enact minimum-wage laws.

In 1918 Congress passed the District of Columbia Minimum Wage Act. In 1919, minimum-wage laws were enacted in North Dakota, Texas, and Puerto Rico, and in 1923 in South Dakota.

The question of constitutionality was presented to a full court for the first time in 1923 in a case involving the District of Columbia law. The Supreme Court handed down a 5-to-4 decision invalidating the law on the ground that it violated the constitutional right of freedom of contract (*Adkins* v. *Children's Hospital*, 261 U. S. 525). This opinion was followed in 1925 by a decision invalidating the Arizona law (*Murphy* v. *Sardell*, 269 U. S. 530), and in 1927 by a decision invalidating the Arkansas law (*Donham* v. *West-Nelson Mfg. Co.*, 273 U. S. 657).

The repercussions of the Adkins case were many and far reaching. The most immediate effect was the repeal, invalidation, or weakening of much of the existing minimum-wage legislation. Thus, within a few years, 3 laws were repealed (Nebraska, Texas, and Utah); 2 laws were held unconstitutional by State courts (Kansas and Puerto Rico); and 1 law was interpreted to be applicable only to minors (Minnesota).

A more remote effect of the Adkins decision was the drafting in 1932 of a new type of law expressly designed to overcome the objections of the majority opinion in the Adkins case. The economic depression was a contributing factor, as was also the fact that minimum-wage legislation had reached its lowest point. At the end of 1932 only 9 States (California, Colorado, Massachusetts, Minnesota, North Dakota, Oregon, South Dakota, Washington, Wisconsin) had minimum-wage laws on their statute books, and some of these laws were inoperative. In the new draft legislation the standard for setting the minimum wage was changed from a cost-of-living basis to that of the fair value of the services rendered. Minimum-wage laws of the new type were passed in 1933 by 6 States (Connecticut, Illinois, New Hampshire, New Jersey, New York, and Ohio); in 1934 by Massachusetts, to take the place of its early law which was of the directory type; and in 1936 by Rhode Island. Utah also passed a minimum-wage law in 1933, but it did not adopt the "fair wage" principle.

In 1936 one of the new "fair wage" statutes, the New York minimum-wage law, came before the Supreme Court in the case of *Morehead* v. *N. Y. ex rel. Tipaldo*, 298 U. S. 587. The Supreme Court affirmed the decision of the highest State court, holding the New York law unconstitutional. The Court in this case refused to reconsider the constitutional issue, basing its decision on the technical grounds that review had been sought only on the narrow issue of whether the facts in the Morehead case were distinguishable from the facts in the Adkins case, and that it found they were not so distinguishable.

The question of constitutionality came before the Supreme Court the following year, 1937, in a case involving the Washington State minimum-wage law. The Court held that the law was constitutional, and it expressly overruled the decision in the Adkins case (*West Coast Hotel* v. *Parish*, 300 U. S. 397). In view of the many judicial setbacks which State minimum-wage legislation had previously received, the decision in this case is perhaps the most important development in minimum-wage history.

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Recent Development

At the time of the Court's decision in 1937, 17 States had minimum-wage laws in force, but as a result of the previous unfavorable decisions, 2 of these laws, Minnesota and New York, were applied only to minors. After the decision establishing constitutionality, it was natural that interest in this type of legislation should be further stimulated. This was demonstrated by the enactment of new laws, revival of earlier laws, and amendments to existing statutes. Three States (Nevada, Oklahoma, and Pennsylvania), which had never had minimum-wage laws, enacted legislation in 1937. Arizona, whose flat-rate law had been declared unconstitutional, adopted a law of the "fair wage" type. New York and Massachusetts enacted laws to replace those having only limited scope, while Wisconsin achieved a similar result by amendment. Five laws that had been wholly or partially inoperative were revived on the advice of attorneys general (Arkansas, District of Columbia, Kansas, Puerto Rico, and Minnesota). In 1938 Kentucky and Louisiana enacted minimum-wage laws, and in 1939 Maine adopted a law covering one industry. As of June 1, 1941, 26 States, the District of Columbia, Alaska, and Puerto Rico had minimum-wage laws on their books. Since this group includes all the larger industrial States but Michigan, and hence represents by far the largest proportion of wage-earning women in the United States, the progress of State legislation in this field is even greater than a purely numerical count of States would indicate.

Only five of the present laws establish fixed statutory minimum-wage rates uniformly applicable to all workers. These are Alaska, Arkansas, Nevada, South Dakota, and Puerto Rico. The Arkansas law gives the commission power to change the statutory rate after determination of necessity upon holding a public hearing. In all States other than the five previously enumerated, minimum-wage laws do not set statutory rates but, instead, provide the machinery whereby minimum-wage rates may be set for specific industries. Usually the function of setting a wage rate is delegated to a wage board appointed by the administrative agency to represent the public and the employers and employees in the industry. The wage-board method is regarded as the most satisfactory method of determining wage rates because it gives recognition to groups directly affected, permits differences in industries and localities to be taken into account, and enables wage orders to be custom-made to fit the conditions of the particular industry.

In general, the procedure under laws of the wage-board type for establishing minimum-wage rates for an occupation involves the following steps: Survey of the occupation; establishment of a wage board; transmission of the wage board's recommendations to the administrative agency; public hearings; and issuance of the wage order. After the order is issued, all the laws provide for some kind of judicial review, though limitations on the nature and extent of such review vary widely.

The laws contain penalty provisions, which are imposed by a court upon conviction of the employer. The penalty provided usually is either a fine or imprisonment, but a few laws limit the penalty to a

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fine. In addition to failure to pay the specified rate, other acts of the employer for which penalties may be imposed under many of the laws are discharge of or discrimination against an employee for activities connected with wage investigations and establishment of wage boards; and failure to keep required records, to permit inspections, or to post notices.

Administration of State minimum-wage laws usually is vested in the State agency in charge of general labor laws, such as the State labor department or industrial commission. Frequently there is a separate division for minimum-wage work, in charge of a director, deputy, or superintendent. Under many of the laws the State agency has authority to take assignments of wage claims and to collect back wages for the employee. Under some laws, however, the employee himself must bring a civil suit.

Coverage and Standards of Present Minimum-Wage Orders

The progress of State minimum-wage legislation in the 4 years that have elapsed since the Supreme Court decision may be measured most significantly by the issuance of new wage orders under State laws of the wage-board type, and by the high standards set in those orders.

The Supreme Court's decision was an immediate impetus to the issuance of orders. Of the total number of orders in force January 1, 1939—27 years after State minimum-wage legislation was first enacted—more than half were issued within 20 months after the decision of March 1937. In the remainder of the year 1937, 21 orders were issued, and in 1938 no fewer than 37 orders were issued, a total of 58 orders in a 21-month period. This activity has continued. In 1939, 23 orders, and in 1940, 13 orders, including in both years a few revisions, were issued.

On June 1, 1941, 123 wage orders covering roughly one and a quarter million women and minors were in effect in the 24 jurisdictions having minimum-wage laws of the wage-board type. In addition, approximately 80,000 women and minors were covered in the 5 States in which wage rates are set by statute. It has been estimated that minimum-wage laws now in force make possible potential total coverage of 4 million women and minors. Hence, even without enacting new wage laws in other States, it would be possible by issuing additional wage orders in States that now have such legislation to extend minimum-wage protection to between 2 and 3 million additional women and minors.

Progress in State minimum-wage legislation may also be measured by the high standards set in recent orders. Notable among these is the establishment of a basic minimum-wage rate on a weekly, rather than an hourly, basis. This is called a "guaranteed weekly wage" because it assures a full week's pay to employees who have not the opportunity to work the maximum number of hours. Where minimum-wage rates are established on a straight hourly basis, many workers are prevented by the irregularity of employment in some industries from earning a full week's pay.

Guaranteed weekly wage provisions have taken several forms. The most liberal from the standpoint of the employee is that found in the

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New York laundry order, which requires payment of the full amount of the specified weekly wage for any work, irrespective of the number of hours, up to 40 a week. Guaranteed weekly wage provisions in a more modified form have been adopted by several other States for the laundry industry and other industries. Colorado, for example, requires payment of the full weekly wage to laundry workers who work 40 hours or less, except that workers who prefer to be employed regularly on a part-time basis may be paid on an hourly basis if special permits are obtained. The District of Columbia laundry order requires payment of the weekly minimum wage for work ranging from 17 to 44 hours a week. Other industries for which guaranteed weekly wage rates in some form have been established are beauty culture, confectionery, office, and retail trade.

Another standard incorporated in recent orders is establishment of a higher wage rate for work that is beyond the number of hours normally considered desirable in an industry but within the maximum number of hours permitted by law. An "overtime pay" provision, as this is called, not only benefits the employees affected but is an aid in regularizing employment within an industry and in spreading work. Overtime-pay provisions are frequently adopted in orders where the basic rate is established on a guaranteed weekly wage basis, as well as in orders where an hourly wage basis is adopted throughout. Thus the Connecticut order for beauty culture establishes for a certain group of workers a guaranteed weekly wage of $18 for work on 4 or more days a week, and an overtime rate of 60 cents an hour for work beyond 48 hours, the maximum legal hours being 52 a week. The New Jersey order for the wearing-apparel industry, on the other hand, establishes a basic minimum-wage rate of 35 cents an hour applicable to work up to and including 40 hours, with time and a half beyond that, the legal limit being 54 hours a week.

The occupations that have been covered by wage orders in the various States have two common characteristics, i. e., a relatively large proportion of women employed, and widespread existence of low wages. Considering the great variety of occupations that have these characteristics, State wage orders show considerable uniformity in occupations covered. As of June 1, 1941, minimum-wage rates for the following occupations were in effect in States having laws of the wage-board type: 18 States have established minimum-wage rates for the laundry industry, 15 for the dry-cleaning industry, 13 for retail trade, 13 for beauty culture, 12 for hotels and restaurants (2 for restaurants only), and 7 for offices. The District of Columbia also covers all these occupations by wage orders. Eight States cover one or more kinds of food processing, such as fish, fruit, and vegetable packing or canning, occupations either wholly or partially exempt from certain of the provisions of the Fair Labor Standards Act.

Some or all branches of manufacturing covered by the Fair Labor Standards Act are covered in 14 States and the District of Columbia by wage orders, most of which were issued before the Federal law was enacted. The lack of uniformity in standards under State and Federal orders has given rise to many difficult enforcement problems. As a result, there is a growing tendency among State administrators to leave the regulation of manufacturing to the Federal Government. At the same time they are becoming more aware of the need for issuing new wage orders for the intrastate and service industries so that the

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protection of minimum-wage legislation may be extended to workers in these industries not covered by Federal law. A definite influence toward coordination of activity in the minimum-wage field and the development of high standards in State wage orders has been the national conferences of State minimum-wage administrators convened annually by the Women's Bureau of the United States Department of Labor.

Table 1 illustrates the occupations covered and the rates established under flat-rate laws and minimum-wage orders in force as of June 1, 1941. Table 2 shows the approximate numbers of workers covered. The material has been divided into three parts so that data for each of the following groups are given separately: (1) Wage orders for specific industries, (2) general wage orders, (3) flat-rate laws. It will be noted that in two of the three States that have general orders, wage orders also have been issued for specific occupations, thereby taking such occupations out of the coverage of the general orders. The names of these two States therefore appear in both part (a) and part (b). In part (a), "coverage under wage orders for specific industries," the data on "range in full-time rates" illustrate not only the amount of such rates but the differences in standards. In the column showing the highest rates, many examples of the guaranteed weekly wage and overtime pay for work not exceeding the weekly limit are found. In the column showing the lowest rates, nearly all the rates are set on a straight hourly basis so that the employee must work the legal maximum number of hours in order to earn a living wage.

TABLE 1.—*State minimum-wage coverage as of June 1, 1941* [1]

(a) COVERAGE OF WAGE ORDERS FOR SPECIFIC INDUSTRIES [2]

Industry	States with wage orders	Range in full-time rates for experienced workers [3]	
		Highest	Lowest
Laundry	Ariz., Calif., Colo., Conn., D. C., Ill., Mass., Minn., N. H., N. J., N. Y., N. Dak., Ohio, Oreg., Pa., R. I., Wash.	N. Y.: $14 a wk.—any work up to 40 hrs.; 35¢—over 40 to 45 hrs.; 52½¢—45 to 48 hrs.	Penn.: 27¢ an hr. (44 hr. max. wk.).
Dry cleaning	Ariz., Calif., Conn., D. C., Mass., N. H., N. J., N. Y., N. Dak., Ohio, Oreg., R. I., Wash.	N. Y.: 36¢ an hr.—40 hrs.; 45¢—over 40 to 48 hrs.	N. Dak.: $12.60 for wk. of 38 to 48 hrs.
Retail trade	Ariz., Calif., Colo., D. C., Mass., N. H., N. Dak., Oreg., R. I., Utah, Wash.	D. C.: $17 a wk. of 40–48 hrs.	N. Dak.: $13 for wk. of 48 hrs.
Beauty culture	Calif., Colo., Conn., D. C., Ill., Mass., N. H., N. Y., Ohio, Oreg., Wash.	Conn.: $18 a wk. for work on 4 or more days; 60¢ an hr. for over 48 to 52 hrs.	Oreg.: 30¢ an hr. (44 hrs. max. wk.).
Restaurant and hotel.[4]	Calif., Colo., D. C., Minn., N. H., N. Y., N. Dak., Ohio, Oreg., Utah, Wash.	D. C.: $17 (nonservice)—wk. of 40 to 48 hrs.	N. H.: 22.2¢ an hr.—nonservice (54 hrs. max. wk.).
General and professional offices.	Calif., D. C., Mass., Oreg., Wash.	D. C.: $17 a wk. of 30 to 44 hrs.; 50¢ an hr. over 44 hrs. No hr. limit.	Wash.: $13.20 for wk. of 48 hrs.
Fish, fruit, and vegetable packing and canning.	Calif., Maine, Mass., Oreg., Wash., Wis.	Wash.: 37½¢ an hr. (48 hr. max. wk.).	Wis.: 22½¢ an hr. (54-hr. wk. in season).
Manufacturing, other than fish, fruit, and vegetable packing and canning.	Calif., D. C., Ill., Mass., Minn., N. H., N. J., N. Y., N. Dak., Oreg., R. I., Wash.	N. J.: 35¢ an hr.—40 hrs. or less; 1½ times regular rate—over 40 to 54 hrs.	N. H. and Wash.: 27½¢ an hr. (48 hrs. max. wk.).
Other [5]	Calif., Mass., N. Dak., Oreg., Wash.	Mass.: 40¢ an hr. No hr. limit. (Office and other building cleaning.)	Oreg.: 30¢ an hr. (44 hrs. max. wk.) (3 orders).

Footnotes at end of table.

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TABLE 1.—*State minimum-wage coverage as of June 1, 1941* [1]—Continued

(b) COVERAGE OF GENERAL WAGE ORDERS

State	Industries covered	Wage rate for experienced workers in all industries covered by general order [3]
Kentucky	All occupations	25¢ an hr. (48 hrs. max. wk.).
Minnesota [6]	Any occupation, i. e., any industry, trade, or branch thereof.	$15—wk. of 36 to 48 hrs.; 36¢ an hr.—over 48 to 54 hrs.
Wisconsin [7]	Any occupation, trade, or industry (includes domestic service).	22½¢ an hr. (50 hrs. max. wk, except for hotels—55 hr. wk. and for minors, 40 hr. wk).

(c) COVERAGE OF FLAT-RATE LAWS

State	Industries covered by minimum-wage law	Statutory rate applicable to all workers
Alaska	All occupations (includes domestic service)	$18 a wk. (48 hrs. max. wk.).
Arkansas	Manufacturing, mechanical (including beauty shops), or mercantile establishment, laundry, express or transportation company, hotel, restaurant, eating place, bank, building and loan association, insurance company, finance or credit business; company supplying electricity or water; work in elevators. *Exceptions:* Cotton factories; gathering of fruit or farm products; railroad companies whose hours are regulated by Federal laws.	$1.25 for day of 9 hrs.
Nevada	Private employment. *Exceptions.* Domestic service; State, county, city, or town employees.	$3 for day of 8 hrs., $18 for wk. of 48 hrs.
Puerto Rico	Industrial occupations, commercial or public service undertakings. *Exceptions:* Agriculture and agricultural industries.	$6 for wk. of 48 hrs.
South Dakota	Factory, workshop, mechanical, or mercantile establishment, laundry, hotel, restaurant, or packing house.	$12 for wk. of 54 hrs.

[1] For more detailed information, see Women's Bureau Bull. No. 167: State Minimum-Wage Laws and Orders, and 1939 and 1940 Supplements.

[2] Kansas, Louisiana, and Oklahoma, with wage-board type laws, have no wage orders in force as of June 1, 1941.

[3] Where wage order establishes a geographic differential, rate given applies to metropolitan areas.

[4] As of June 1, 1941, New Hampshire, Utah, and Minnesota orders apply to restaurants only. Utah has issued hotel order to become effective July 14.

[5] One or more of States listed have orders covering one or more of following industries: Telephone, hospital, apartment house, office and other building cleaning, personal service.

[6] Minnesota has separate wage orders for the laundry, needlecraft, restaurant, and telegraph industries. These industries, included in table 1 (a), are excluded here.

[7] Wisconsin has separate orders for canning. This industry, included in table 1 (a), is excluded here.

TABLE 2.—*Number of workers covered by specified types of minimum-wage orders, June 1, 1941*

Industry or State	Number of workers covered by orders [1]	Industry or State	Number of workers covered by orders [1]
(a) Wage orders for specific industries	898,540	**(b) General wage orders**	295,569
Laundry industry	90,560	Kentucky	59,610
Dry-cleaning industry	7,406	Minnesota [3]	80,600
Retail trade	127,224	Wisconsin [4]	155,359
Beauty culture	54,508	**(c) Flat-rate laws**	78,350
Restaurants and hotels	149,133	Alaska	1,869
General and professional offices	295,443	Arkansas	9,835
Fish, fruit, and vegetable packing and canning	11,233	Nevada	2,704
Manufacturing, other than fish, fruit, and vegetable packing and canning	153,862	Puerto Rico	56,392
Other [2]	9,171	South Dakota	7,550

[1] Figures estimated on basis of 1930 census.

[2] One or more States listed have orders covering one or more of following industries: Telephone, hospital, apartment house, office and other building cleaning, personal service.

[3] Minnesota has separate wage orders for laundry, needlecraft, restaurant, telegraph. These were included under table 1(a) and are excluded here.

[4] Wisconsin has separate orders for canning. These were included under table 1(a) and are excluded here.

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Effect of Minimum Wage on Earnings

The benefits accruing from the introduction of the minimum wage in an industry are best observed when comparisons are made of earnings and hours before the issuance of the minimum-wage order and at specified times thereafter. The United States Women's Bureau made a study in 1937 of the effect of the minimum wage in the dry-cleaning and laundry industries, and studies covering the industries in which the minimum wage had become operative in the States of New York and Rhode Island were made by the department of labor in these States. The minimum wage in the industries covered by these studies applied to women and minors, and the conclusions reached were similar. Earnings were increased on the introduction of the minimum wage, not only for the lowest-paid workers but also for those in the higher wage classes. The minimum did not become the maximum, nor were women replaced by men. Data from these studies are here given.

Effect of Minimum Wage in Dry-Cleaning and Laundry Industries[1]

Minimum-wage regulations in the dry-cleaning and laundry industries, even during adverse business conditions, resulted in improved business management, a higher level of wage rates, and increased total earnings for women. They did not bring about a substitution of men for women, and, although a few employees may have been dismissed by some firms when the minimum rates were first put into effect, in most cases this was due fundamentally to the general bad business condition of the firm. These conclusions were reached by the United States Women's Bureau after a study of conditions in the dry-cleaning and dyeing industry in Ohio and the power-laundry industry in New York in 1937.[2] These were the only two States which issued minimum-wage orders between the fall of 1933 and the fall of 1935, when business conditions were disturbed because of the depression of 1931–33. Comparative studies of the same industries in Indiana and Pennsylvania, respectively, which had no such regulation, were also made. The establishments and employees covered by the surveys were representative of the industries.

During the period covered by the study, important changes took place in the dry-cleaning and dyeing industry. The highly inflammable petroleum hydrocarbons previously used as solvents of grease and loose dirt in dry cleaning were replaced by noninflammable chlorinated hydrocarbons. Newly designed automatic machines for the larger plants and small open machines for small establishments, together with the new press-bed machine and steam iron for pressing, increased the output per employee and decreased costs considerably. Prices were reduced one-half, and the resultant increase in volume of business made it possible to keep the same number of workers as before.

[1] From the Monthly Labor Review for February 1939.
[2] U. S. Department of Labor. Women's Bureau. The Effect of Minimum-Wage Determinations in Service Industries: Adjustments in the dry-cleaning and power-laundry industries. Washington, 1938. (Bull. No. 166.)

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In the power-laundry industry during the period 1931–33 laundry receipts decreased greatly, as a result of a diminished use of laundry services and also because of price cuts. Employment and wages were naturally affected, but the former less than the latter.

Dry Cleaning and Dyeing

Employment.—In Ohio and Indiana the proportion of women among all the employees of all the establishments studied was approximately the same in April 1937 as in April 1934—55 percent and 53 percent, respectively. Thus there was no appreciable shift of work between the sexes during the period, nor did the minimum wage affect the relative proportion of women in Ohio as compared with the proportion in the nonminimum State of Indiana.

Hourly earnings.—The minimum wage set in Ohio for the dry-cleaning and dyeing industry was 35 cents an hour or $14 a week for a 40-hour workweek, except that for store clerks it was 35 cents an hour or $16.80 for a 48-hour workweek. Under the minimum-wage orders, payments of less than 35 cents an hour have been practically eliminated and after 2 years' operation, as shown by records of identical firms, the proportion of women earning 40 cents and over had increased from 30 percent in 1935 to 51 percent in 1937.

In Indiana nearly three-fifths of the women in the industry were still earning less than 35 cents an hour in April 1937, and the proportion of women in identical firms earning 40 cents and over had increased from 16½ percent in 1934 to only 27 percent in 1937.

Comparison of men's and women's hourly earnings in identical firms in Ohio revealed that there was an increase over the 3 years of 7.6 percent in men's median earnings (from 48.8 to 52.5 cents) and of 14 percent in women's median earnings (from 35 to 40 cents). In Indiana the increase in men's earnings was 19 percent (from 35.0 to 41.7 cents) and in women's earnings it was 10 percent (from 30 to 33 cents). Thus the minimum wage seems to have influenced firms in Ohio to give woman employees a relatively larger increase than the men, whereas in Indiana the men received the larger increases. Women in Ohio employed in the same occupations were, however, still earning substantially less than men.

Weekly hours and earnings.—Although the Ohio hour law limits the workweek of women to 50 hours, the minimum-wage order set no specific limit but required the payment of time and a half for all time over 48 hours worked by store clerks and over 40 hours worked by others. During busy months therefore, no attempt was made to limit hours. Only 18½ percent of the women in Ohio worked as long as 48 hours, however, as compared with 41 percent in Indiana, so that the minimum wage did prevent overlong hours for many women.

During the 3-year period, week's earnings of women in all the firms having records increased more than 20 percent (from $13.85 to $16.70) and those of women in identical firms increased about 23 percent. These increases in week's earnings compare with increases in Indiana of 10 (from $13.15 to $14.50) and 16½ percent, respectively. The weekly minimum set in Ohio evidently did not become the usual rate, as only 3 percent of the women earned that amount in both 1935 and 1937, and it did not become the maximum as three-fourths of all the woman workers earned more than $14 a week in 1937.

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Power-Laundry Industry

The proportion of woman employees in identical establishments in the power-laundry industry changed but little between 1933 and 1935, in both New York and Pennsylvania, there being a decrease of only 1.6 points and 0.5 point, respectively. Obviously there was no shifting of employment between the sexes because of the minimum wage in New York.

Hourly earnings.—The New York minimum-wage order for the laundry industry, which became effective October 2, 1933, and mandatory August 6, 1934,[3] fixed a rate of 31 cents an hour in the New York City area and 27½ cents an hour in the rest of the State for a workweek of 40 hours. Prior to the enforcement of the order, over four-fifths of the woman workers in the New York City area earned less than 31 cents an hour, and more than three-fourths of those in 21 other New York cities earned less than 27½ cents. After 15 months' operation of the minimum-wage order, 45 percent of the woman workers in the New York City area earned 35 cents an hour and 38 percent between 31 and 35 cents; 28 percent of those in the 21 other New York cities earned 27½ cents and 45 percent earned between 27½ and 31 cents. In Pennsylvania, where there was no minimum wage, 87 percent of the woman employees in Philadelphia and 26 other cities earned less than 27½ cents an hour in May 1933, and in November 1935 there were still 71 and 76 percent, respectively, earning less than that amount, as compared with less than 1 percent in New York State.

Weekly hours and earnings.—The minimum-wage order for the power-laundry industry in New York State specified that time and a half should be paid for all time worked after 45 hours a week. Before the wage order became effective, 48 percent of the woman laundry operatives in New York City worked 46 hours or longer, as compared with 12 percent in 1935. In 21 other New York cities, 27 percent of the women worked at least 46 hours in 1933 as against 10 percent in 1935. In Pennsylvania, which permitted a 54-hour week, only 13 percent of the women worked as long as 46 hours in November 1935, but undertime was more of a problem in this State than overtime.

Average week's earnings in New York City increased from $11.10 prior to the minimum-wage order to $13.50, 15 months after the order became mandatory, and in 21 other cities in the State the increase was from $9.30 to $11.85 in the same period. Pennsylvania laundry women earned $2.20 less in 1933 than those in New York and $2.50 less in 1935.

The effect of overtime rates is apparent from the fact that the average week's earnings of the women in the New York City area who worked 46 hours or longer in 1935 were $15.30 and in other New York cities $13.70, while in Philadelphia the women averaged but $12.20 and in other parts of the State $12.40 for 46 hours or longer.

Effect of Minimum Wage in New York Industries.[4]

Increased wages for women in the higher wage classifications as well as for the lowest-paid workers resulted from the introduction of the State minimum wage for women and minors in the beauty-service,

[3] A new order became effective March 14, 1938, and was made mandatory August 22, 1938, which made certain changes in rates.

[4] From the Monthly Labor Review for February 1941.

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confectionery, and laundry industries in the State of New York. This was revealed by annual analyses by the New York State Department of Labor of sworn pay rolls for a given week.[5]

Beauty-Service Industry

Median weekly wages of woman workers in beauty parlors in April 1940 were 25 percent higher than in 1936 before there was a minimum-wage law, increasing from $13.47 in 1936 to $16.79 in 1940. The increases to the lowest-paid workers had the effect of pushing up the wages of women in the higher classifications also. Whereas 65 percent of the workers in 1936 earned less than $15 a week, only 14 percent earned that little in 1940 and more than 41 percent were paid more than the required minimum.

Median hourly earnings increased even more in this 4-year period—from 27.6 cents in 1936 to 39.3 cents in 1940, or more than 42 percent. In 1940 almost all of the workers (98.4 percent) received 35 cents or more an hour, as compared with only 27.4 percent in 1936.

These increases in the wages of the workers generally, in the 4-year period, occurred in spite of the fact that the workweek had been shortened 3 hours. The shortening of hours was due to the State law limiting the daily and weekly hours of work of women, as well as to the minimum-wage order. The median week's hours in 1940 were 45.0 as compared with 48.4 in 1936.

Confectionery Industry

A year after the directory order became effective in the confectionery industry in the State of New York, the median week's earnings had increased from $15.77 to $16.06. All classes of workers had benefited. The lowest-paid groups were almost depleted of workers, and even the highest-paid group—those earning $20 or over a week—had increased from 15 percent to 20 percent.

Hourly rates of wages showed similar increases. In 1939 all but 2 percent of the women received 35 cents or more an hour, as compared with less than 69 percent in 1937.

The median workweek was the same in both years, 40 hours, but the percentage of women working 48 hours or over in the week was reduced from 20.4 to 6.4.

Laundry Industry

In the laundry industry also, the legal minimum wage brought increases to woman workers all along the line from the lowest to the highest. Median week's earnings in laundries in Zone A [6] rose from $14.76 in 1937 to $15.62 in 1939 and in Zone B [6] from $12.86 to $14.44. Median hourly earnings showed a similar trend, increasing from 36.4 cents in 1937 to 38.8 cents in 1939 in laundries in Zone A and from 32.5 cents in 1937 to 34.9 cents in Zone B.

Part-time work decreased under the minimum-wage order, the proportion of women having a regular workweek of at least 40 hours being greater in 1939 than in 1938 or in 1937.

[5] New York State Department of Labor. The Industrial Bulletin (Albany), July 1940, September 1940, and October 1940.

[6] Zone A covers New York City and Westchester and Nassau Counties; Zone B includes all places over 18,000 outside Zone A. No data are given for laundries in other places in the State (Zone C) as they have no guaranteed weekly wage, though there is a minimum of 30 cents an hour.

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Effect of Minimum Wage on Women's Earnings in Rhode Island[7]

The introduction of the minimum wage in the three industry groups in Rhode Island for which wage orders had become operative had the effect of raising the wage rates of many women and minors, but did not result in the minimum wage becoming the maximum nor in women being replaced by men. This was indicated by the results of surveys made by the Division of Women and Children of the Rhode Island Department of Labor.[8]

Minimum-wage orders became operative in Rhode Island in jewelry manufacturing, March 1, 1937; in the manufacturing of wearing apparel and allied industries, October 18, 1937; and in the laundry and dry-cleansing industries, May 2, 1938. The wage orders, when put into effect, were directory only, carrying no fines as penalty for violation. Those in the jewelry-manufacturing and the wearing-apparel and allied industries were, however, made mandatory on August 1, 1937, and April 25, 1938, respectively.

The survey in the jewelry-manufacturing industry covered 132 identical firms, with 8,467 employees in August 1936 and 9,657 in August 1937; the survey in the wearing-apparel and allied industries covered 54 identical firms, with 4,392 employees in October 1936 and 3,700 in November 1937; and the survey in the laundry and dry-cleansing industries covered 155 establishments in the second week of May 1938, employing 1,887 women and minors who came under the 30-cent minimum. A rate of 35 cents was made the minimum in the wearing-apparel and allied industries and of 30 cents in jewelry-manufacturing and the laundry and dry-cleansing industries.

Hourly and Weekly Earnings

Average (median) hourly earnings of women and minors covered by the survey of the jewelry industry increased from 32.1 cents before the introduction of the minimum wage to 36.0 cents after it became effective, or 12.1 percent. In the wearing-apparel and allied industries the increase was from 33.3 to 38.1 cents, or 14.4 percent.

In the jewelry-manufacturing firms surveyed, 38.1 percent of the women and minors received less than 30 cents an hour before the wage order, as compared with 0.2 percent afterward. A similiar decrease occurred in the proportion of women and minors in the laundry and dry-cleansing industries who received less than 30 cents an hour before and after the wage order, the reduction being from 40.1 percent to 2.4 percent.

In the wearing-apparel and allied industries, the percentage of women and minors reported as receiving less than 35 cents an hour was reduced from 56.3 before the wage order to 27.4 after it went into operation—or over one-half. In this industry group the wage order made provision for lower rates for learners and handicapped persons, so that the percentage receiving less than the minimum after the wage order did not represent violations only.

[7] From the Monthly Labor Review for September 1938

[8] Rhode Island. Department of Labor. Division of Women and Children. Comparison Hours and Wages of Employees in 132 Identical Firms Manufacturing Jewelry in the State of Rhode Island, Before and After the Mandatory Wage Order [Providence], April 1938; Comparison Hours and Wages of Employees in 54 Identical Firms in the Manufacturing of Wearing Apparel and Allied Industries in the State of Rhode Island Before and After the Mandatory Wage Order, also Preliminary Summary of the Results of the Laundry and Dry Cleansing Wage Orders [Providence], June 1938 (mimeographed).

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Both in jewelry manufacturing and in the wearing-apparel and allied industries, a distribution by wage groups showed a smaller percentage of the women and minors in each wage group below the minimum rate, and a larger percentage in each wage group above that rate, after the wage orders than before. The reports for the laundry and dry-cleansing industries disclosed that after the wage order was issued, 47.3 percent of the women and minors covered were paid the minimum rate exactly, and that 50.3 percent received more than that rate.

From these facts it appears that the increases in wage rates of the lower-paid workers in these three industries in Rhode Island did not result in lowered rates for the higher-paid workers therein.

Average (median) earnings in the jewelry and wearing-apparel industries showed an increase in 1937, after the minimum wage became effective, over those in 1936. In jewelry manufacturing the average weekly earnings of women and minors increased from $12.16 to $13.63, or 12 percent. The increase in the weekly wages of women and minors in the manufacture of wearing apparel and allied industries was smaller, being from $12.90 to $13.32, or 3.3 percent. A shorter workweek in 1937 was given as the reason for the small increase in weekly earnings in the wearing-apparel industries as compared with that in hourly earnings. The fact that there were 692 fewer employees in the reporting firms in this industry in 1937 than in 1936, being a decrease of 15.8 percent, indicated that the shorter workweek was probably due to the recession in the fall of 1937.

Effect on Employment of Women

The proportion of women to men employed remained approximately the same in the wearing-apparel and allied industries after the order became operative as before, and exactly the same in the laundry and dry-cleansing industries; in jewelry manufacturing the proportion of women and minors increased from 54.8 to 59.2 percent. From these data it appears that the introduction of the minimum wage did not result in women losing their jobs and being replaced by men. While the minimum-wage orders did not apply to men, in both the jewelry and the wearing apparel and allied industries they apparently benefited the men also, as in the jewelry industry the percentage of men receiving less than the minimum set for women fell from 7.7 before the order to 0.7 after it went into effect, and in the wearing-apparel industries it decreased from 19.2 to 8.3.

Suspension of 8-Hour Day on Construction of Leased Bases[1]

Hours of employees engaged in the construction of bases acquired from the British Government, by lease, will not be limited to 8 per day, under the terms of an Executive order promulgated on December 31, 1940. The President's action was taken because of the present emergency.

[1] From Monthly Labor Review for February 1941.

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The need for suspending the 8-hour limitation in this instance arises from the isolation of the areas from sources of labor supply in the United States. Without lengthening hours, it appears impossible to accomplish the work necessary to the establishment of the aviation and other Army and Navy facilities within the time required by the interests of the national defense. The application of the 8-hour limitation would involve such a departure from local labor practices and regulations as would be likely to affect adversely the local labor situation, the order also states.

Under the terms of existing legislation (section 1 of the act of August 1, 1892, 27 Stat. 340, as amended by the act of March 3, 1913, 37 Stat. 726, U. S. C., title 40, sec. 321) the service of all laborers and mechanics employed by the Government upon any public work of the United States and of all persons employed by the Government to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States, is limited to 8 hours in any 1 calendar day except in case of extraordinary emergency.

Regulation of Hours of Work of Motor-Vehicle Operators

The Interstate Commerce Commission, on July 12, 1938, under authority of acts of Congress designed for the promotion of safety, issued an order regulating the hours of drivers of motor vehicles engaged in interstate commerce. The regulations, effective October 1, 1938, embodied certain modifications of the Commission's order of December 29, 1937, the enforcement of which had been postponed for reargument upon petition filed by representatives of organized labor.[1] The Commission again, on January 27, 1939, issued an order modifying the regulations, the new order becoming effective on March 1, 1939. This basic order applied originally to common and contract carriers of passengers and property but not to private carriers. A later order, effective October 15, 1940, extended the regulations, with modifications, to private carriers of property, that is, to carriers who engage in the transportation of their own property, as owner, lessee, or bailee, for sale or related commercial purposes or as an incident to the conduct of their enterprise. The interstate character of a shipment may make a trip legally one in interstate commerce even though the trip is wholly within the boundaries of one State.

The limitations on hours of service were designed basically for the purpose of promoting safety and were not intended as a general standard. The Commission stated, in connection with its order of July 12, 1938: "We look with distinct disfavor on carriers or others who use regulations premised on safety as a means of defeating employees' efforts to improve their economic status."

Under the regulations effective on March 1, 1939, a driver was limited to 60 hours "on duty" in any period of 168 consecutive hours (7 days), beginning at the time the driver reports for duty. Carriers con-

[1] Summarized in the Monthly Labor Review for September 1938. Later regulations are given in Interstate Commerce Commission's Motor Carrier Safety Regulations, Revised, Washington, 1941, and are interpreted, in application to common and contract carriers, in an administrative ruling of May 16, 1939.

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ducting business every day of the week might, however, permit drivers in their employ to remain on duty 70 hours in any period of 192 consecutive hours (8 days). "Time on duty" was defined as including "all driving time, time spent loading or unloading, making out reports, waiting for work, and the like." The order limited daily hours of drivers to 10 hours of driving or operating unless they received 8 consecutive hours off duty during or immediately following the 10 hours aggregate driving. If a motor vehicle is provided with a sleeper berth, with two drivers, periods of driving or sleeping may alternate in any way the men or their employer desire, as long as the 8 hours off duty are not broken into more than two periods. The 10-hour regulation was the basic limitation, but a certain flexibility up to an additional 2 hours was permitted in emergencies, such as certain abnormal weather or traffic conditions. Stops of 10 minutes or less for whatever purpose were defined as driving time; stops of more than 10 minutes were defined not as driving time but as on-duty time unless of such a character as to justify classification as "off duty," but only when a driver is relieved from all work or responsibility for performing work.

Modifications of these basic rules were made in application to private carriers. These included a provision that driver-salesmen who devote more than 50 percent of their time to selling and less than 50 percent to such work as driving, loading, unloading, and the like were limited to 50 hours in any week devoted to driving with no limitation on the amount of time spent on their other duties. This same modification applied to the driver of a motor vehicle controlled and operated by a farmer, used in the transportation of his agricultural commodities and products or in the transportation of supplies to his farm.

The Interstate Commerce Commission, by orders of October 29 and November 4, 1940, removed the limitation of 60 hours per week in the case of drivers of motor vehicles engaged solely in making deliveries for retail stores from December 10 to December 25 of each year.

The regulations required reports to the Interstate Commerce Commission on hours of service in case the drivers' hours exceed the basic limitations on hours. Special reports were required for the supplying of information regarding hours of driving between the 10 hours ordinarily permissible and the 12 hours permissible only under emergency conditions. The regulations also required a driver to maintain a daily log unless operating wholly within a municipality or between contiguous municipalities. The driver's daily log is to be filed with the employer and to be made available for inspection by the Interstate Commerce Commission, which may call for copies at any time.

The regulations regarding the filing of reports by motor carriers were waived for the present in the case of private carriers of property. The driver's daily-log requirement for private carriers is substantially the same as that for the for-hire carriers, with one exception. The maintenance of this record is not required of drivers of farm trucks, nor is it required of drivers of a private-property carrier's motor vehicles (commonly called work trucks or work cars) specially designed or equipped for use, and used solely in the construction or maintenance of the carrier's plants and equipment.

Most of the States have adopted regulations limiting the hours of drivers of motor vehicles. Some of the State regulations, like those of the Interstate Commerce Commission, are primarily designed for

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the promotion of safety. Others are more largely concerned with the maintenance of general standards and in some instances are more exacting than those of the Interstate Commerce Commission.[2]

Minimum Wages for Sugar-Beet and Sugarcane Labor

Most of the State and Federal laws regulating the compensation, hours, and working conditions of wage earners do not apply to workers on farms. An exception is the establishment of minimum wages for sugar-beet and sugarcane labor, under the provisions of the Federal Sugar Act of 1937. This act provided for a quota system for regulating imports and marketings of sugar in the United States and for public assistance to producers of sugar beets and sugarcane. These benefits were granted by Congress under certain conditions. One of the conditions was the establishment of "a fair and reasonable rate" of pay for workers. The determination of what is "fair and reasonable" is made by the Secretary of Agriculture after public hearings and investigation.[3]

Annual determinations of wage rates in the sugar-beet and sugarcane industries have been made by the Secretary of Agriculture since 1937. The determinations are in considerable detail, the rates for the sugarcane areas being different from those for the sugar-beet areas and the rates for the several sections of the two main types of producing areas varying with local conditions and customs.

Sugar-Beet Wages

Determinations issued February 10, 1941, cover minimum rates for production, cultivation, or harvesting of the 1941 crop of sugar beets in California. In southern California the rate for blocking and thinning was set at either $6.50 per acre or, on a time basis, 35 cents per hour. The rate for first hoeing was either $1.50 per acre or 30 cents per hour. For the second and subsequent hoeings the rate was either $1 per acre or 30 cents per hour. For topping and loading, the time rate was 40 cents per hour, and on a piece-work basis the rate ranged from $1.93 per ton on production of less than 5 tons per acre to 64 cents per ton on production of 25 tons or more per acre. In northern California the rate for blocking and thinning was $7.50 per acre or 40 cents an hour. The rate for first hoeing was $2 per acre or 35 cents per hour, and for second and subsequent hoeings, $1.50 per acre or 35

[2] U. S. Department of Labor. Division of Labor Standards. Summary of Hours of Service Regulations for Operators of Motor Vehicles, by States. (Mimeographed.)

[3] A summary of the original determinations for beet-sugar wages was given in the Monthly Labor Review, March 1938 (p. 638). An article on Wages, Employment Conditions, and Welfare of Sugar-Beet Laborers, by Elizabeth S. Johnson, of the U. S. Children's Bureau, appeared in the February 1938 issue of the Monthly Labor Review.

The 1941 wage determinations for sugar-beet labor are given in U. S. Department of Agriculture press release of February 10, 1941, for California, and in a release of March 19, 1941, for other sugar-beet areas. The determinations for sugarcane labor are given in publications of the Agricultural Adjustment Administration, U. S. Department of Agriculture, as follows: For harvesting of sugarcane in the mainland sugarcane area, September 1, 1940, to June 30, 1941, in S. D. No. 93; for the production and cultivation of sugarcane in the mainland sugar area during the calendar year 1941, in S. D. No. 103; for the production, cultivation, or harvesting of sugarcane in Puerto Rico during the calendar year 1941, in S. D. No. 106; and for the production, cultivation, or harvesting of sugarcane in Hawaii during the calendar year 1941, in S. D. No. 104.

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cents per hour. The topping and loading rate was 45 cents per hour or $2.28 per ton of production below 5 tons per acre, ranging down to 74 cents per hour for production of 25 tons or more per acre.

Determinations announced on March 19, 1941, cover minimum rates in sugar-beet areas outside of California. In district 1, comprising Ohio, Michigan, Indiana, and Wisconsin, the rate for blocking, thinning, and hoeing was set at $11 per acre, or, on a time basis, 40 cents per hour for blocking and thinning and 35 cents per hour for hoeing. For topping, the time rate was 45 cents per hour, and the piece rate varied from $1.50 per ton on tonnage from acreage producing 3 tons or less to 80 cents on tonnage from acreage producing 16 tons or more.

In district 3 (Nebraska, Colorado, Kansas, southern Wyoming, and South Dakota), as well as district 1, either piece rates or time rates were permissible. The time rates ranged from 35 cents to 45 cents per hour. This was true also of district 7 (Utah, Idaho, and Oregon), except that the hourly rates were either 35 or 40 cents per hour. Both types of rates were specified also in district 8 (Washington) and the hourly rates ranged from 30 cents to 45 cents. For districts 2 (Minnesota and Iowa), 4 (southern and eastern Montana and northern Wyoming), 5 (western Montana), and 6 (northern Montana) no time rates were specified, and the piece rates (either per ton or per acre) varied with local conditions and customs.

Special agreements between employers and workers could, under certain circumstances, supersede the minimum-wage determinations. An employer was required to furnish to the laborer without charge the perquisites customarily furnished by him, such as a house and a garden plot. A producer must not, through any subterfuge or device, reduce the wage rates below those officially determined.

Sugarcane Wages

Minimum rates for the harvesting of sugarcane in the mainland sugarcane area between September 1, 1940, and June 30, 1941, were somewhat different in the two sugarcane areas of Louisiana and Florida. For cutting, topping, and stripping, the minimum rate for adult male workers in Louisiana was $1.50 per day of 9 hours and for adult female workers, $1.20 per day of 9 hours. For a working day longer or shorter than 9 hours, the rate for adult male workers was 17 cents per hour, and for adult female workers, 13 cents per hour. Corresponding rates in Florida were $2 per day or 22.5 cents per hour for men and $1.60 per day or 18 cents per hour for women. The determinations included detailed time rates for loading and for cutting and loading combined, and tonnage rates which varied for green sugarcane and burnt sugarcane.

The rates for certain harvesting operations were the same in both Louisiana and Florida. These operations included tractor driving and operating mechanical loading equipment. For specified occupations of this nature the rates for adult males ranged from $1.85 to $1.60 per day of 9 hours and from 21 cents to 18 cents per hour. Other harvesting operations not defined paid adult male workers $1.25 per day of 9 hours or 14 cents per hour, and adult female workers, $1 per day or 11 cents per hour.

For children between the ages of 14 and 16 years the rates per day of 8 hours (the maximum hours per day for this group) were three-

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fourths of the rates for adult male workers for a 9-hour day, with proportionate rates on an hourly basis for a working day shorter than 8 hours. The piece rates for children between the ages of 14 and 16 were the same as for adults, but piece workers as well as time workers in this age group were limited to 8 hours per day.

A separate determination of wages applied to workers employed in the production and cultivation as distinguished from the harvesting of sugarcane, this determination being for the calendar year. The minimum rate for tractor drivers in Louisiana in 1941 was set at $1.50 per day of 9 hours or 17 cents per hour for a working day longer or shorter than 9 hours. In Florida, the daily rate for tractor drivers in 1941 was $1.80 and the hourly rate, 20 cents. Rates for other types of work ranged downward from the rates for tractor drivers to a rate as low, in Louisiana, as $1 per day or 11 cents per hour for women. The corresponding rates in Florida were $1.30 per day and 14 cents per hour.

The wage determinations provided that employers shall furnish without charge the customary perquisites. The perquisites mentioned as customary are living quarters, garden, pasturage for livestock, and medical attention. An employer must not reduce wage rates by any subterfuge or device below the specified rates.

Sugarcane producers in Puerto Rico and Hawaii are also beneficiaries of quotas and public assistance under the Sugar Act of 1937 and are therefore subject also to wage determinations. The rates of pay, as determined under the law, vary widely in Puerto Rico and Hawaii, for efforts have been made to apply the law in these areas in conformity to customs and techniques there prevailing.

Bituminous Coal Codes, 1935 and 1937

Following invalidation of the National Industrial Recovery Act, the first code for the bituminous coal industry was formulated on October 9, 1935, by the National Bituminous Coal Commission under the terms of the Bituminous Coal Conservation Act of 1935.[1] Provision was made in this code for dealing with (1) organization and production; (2) marketing; and (3) labor relations. The bituminous-coal industry was organized into 23 districts, each having a board of coal producers. Each board was to consist of not less than 3 nor more than 17 members, to be determined according to tonnage produced in 1934. Producers were entitled to all but one of the seats on the respective boards and employees were entitled to designate the remaining member. The choice of the employee member was to be made by the labor organization with the largest number of employees in the district.

The part of the code touching upon labor relations included a provision that employees should have the right to organize and bargain collectively through representatives of their own choosing without interference. It was further provided that employees should have the right of peaceable assemblage to discuss the principles of collective

[1] See October 1935 and January and July 1936 issues of the Monthly Labor Review for a detailed description of the Bituminous Coal Conservation Act of 1935 and the grounds on which it was held unconstitutional.

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bargaining, that they should be entitled to select check weighmen to inspect the weighing or measuring of coal, and that they should not be required to live in company houses or trade at stores of the employer.

The Bituminous Coal Labor Board established under the act was granted authority under the terms of the code to determine whether a labor organization was dominated by an employer and was authorized to hold elections to determine who are the freely chosen representatives of the employees. The Board was empowered to offer its services as mediator in any dispute between employers and employees, if such dispute were not settled by a tribunal set up by collective agreement. Cases could be arbitrated by the Board upon request of both parties concerned.

Agreements on working time reached between the producers of over two-thirds of the annual national tonnage in the preceding calendar year and over one-half of the mine workers employed were required to be accepted by all code members. Similarly, if employers producing over two-thirds of the tonnage in a given district or districts in the preceding year and over one-half the employees agreed on wage rates, they were to be filed with the Labor Board and became binding upon all the code members in the area.

On May 18, 1936, the National Bituminous Coal Conservation Act of 1935 was held unconstitutional by the United States Supreme Court. The decision was a divided one but the majority held, in effect, that Congress had no power to regulate wages, hours of labor, and working conditions in an industry not directly engaged in interstate commerce, and that the production of coal does not directly affect such commerce.

A year later, in 1937, a new law was adopted for stabilizing conditions in the industry.

Under this law—the Bituminous Coal Act of 1937 [a]—the National Bituminous Coal Commission, consisting of seven members, was established in the Department of the Interior. The act, which was to remain in effect for 4 years and which was extended in 1941 for 2 years longer (expiration date, April 26, 1943) regulates interstate commerce in the soft-coal industry and provides for the establishment of minimum and maximum coal prices. While the law does not include labor provisions, it does set forth the public policy of the United States relative to the right of collective bargaining by employees in the coal industry.

Carrying out the provisions of the law, minimum prices were established, effective October 1, 1940, based on weighted average prices.

Legislation Requiring the Payment of Wages at Specified Times, as of June 1, 1941 [1]

Nearly all of the States have adopted legislation requiring the payment of wages within specified periods—weekly, monthly, or semimonthly. Many of the early laws applied only to certain corporations or occupations, such as mining, quarrying, manufacturing, or trans-

[a] See October 1937 issue of the Monthly Labor Review for a summary of the Bituminous Coal Act of 1937 (p. 901).

[1] From the Monthly Labor Review for December 1938, with later data.

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portation. While this type of law still exists in a number of the States, the tendency in recent years has been for such statutes to apply either to all occupations or to all corporations doing business in the State. In general, such laws do not cover domestic or agricultural employments.

The majority of the States specify that wages shall be paid at least semimonthly.[2] Only two jurisdictions (Alaska and Oregon) have provided that wages generally must be paid at least once a month, while in Missouri the wages of railroad workers must be so paid. All of the New England States [3] require that wages shall be paid at least weekly. In addition, Delaware and Puerto Rico have such a requirement. Employees in Hawaii receiving $5 or less a day must be paid weekly, and in Indiana employees must be paid in this manner if they so request. Textile employees in South Carolina are required also to be paid weekly. While New York has a general requirement that wages must be paid semimonthly, special legislation requires that employees engaged in a business conducted under a lease must be paid weekly. In only four jurisdictions (District of Columbia, Florida, Idaho, and Washington) have the respective legislative bodies failed to provide any requirements for the payment of wages at certain times.

Although the provisions of the laws regulating the period of wage payment are fairly uniform, the decisions of the courts rest on such various grounds that no generalization can be made as to the degree of regulation which will be allowed. However, nearly all of the decisions were rendered years ago, and since that time many States have enacted laws the constitutionality of which has not been successfully challenged. Even in those States in which manifest declarations of unconstitutionality have been made, legislative action indicates a purpose to regulate the payment of wages, and in some instances constitutional amendments have been adopted to this end.

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[2] Alabama, Arizona, Arkansas, California, Colorado, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Philippine Islands, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

[3] Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

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