

UNITED STATES DEPARTMENT OF LABOR

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BUREAU OF LABOR STATISTICS

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Wages in the Basic Lumber Industry, 1944



Bulletin No. 854

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. - Price — cents

Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., October 30, 1945.

The SECRETARY OF LABOR:

I have the honor to transmit herewith a report on wages in the basic lumber industry. This report was prepared in the Bureau's Wage Analysis Branch by Victor S. Baril, assisted by Norbert J. Prager, W. C. Quant, and John Standish. The field work was done under the direction of the wage analysts in the Bureau's regional offices.

The Bureau acknowledges its indebtedness to both unions and management for their cooperation in this survey. For valuable assistance given by several Government agencies, particularly the Forest Service, the Bureau wishes to express its appreciation.

A. F. HINRICHS, *Acting Commissioner.*

Hon. L. B. SCHWELLENBACH,
Secretary of Labor.

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Wages in the Basic Lumber Industry, 1944

Summary

The trend in wages in the basic lumber industry was sharply upward during World War II. Gross hourly earnings which include overtime payments increased about 74 percent, advancing from 46 cents at the start of 1939 to 80 cents during the summer of 1944. From then until the summer of 1945 hourly earnings increased only slightly.

Basic wage rates in 1944 were considerably higher than before the outbreak of the war. Between the fall of 1939 and August 1944 straight-time hourly earnings (exclusive of overtime payments) increased from 46 cents to 72 cents, a gain of 56.5 percent. During the same period straight-time hourly earnings rose from 75 cents to \$1.18 in the West, from 40 to 73 cents in the North, and from 34 to 52 cents in the South. The earnings figures for both periods are based on comprehensive field surveys of occupational wage rates in six segments of the basic lumber industry. The statistics for August 1944 are based on reports from 2,651 companies maintaining 4,168 operations and employing 184,446 workers.

The absolute gain in straight-time hourly earnings between the fall of 1939 and August 1944 for workers in skilled occupations was generally no greater than for the less-skilled occupations. On a percentage basis, the wage increases for skilled jobs were generally lower than for the less-skilled jobs.

In the various branches of the industry, straight-time hourly earnings in August 1944 averaged 67 cents in sawmills, 78 cents in logging camps, 53 cents in cooperage-stock mills, \$1.45 in shingle mills, 52 cents in veneer mills, and 73 cents in plywood mills. Representative of regional differences in hourly earnings, common-labor entrance rates were highest in the West, next highest in the North, and lowest in the South.

For nearly two-fifths of southern workers straight-time hourly earnings averaged less than 50 cents, and for more than three-fourths the average was under 55 cents. The majority of western workers earned over \$1.00 an hour, while in the North the greatest concentration was between 60 and 80 cents.

In the West, the only region where a large number of lumber companies operate under union contract, straight-time hourly earnings of union workers did not differ significantly from the earnings of non-union workers. In practically all sectors of the basic lumber industry, time workers earned less per hour than workers employed on an incentive basis. However, only a small proportion of the workers in this industry were employed under the incentive method of wage payment.

The most common workweek schedule in the West was 8 hours a day and 48 hours a week. In the North, where a shorter workweek was common, the 8-48 hour schedule was observed by less than two-fifths of the operations; in the South more than half of the operations worked a 40-hour week and 8-hour day. Practically all of the operations in the basic lumber industry paid time and a half for overtime after 40 hours a week, while in about one out of four the premium rate was also effective after 8 hours a day.

Single-shift operation was typical of most lumber operations. The practice of paying a differential when more than one shift was worked was more common in the West than in the North and South, as was also the provision of paid vacations. About half of the western logging camps and sawmills and all the shingle mills in that region had paid-vacation plans at the time of the survey.

The Industry During the War

Historically one of the oldest of American industries, the basic lumber industry has always occupied an important position in our economy. Gigantic in size and dispersed over a broad area, the industry produces a wide variety of items for sale in an extensive national market. The principal peacetime outlets for its many products, in addition to the building and construction industry, include railroads, mining, communication, light and power, and such manufacturing industries as furniture, refrigeration, radio, and paper and paper products.

The supply of lumber, one of the most vital of war materials at the start of the war, soon became critically short. In addition to serving normal outlets, great quantities of lumber were required at the start of the war for military construction. Later, nearly half of all lumber produced was used for boxing, crating, and dunnage.

Despite a sharp increase in production after 1937, the lumber industry was unable to manufacture enough lumber to meet war needs, and as a result consumption exceeded production throughout the war period. In 1942, for example, when peak wartime production of 36.3 billion board feet of lumber was attained, consumption exceeded production by nearly 7 billion board feet. In order to stop the heavy drain on stocks and effect a better balance between consumption and production, the War Production Board issued a number of restrictive orders. The last of these orders (L-355, effective August 1, 1944) affected all users of lumber, distributors, and all but the smallest sawmills.

Demand for lumber is expected to continue at a high level during the postwar period. Depleted stocks must be replenished. Long-delayed repairs will also require much lumber. Perhaps the greatest single user of lumber will be the building and construction industry. It is estimated that 400,000 dwelling units will be constructed in 1946 and, beginning with 1948, that 1,000,000 units will be built annually. The physical reconstruction of liberated countries will also require large quantities of lumber. It is doubtful, however, that the industry will be able to meet much of this foreign demand if the lumber requirements in this country continue to be high.

The Labor Market Situation

Of the many problems which beset the industry throughout the war period, the manpower problem was undoubtedly one of the most pressing. Although employment in the basic lumber industry increased steadily through 1941, it declined slightly in 1942 and fell precipitously thereafter. Production also fell off sharply after 1942. Between 1941 and 1944 employment in the industry declined about 26 percent and by 1945 there were about 25 percent fewer workers in the industry than in 1939.

The manpower problem was especially acute in logging camps and in sawmills. The armed forces alone took a substantial number of lumber workers; in the Far West alone, it was estimated that 25 percent of the workers who were in the industry at the start of the war were inducted into the armed forces. There was also a steady exodus of lumber workers to the better-paying war industries in the area. At the start of the war, lumber workers left the logging camps and sawmills to seek employment at much higher rates on construction projects. They were also attracted to other war industries, such as shipbuilding, aircraft, metalworking, etc., because of more rapid advancement provisions, higher rates of pay, and liberal shift-differential payments—all of which enabled them to earn considerably more than in the lumber industry. War industries also provided greater continuity of employment than the lumber industry which, for reasons beyond its control, has always been highly seasonal.

A number of Government agencies endeavored to alleviate the manpower shortage in the lumber industry. These agencies developed a number of plans, the most far reaching of which was the West Coast Plan instituted late in 1943 by the War Manpower Commission to tighten up earlier stabilization orders. This plan was later extended to the whole country. Among other things, the plan required employers to hire men through the U. S. Employment Service; employment ceilings in certain areas were set and manpower priorities established insofar as referral of labor was concerned. Under the plan, the recruiting activities of the U. S. Employment Service were stepped up. In addition, the War Production Board designated the basic lumber industry as one of the industries to be granted priority in the placement of workers, and Selective Service recognized lumber as one of the essential industries.

The employment of women helped alleviate the labor shortage to a limited extent. Owing to the arduous nature of the work in logging camps and in most of the operations in sawmills, the employment of women is very largely confined to box factories, veneer mills, and plywood mills. Here they perform a number of the lighter tasks as off-bearers on machines, machine hikeaways, operators of stitching and clipping machines, etc. The heavier and more difficult work involved in operating saws and planers, pulling lumber from the chains and stacking and loading lumber, is performed by men.

Despite determined efforts on the part of Government agencies to solve the manpower problem, there was an acute shortage of labor in the lumber industry throughout the war period. With the release of substantial numbers from the armed forces and as workers are laid-off from war industries, particularly the high-wage industries in the prin-

incipal lumber-producing areas, employment in the basic industry is expected to increase sharply in response to the anticipated high post-war demand for lumber and timber products.

War-time Earnings Trends under Stabilization

The sharp upward trend in wages in the basic lumber industry during the war period reflects the upward pressure on wages from such factors as the critical need of lumber and timber products for war purposes; the serious manpower shortage; and the keen competition, particularly from the high-wage war industries, for available labor. Gross hourly earnings increased about 74 percent, advancing from about 46 cents at the start of 1939 to nearly 80 cents during the summer of 1944. (See table 1.) From then until the summer of 1945 wages increased only slightly. It will be noted that most of the increase in wages took place after January 1941, the base period for wage stabilization purposes during the war. Earnings increased

TABLE 1.—Average Weekly Hours and Average Hourly and Weekly Earnings in Basic Lumber Industry, by Months, January 1939 to June 1945

Year and month	Weekly hours	Gross earnings ¹		Year and month	Weekly hours	Gross earnings ¹	
		Hourly	Weekly			Hourly	Weekly
<i>1939</i>				<i>1942—Continued</i>			
January.....	33.2	<i>Cents</i> 45.8	\$17.50	April.....	39.5	60.6	\$23.97
February.....	33.0	45.2	17.18	May.....	40.4	62.0	25.05
March.....	33.2	46.0	17.57	June.....	40.7	64.6	26.26
April.....	33.3	47.1	18.04	July.....	40.4	64.6	26.14
May.....	33.4	48.1	18.95	August.....	41.2	66.3	27.33
June.....	33.7	48.4	19.21	September.....	40.6	67.1	27.22
July.....	33.1	47.3	17.08	October.....	42.0	68.4	28.69
August.....	33.0	48.1	18.76	November.....	40.9	67.0	27.44
September.....	33.4	47.9	18.39	December.....	40.1	66.0	26.46
October.....	40.3	48.3	19.45	<i>1943</i>			
November.....	38.6	49.7	19.20	January.....	38.6	65.7	25.36
December.....	37.0	48.9	18.11	February.....	41.2	66.6	27.43
<i>1940</i>				March.....	41.6	68.1	28.31
January.....	36.1	49.1	17.73	April.....	42.5	69.9	29.75
February.....	37.0	49.1	18.19	May.....	43.4	72.6	31.49
March.....	37.6	49.2	18.49	June.....	44.0	72.9	32.06
April.....	38.1	49.7	18.93	July.....	42.1	72.5	30.50
May.....	38.7	50.3	19.43	August.....	45.0	73.3	32.99
June.....	38.3	50.5	19.32	September.....	43.1	75.9	32.70
July.....	36.4	49.6	18.02	October.....	43.7	76.3	33.34
August.....	38.9	50.9	19.79	November.....	42.8	76.3	32.69
September.....	39.2	50.7	19.85	December.....	42.1	75.1	31.59
October.....	40.0	50.6	20.23	<i>1944</i>			
November.....	37.7	50.5	19.06	January.....	40.1	75.7	30.37
December.....	38.0	50.7	19.29	February.....	42.2	75.6	31.94
<i>1941</i>				March.....	42.6	75.7	32.26
January.....	38.5	51.7	19.89	April.....	42.7	77.5	33.14
February.....	38.5	51.7	19.89	May.....	42.7	78.8	33.69
March.....	38.9	52.3	20.32	June.....	43.9	79.2	34.72
April.....	39.7	53.0	21.02	July.....	41.5	78.8	32.73
May.....	38.6	53.7	20.74	August.....	44.4	79.3	35.21
June.....	39.7	55.2	21.89	September.....	42.7	79.5	33.91
July.....	38.6	56.0	21.60	October.....	44.2	79.8	35.29
August.....	41.0	57.3	23.49	November.....	42.1	77.6	32.66
September.....	39.7	57.2	22.72	December.....	41.4	77.9	32.28
October.....	40.2	57.8	23.22	<i>1945</i>			
November.....	38.0	57.3	21.79	January.....	42.0	77.3	32.43
December.....	37.6	57.2	21.48	February.....	42.6	77.7	33.11
<i>1942</i>				March.....	42.5	78.0	33.15
January.....	37.8	57.6	21.77	April.....	43.1	79.0	34.05
February.....	39.7	58.4	23.20	May.....	42.4	80.0	33.90
March.....	39.5	59.4	23.47	June.....	43.5	80.8	35.17

¹ These are gross earnings including both premium-overtime and shift-differential earnings.

nearly 58 percent between January 1941 and the summer of 1945; the greatest gains were made in 1942 and 1943. It appears that most of the advance in hourly earnings during the war was due to general wage increases, individual merit increases, and upgrading, and that only a comparatively small part of the advance resulted from premium payment for overtime work.¹

Wage increases varied widely among regions both as to type and amount of increase. Because of the prevailing low wages, the South and the North were affected to a greater extent than the West by the establishment late in 1941 (under the provisions of the Fair Labor Standards Act) of a 30-cent minimum rate for logging camps and a 35-cent minimum rate for sawmills. A 40-cent minimum rate for both branches of the industry was instituted early in 1944. These same regions were also chiefly affected by General Order No. 30 of the National War Labor Board and subsequent revisions of this order which successively authorized employers to raise minimum rates to 40 cents (early in 1943), 50 cents (late in 1944), and 55 cents (early in 1945).

In the West, wage increases were generally flat across-the-board amounts granted to all workers. In the Douglas Fir region, for example, four separate increases aggregating 27½ cents were granted between 1940 and 1942. Furthermore, the average level of wages in this region was raised substantially in 1942 when the War Labor Board approved the report of a special panel which recommended that wages in the Willamette Valley of Oregon be raised to the level of the region as a whole. Much the same general pattern of increase took place in the other regions of the West.

Gross weekly earnings doubled during the war period, rising from an average of \$17.50 in January 1939 to an average of \$35.17 in June 1945. This sharp increase reflects primarily the advance in hourly earnings, as weekly hours increased only moderately during the war period.

The figures which appear in table 1 are based on summary reports on employment, man-hours, and pay rolls submitted monthly to the Employment Statistics Division of the United States Bureau of Labor Statistics by a large number of firms in the basic lumber industry. These data make it possible for the Bureau to compute average weekly hours worked and average gross hourly and weekly earnings. The earnings data which appear in table 1 are gross earnings and as such include premium payments for overtime work and for work on late shifts. These earnings are not to be confused, however, with the detailed wage data for August 1944 which appear later in this report and which are based on a comprehensive field survey of wage rates for selected key occupations in six branches of the industry; namely, logging camps, sawmills, shingle mills, cooperage-stock mills, veneer mills, and plywood mills. The two surveys do not cover exactly the same segments² of the industry and a different sample of establish-

¹ The increase in net hourly earnings, i.e., earnings from which premium overtime earnings have been eliminated, closely approximated the increase in gross earnings—52 percent compared to 58 percent for the period from January 1941 to the summer of 1945.

² The principal difference between the two surveys is that plywood mills are included only in the August 1944 survey. Another difference is that the August 1944 survey includes only occupations in six segments of the industry, whereas the summary figures submitted to the Bureau monthly may include data for additional segments of the industry operated in conjunction with any one of the six segments covered by the August 1944 survey.

ments was used in each survey. The differences between the two surveys, however, are not great and the level of earnings indicated by the August 1944 field survey approximates very closely that shown for the same period by the monthly survey.

Scope and Method of Survey

BRANCHES OF INDUSTRY INCLUDED

The Bureau of Labor Statistics has collected and made available a considerable amount of information on wage rates by occupation and locality in a large number of industries. The present Nation-wide study of wages in the basic lumber industry, undertaken during the fall of 1944, is one in this series of industry wage studies.³ The immediate purpose of this study was to provide the National War Labor Board with data for use in connection with the stabilization of wages in the lumber industry. The study should also prove useful to both labor and management in collective bargaining and should provide the factual background necessary in the development of the lumber industry in the postwar period.

The basic lumber industry is concerned with the production and preparation of raw forest materials for the use of secondary industries which manufacture finished lumber and timber products. Logging camps and sawmills are the most important branches from the standpoint of both total production and number of workers employed. The basic lumber group also includes four smaller branches—namely, shingle mills, cooperage-stock mills, veneer mills, and plywood mills. All six branches were included in the present study of the industry.

Logging camps, sawmills, and plywood mills are found in all regions and were surveyed in each. Veneer and cooperage stock mills are comparatively unimportant in the West and were, therefore, not covered in that region. For the same reason, shingle mills, which are concentrated almost entirely in the Douglas Fir district of the West, were not studied outside of that region.

CHARACTERISTICS OF OPERATIONS STUDIED

The six branches of the industry covered in this survey represent distinct segments of the basic lumber industry. They differ both as to end product and production process.

Logging camps are concerned with the production of logs for sawmills and for other special-purpose mills manufacturing such products as shingles, veneer, and plywood; they also produce a number of finished timber products including hewed cross ties, poles, and piling.

Sawmills are primarily engaged in the production of rough lumber from logs, though some mills also produce dressed lumber and a variety of finished and semifinished lumber products.

Shingle mills are engaged solely in the manufacture of shingles,

³ A report covering one region of the basic lumber industry appeared under the title *Wages in the Basic Lumber Industry in the Far West, 1944*, in the *Monthly Labor Review*, July 1945. A second report summarizing the findings of the Nation-wide survey appeared under the title *Wages in the Basic Lumber Industry, 1944*, in the *Monthly Labor Review*, October 1945. The results of a 1939-40 survey of this industry were reported in the article *Hourly Earnings in the Lumber and Timber Products Industry*, in the *Monthly Labor Review*, July 1941.

while cooperage-stock mills produce staves, heading, and hoops for use in the manufacture of loose and tight cooperage.

Veneer mills produce both face and utility veneer for use by other wood-using industries; plywood mills manufacture a variety of plywood.

Varying degrees of integration are found in the basic lumber and timber products industry. On the whole, however, these variations are confined to logging camps and sawmills, as shingle mills, cooperage-stock mills, veneer mills, and plywood mills are seldom operated by firms or individuals connected with lumber manufacturing. Logging camps are operated either independently of lumber manufacturing operations or in conjunction with them. In some areas, particularly in the Douglas Fir region of the Far West, logging is carried on by independent loggers who either own timber stands or obtain timber from Government-owned land and sell their logs in open log markets or under contract to manufacturers. Frequently, however, logging camps are operated in conjunction with sawmills. In addition to logging camps, some sawmills also operate planing mills and, in some regions, particularly in the Western Pine region, they also manufacture a substantial proportion of their lumber into box shooks.

In both logging and sawmilling, production methods are different in the West from those used in other lumber-producing regions of the country. These differences, which exert a profound influence on the occupational structure of these two branches of the industry as well as on the level of wages paid, are due very largely to wide differences among regions in the density of the timber stand and to the type and size of trees. Production techniques in the other four branches studied are, on the whole, much the same in all regions.

Aside from the felling and bucking operations, which are still very largely performed with the aid of hand tools in all regions, logging is much more highly mechanized in the West than in either the North or the South. In the West, tractors, and in some sections of the Douglas Fir region, power skidders, are required to move large logs over rugged terrain from the cutting area to the landing or loading point, and mechanical loaders are needed to load logs on trucks or railroad cars. Power equipment is less frequently used in other regions and, because of the much smaller size of the logs, the equipment as a rule is lighter. In all regions, trucks are extensively used to transport logs from the woods to the mill.

Because lumber manufacturing is generally more complex in the West than in either the North or the South, medium-size and large mills which customarily produce a wide variety of items, account for the bulk of the lumber produced. In the two other regions, small mills, which as a rule produce few items, account for the bulk of the lumber output. Of the lumber produced in the Far West in 1943, fully four-fifths came from mills with an annual cut of 10,000,000 or more board feet, two-thirds came from mills with a cut of 25,000,000 or more board feet, and over one-third from mills with a cut of 50,000,000 or more board feet. In Washington, over half of the lumber was produced in mills cutting 50,000,000 or more board feet per year. In the East, on the other hand, less than 15 percent of the lumber produced in 1943 came from mills cutting 10,000,000 or more board feet, whereas more than half was produced by mills cutting between 1,000,000 and

10,000,000 board feet and a third by mills cutting less than 1,000,000 board feet per year.⁴

Outside of the West, few lumber operations have collective bargaining agreements with organized labor. Thus, only 8 percent of the operations in the North with somewhat over one-fifth of the workers in that area and only one percent of the operations in the South employing about 8 percent of the workers in that region, had union agreements. In the West, however, one-half of the basic lumber operations accounting for more than four-fifths of all workers in that area had collective bargaining agreements with organized labor. The above figures also indicate a preponderance of large operations among the group having collective bargaining agreements. The above figures reflect the extent of unionization in the industry in the summer of 1944 when the field survey was made. At that time extensive organizational campaigns were under way in some regions, particularly in the West, and it is understood that additional operations have been organized.

METHOD OF STUDY

Information was obtained from a representative sample of companies⁵ and operations⁶ in the six branches of the industry. The various operations in each of the branches were not sampled in the same proportion, and for that reason it was necessary in combining the data to assign different weights to the respective branches so that each might be represented in proportion to its importance in the industry. Data were actually obtained from 2,651 companies maintaining 4,168 operations and employing 184,446 workers. The figures which appear in the final tabulations represent the results after weighting. This

TABLE 2.—Number of Operations and Workers in Operations Surveyed, and Estimated Total in Basic Lumber Industry, by Region and District, August 1944

Region and district	Actually surveyed		Estimated total represented	
	Number of operations	Number of workers	Number of operations	Number of workers
Total, United States.....	4,168	184,446	17,772	455,931
Total, West.....	716	63,851	2,174	135,152
Douglas Fir region.....	334	31,821	1,057	73,000
Western Pine region.....	353	27,268	1,035	53,899
Redwood region.....	29	4,762	82	8,253
Total, North.....	1,084	32,944	2,653	57,314
Prairie.....	62	1,567	64	1,718
Lakes.....	237	13,148	607	20,604
North Central.....	256	6,254	447	10,354
Middle Atlantic.....	252	4,597	559	8,067
New England.....	277	7,378	976	16,571
Total, South.....	2,368	87,651	12,945	263,465
Southeast.....	1,841	55,868	11,378	198,242
Southwest.....	527	31,783	1,567	65,223

⁴ Census of Forest Products, 1943, U. S. Department of Commerce, Bureau of the Census.

⁵ In selecting the sample of companies and operations to be studied, full consideration was given to all important factors which influence wages, such as size and type of operation, corporate affiliation, geographical distribution, and unionization.

⁶ The term "operation" relates to a single segment of the industry such as a logging camp, a sawmill, a shingle mill, etc. In the case of partially or completely integrated companies, each segment was counted separately. For example, a company which did both logging and sawmilling was included in both the logging camp and sawmill counts.

weighting yielded a total of 17,772 operations and 455,931 workers, which are believed to represent the approximate size of the basic lumber industry as defined in this study. Table 2 shows in further detail the size of the sample upon which this study was based and the estimated total number of operations and workers represented.

Wage data were obtained only for key occupations which are believed to be representative of the range of skills and wages in the six branches of the industry. Roughly three-fourths of all the workers in the industry are employed in these key occupations. In order to insure as full comparability as possible among occupations, the Bureau's field representatives used uniform job descriptions in classifying workers in the operations studied. A careful check was also made of significant duties performed in each of the selected key occupations and any important variations were reported. On the basis of this supplementary information on duties performed by workers, it was possible for the Bureau to overcome interplant variations to a considerable extent and to arrive at occupational classifications that are believed to be dependable.

Three broad lumber-producing regions were covered—the West, the North, and the South. The West¹ includes the three Pacific Coast States and eight States in the Rocky Mountain area. The North includes the Prairie States, Lake States, North Central States, Middle Atlantic States, and New England. The South includes nine Southeastern and four Southwestern States.

The wage data for most operations relate to a pay-roll period in August 1944 and represent straight-time average hourly earnings, excluding premium payments for overtime and work on late shifts. These earnings include incentive payments derived from piecework and production-bonus plans, but exclude nonproduction bonuses. In order to show the differences in average hourly earnings for workers paid on a straight-time basis and those employed on an incentive basis, special tabulations were made for each group.

The figures presented in this report depict the general level and distribution of wages in each of the branches and regions studied. Because of rather wide differences in the nature of the industry, regional comparisons, particularly on an occupational basis, should be made with caution.

Basic Wage Structure of Industry, Summer of 1944

GENERAL LEVEL OF WAGES AND REGIONAL VARIATIONS

Straight-time hourly earnings of workers in the basic lumber industry averaged 72 cents in August 1944. (See table 3.) This figure, while useful in comparing general wage levels among industries, has only limited significance in the lumber industry due to the widely different levels of wages found in the principal lumber producing areas of the country. While the general average for the industry closely approximates the level of wages in the North, (72 cents against 73 cents), it understates by as much as 46 cents the level of

¹ This region is broader than the region covered by the special report for the Far West published in the Monthly Labor Review, July 1945. The Far West, as defined for purposes of that report, covered only five States, namely California, Idaho, Montana, Oregon and Washington. The lower Rocky Mountain States were not included.

wages in the West and overstates by 20 cents the level of wages in the South.

The basic differences in wage structure among lumber-producing regions are clearly indicated in the distributions of workers according to straight-time average hourly earnings in table 3. Virtually all of the workers in the West earned 80 cents or more an hour and roughly two-thirds earned \$1 or more an hour. Of the workers in the North and in the South, however, only 28.2 and 4.5 percent, respectively, received as much as 80 cents an hour, and only 13.2 and 1.7 percent, respectively, averaged \$1 or more an hour.

TABLE 3.—Percentage Distribution of Workers in Basic Lumber Industry, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings (in cents)	Total, U. S.	West	North	South	Average hourly earnings (in cents)	Total, U. S.	West	North	South
Under 40.0.....	0.4		0.1	0.6	97.5, under 100.0.....	1.2	4.1	0.6	0.1
40.0, under 42.5.....	12.1	(1)	1.2	19.1	100.0, under 105.0.....	3.8	10.5	4.3	.8
42.5, under 45.0.....	1.4	(1)	.4	2.2	105.0, under 110.0.....	2.2	7.7	1.1	.2
45.0, under 47.5.....	9.9	(1)	2.0	15.3	110.0, under 115.0.....	2.0	6.4	1.7	.2
47.5, under 50.0.....	1.2	(1)	.7	1.7	115.0, under 120.0.....	2.0	7.0	.9	.1
50.0, under 52.5.....	23.9	0.1	8.9	36.6	120.0, under 125.0.....	1.2	4.2	.8	.1
52.5, under 55.0.....	1.1	(1)	1.3	1.4	125.0, under 130.0.....	1.7	5.4	1.1	.2
55.0, under 57.5.....	4.0	(1)	6.0	5.3	130.0, under 135.0.....	.8	2.6	.5	.1
57.5, under 60.0.....	.8	(1)	2.7	.8	135.0, under 140.0.....	.6	2.2	.4	(1)
60.0, under 62.5.....	4.8	.1	15.4	4.9	140.0, under 145.0.....	.5	1.8	.4	(1)
62.5, under 65.0.....	1.8	(1)	5.8	1.9	145.0, under 150.0.....	.5	1.5	.5	(1)
65.0, under 67.5.....	2.0	.3	8.1	1.7	150.0, under 160.0.....	1.2	4.1	.5	(1)
67.5, under 70.0.....	.6	.1	2.6	.4	160.0, under 170.0.....	.6	2.0	.3	(1)
70.0, under 72.5.....	1.5	.3	6.9	1.1	170.0, under 180.0.....	.5	1.8	.2	(1)
72.5, under 75.0.....	.4	.2	1.6	.3	180.0, under 190.0.....	.4	1.6	.2	(1)
75.0, under 77.5.....	2.1	.7	6.7	1.9	190.0, under 200.0.....	.3	1.2	.1	(1)
77.5, under 80.0.....	.4	.3	1.4	.3	200.0 cents and over.....	1.3	4.8	.2	(1)
80.0, under 82.5.....	1.1	.9	3.3	.8					
82.5, under 85.0.....	.9	2.4	1.0	.3					
85.0, under 87.5.....	1.2	2.7	2.3	.4	Total.....	100.0	100.0	100.0	100.0
87.5, under 90.0.....	1.5	3.2	3.6	.4	Number of workers.....	331,716	87,135	36,914	207,667
90.0, under 92.5.....	2.6	8.2	2.0	.4	Average hourly earnings.....	\$0.72	\$1.18	\$0.73	\$0.52
92.5, under 95.0.....	1.6	5.3	.8	.2					
95.0, under 97.5.....	1.9	6.3	1.4	.2					

¹ Less than a tenth of 1 percent.

The differences among regions with respect to the proportion of workers in the lower wage brackets were equally wide. In August 1944 fully three-fourths of the workers in the South, for example, earned less than 55 cents an hour and nearly two-fifths earned less than 50 cents an hour. Only 14.6 percent of the workers in the North, however, received less than 55 cents an hour and only 4.4 percent earned less than 50 cents an hour, while in the West less than one percent received comparable low earnings. Subsequent to this survey General Order No. 30 of the National War Labor Board was revised, permitting wages to be raised to 50 cents an hour late in 1944 and to 55 cents an hour in May 1945. This revision undoubtedly resulted in a substantial reduction in the number of southern and northern workers who in August 1944 received less than 55 cents an hour. At the time of the survey virtually no lumber workers in the country earned less than 40 cents an hour.

The entrance rates of pay of common laborers provide another medium for comparing wage levels in the lumber-producing regions and in the various branches of the industry. In general, entrance rates in 1944 were highest in the West, next highest in the North, and lowest in the South. In the West these rates followed closely the

minimum rates set by the West Coast Lumber Commission for unskilled workers in the various wage-stabilization districts: 90 cents in the Douglas Fir district, 87.5 cents in central Oregon and northern California, 85 cents in central California, 82.5 cents in the Inland Empire, Snake River and Redwood districts, and 80 cents in central Washington. Substantially lower entrance rates, between 60 and 65 cents an hour, were paid in the lower Rocky Mountain district.

In over half of the basic lumber operations in the North common laborers received 50 cents or more an hour, and in a substantial number of operations they received 60 cents or more an hour. In the South the most common entrance rate was 40 cents an hour, the statutory minimum established under the Fair Labor Standards Act. More than two-fifths of the southern sawmills, nearly half of the logging camps, and half or more of the veneer, cooperage-stock, and plywood mills had a 40-cent entrance rate. A third of the southern logging camps, a fourth of the sawmills, and a fifth of the veneer and cooperage-stock mills paid 50 cents an hour. Less than a tenth of the plywood mills, however, had a common-labor entrance rate as high as 50 cents.

The high level of wages in the West has been supported to a large extent by the superiority of the region's basic timber resources and the high productivity of labor. In 1938 it was estimated that 63 percent of the country's old-growth saw timber was in the West, 25 percent in the South, and 12 percent in the North.⁸ Such timber is the most important, in the greatest demand, and is preferred in the manufacture of most timber products. In 1944, 45 percent of the total lumber production in the country was produced in the West, 39 percent in the South, and 16 percent in the North.⁹

Because of the great concentration of the timber stand and the large size of the trees, western operations are larger in scale and more highly mechanized than operations in the North and South and, as a result, the productivity of western labor is far greater than in other regions. A study made by the Bureau in 1937 showed that 32.2 man-hours were required to produce 1,000 board feet of yard lumber in the Southern Pine region and 36.0 man-hours in the Southern Hardwood region. In the Western Pine region the corresponding figure was 25.3 man-hours, and in the western Douglas Fir region only 22.1 man-hours.¹⁰

The relatively high wage levels of the West also reflect the high skill requirements of that region, the keen wartime competition for labor from within the industry and from high-wage industries within the region, and the high degree of unionization.

Under peacetime conditions, labor for the southern lumber industry is drawn primarily from agriculture. The low farm wages in the South and the fact that for a large proportion of the workers the lumber industry is not, as in the West, the prime source of income but only a supplement to farm income, have acted to lower the level of lumber wages in that region. The skill requirements of the industry in the South are also substantially lower on the whole than in the West due largely to the much smaller size of the timber and the lesser

⁸ 1940 Yearbook of Agriculture (p. 463).

⁹ Data are from Forest Service and War Production Board. In 1944, 32,554 millions of board feet of lumber were produced in the United States.

¹⁰ See Labor Requirements in Lumber Production by B. H. Topkis, in Monthly Labor Review, May 1937. In the computation of man-hours, four operations were considered: Logging, manufacturing, selling and administration, and transportation. The northern lumber region was not covered in that survey.

degree of mechanization. Equally important is the fact that in the South, Negroes form a large proportion of the labor force and that, as a group, they generally receive lower wage rates than white workers. The latter situation is not primarily a result of wage discrimination among workers doing the same work. Of greater importance is the fact that the wage level of establishments employing substantial numbers of Negroes is low and, in addition, Negroes are generally found in the less-skilled and lower-paying occupations.

The scarcity of workers for the lumber industry in the South was felt keenly during the war as this region also experienced an abnormal increase in industrial activity. While many southern lumber firms increased wage rates as the data presented above indicate, others were forced to curtail operations because of their inability to retain their labor supply in the face of competition from higher-wage industries.

Labor market conditions in the North resemble those in the South, although competition for labor from manufacturing industries is somewhat more important. Very few Negroes are employed in the Northern lumber operations.

BRANCH VARIATIONS IN HOURLY EARNINGS

Average straight-time hourly earnings in August 1944 ranged from 52 cents in veneer mills to \$1.45 in shingle mills. As would be expected, the branches also showed marked variations with respect to the distribution of workers according to hourly earnings (table 4). Although in no branch did more than a few workers receive less than 40 cents (the statutory minimum wage), the proportions of workers whose straight-time hourly earnings were under 50 cents, under 55 cents, and over \$1.00 were substantially different, as the following summary based on table 4 shows:

	<i>Percent with straight-time hourly earnings of—</i>		
	<i>Under \$0.50</i>	<i>Under \$0.55</i>	<i>Over \$1.00</i>
Logging camps.....	19.3	47.2	25.9
Sawmills.....	28.6	52.3	14.4
Veneer mills.....	49.5	68.8	1.5
Shingle mills.....	---	---	93.9
Cooperage-stock mills....	43.3	70.5	.6
Plywood mills.....	26.8	37.7	18.8

The relative importance of skilled labor in the labor force of each branch also operates to differentiate wage levels. Although the simplest occupational structure is found in shingle mills, this branch employs a higher proportion of skilled workers than any of the other branches. Logging camps and sawmills have a greater subdivision of labor than shingle mills, but they also employ a large number of skilled workers. The use of skilled workers is smaller in relation to the size of the labor force in veneer, plywood, and cooperage-stock mills. Veneer and plywood mills are the only branches that employ women in any considerable number, and veneer mills, because of their concentration in the South, also employ relatively more Negroes than do the other branches.

TABLE 4.—Percentage Distribution of Workers in Basic Lumber Industry, by Straight-Time Average Hourly Earnings and Branch of Industry, August 1944

Average hourly earnings	Total, all branches	Logging camps	Sawmills	Veneer mills ¹	Shingle mills ²	Cooper-age-stock mills ¹	Plywood mills
Under 40.0 cents	0.4	0.3	0.4			0.1	0.4
40.0 and under 42.5 cents	12.1	9.3	14.2	22.1		16.3	10.0
42.5 and under 45.0 cents	1.4	.7	1.8	5.8		1.4	3.3
45.0 and under 47.5 cents	9.9	8.1	10.9	19.7		19.9	11.0
47.5 and under 50.0 cents	1.2	.9	1.3	1.9		5.6	2.1
50.0 and under 52.5 cents	23.9	26.9	22.7	18.0		25.6	8.8
52.5 and under 55.0 cents	1.1	1.0	1.0	1.3		1.6	2.1
55.0 and under 57.5 cents	4.0	4.4	3.6	6.6		4.1	4.1
57.5 and under 60.0 cents	.8	1.0	.6	1.8		1.1	1.3
60.0 and under 62.5 cents	4.8	5.5	4.5	5.8		6.2	3.0
62.5 and under 65.0 cents	1.8	2.4	1.3	2.0		4.0	1.6
65.0 and under 67.5 cents	2.0	1.9	2.0	4.3		3.3	2.9
67.5 and under 70.0 cents	.6	.6	.6	1.8		1.1	1.0
70.0 and under 72.5 cents	1.5	1.4	1.5	2.1		1.8	2.2
72.5 and under 75.0 cents	.4	.5	.3	1.0		.5	.6
75.0 and under 77.5 cents	2.1	2.1	2.2	1.5		1.5	1.5
77.5 and under 80.0 cents	.4	.4	.4	.3		.7	.9
80.0 and under 82.5 cents	1.1	1.0	1.2	.7		1.0	.7
82.5 and under 85.0 cents	.9	.6	1.2	.1		1.2	.8
85.0 and under 87.5 cents	1.2	.6	1.7	.5		.8	.9
87.5 and under 90.0 cents	1.5	1.3	1.8	.3		.1	.4
90.0 and under 92.5 cents	2.6	1.2	3.6	.6		.5	8.1
92.5 and under 95.0 cents	1.6	.7	2.3	.1		.2	4.6
95.0 and under 97.5 cents	1.9	.5	3.0	.2	2.4	.6	4.9
97.5 and under 100.0 cents	1.2	.8	1.5		3.7	.2	3.7
100.0 and under 105.0 cents	3.8	2.6	4.8	.7	7.1	.4	3.8
105.0 and under 110.0 cents	2.2	2.5	2.0	.1	6.2	.1	2.6
110.0 and under 115.0 cents	2.0	2.4	1.7	(³)	3.5	(³)	3.5
115.0 and under 120.0 cents	2.0	2.6	1.4	(³)	2.7	.1	4.6
120.0 and under 125.0 cents	1.2	1.7	.8	.1	4.1		2.0
125.0 and under 130.0 cents	1.7	2.5	.9	.2	3.9	(³)	2.3
130.0 and under 135.0 cents	.8	1.2	.4	(³)	3.9		.3
135.0 and under 140.0 cents	.6	1.0	.3	(³)	5.0		(³)
140.0 and under 145.0 cents	.5	.9	.2		5.4		(³)
145.0 and under 150.0 cents	.5	.8	.2		6.6		(³)
150.0 and under 160.0 cents	1.2	2.0	.5		12.9		(³)
160.0 and under 170.0 cents	.6	.9	.3		10.6		
170.0 and under 180.0 cents	.5	.9	.2		6.7		
180.0 and under 190.0 cents	.4	.8	.1		6.6		
190.0 and under 200.0 cents	.3	.6	.1		4.5		
200.0 cents and over	1.3	2.5	.4		4.2		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	331,716	140,991	170,430	4,727	1,678	3,669	10,221
Average hourly earnings	\$0.72	\$0.78	\$0.67	\$0.52	\$1.45	\$0.53	\$0.73

¹ Does not include data for veneer and cooper-age-stock mills in the West, as these two branches of the industry are relatively unimportant in that area.

² Based only on data for shingle mills in the Douglas Fir region of the Far West, which produced approximately 95 percent of all shingles manufactured in the United States.

³ Less than a tenth of 1 percent.

In a highly hazardous industry it is reasonable to assume that inter-branch differences in accident risks play some part in differentiating wage levels. A study made by the Bureau in 1940 of accidents in three branches of the lumber industry showed that the average number of disabling injuries per million hours worked was 102.02 in logging camps, 46.53 in sawmills and 34.94 in planing mills. The average number of days lost per 1,000 hours worked was 15.40 in logging camps, 4.99 in sawmills, and 2.84 in planing mills.¹¹

The general level of earnings of workers in each branch for the three broad regions is indicated in the following text table. In logging camps, sawmills and plywood mills, workers in the West earned more

¹¹ Causes and Prevention of Accidents in Logging and Lumber Mills, 1940, in Monthly Labor Review, December 1941.

than twice as much as southern workers. Earnings in the North approximated more closely earnings in the South than in the West. On the whole, wages in the various districts tended to conform to the general pattern of the broad region. The extent to which the earnings of individual workers within each branch varied among regions and districts may be observed in appendix tables A, B, C, D, and E which present distributions of workers according to straight-time average hourly earnings in logging camps, sawmills, veneer mills, cooperage-stock mills, and plywood mills.

	<i>Straight-time average hourly earnings</i>			
	<i>United States</i>	<i>West</i>	<i>North</i>	<i>South</i>
Logging camps.....	\$0.78	\$1.37	\$0.81	\$0.53
Sawmills.....	.67	1.04	.69	.51
Veneer mills.....	.52	---	.62	.49
Shingle mills.....	1.45	1.45	---	---
Cooperage-stock mills.....	.53	---	.59	.52
Plywood mills.....	.73	1.03	.62	.49

For three branches of the basic lumber industry the physical location influences the level of wages to a greater extent than for other branches because of the concentration of production within certain areas. Veneer and cooperage-stock mills, as has been noted, operate primarily in the North and South and consequently wages in these branches are not affected by the higher wage levels prevailing in the West. On the other hand, almost 95 percent of all shingles are produced in the West, the highest wage area. This, coupled with a high proportion of incentive workers, accounts for the fact that average hourly earnings in shingle mills were nearly twice as high as those in logging camps, which had next to the highest earnings of the six branches studied. Unlike veneer, cooperage-stock, and shingle mills, however, sawmills, logging camps, and plywood mills are important in all regions, and, as a result, their general wage levels are affected by both the higher wages of the West and the lower wages of the North and South.

INFLUENCE OF INCENTIVE METHODS OF PAY

Although only one-tenth of the workers in the basic lumber industry were paid on an incentive basis, the high earnings of these workers exerted considerable influence on the wage structure of the industry. This influence, however, varied among regions and branches because of differences in the proportion of workers paid on an incentive basis and in the level of earnings of such workers. For example, the proportion of workers paid on an incentive basis varied from 5.8 percent in the South to 20.7 percent in the North; in the West 16 percent of the employees were incentive workers (see table 5). Among the 6 branches studied, only 2.1 percent and 3.1 percent of the workers in veneer and sawmills, respectively, received incentive pay, but 11.9 percent of the workers in cooperage-stock mills, 15 percent in plywood mills, 17.9 percent in logging camps, and 58.4 percent in shingle mills received such earnings. To a very large extent incentive work is confined to a few occupations such as fallers and buckers in logging camps, car loaders, lumber pullers, green chain pullers and lumber stackers and unstackers in sawmills, and shingle sawyers and packers

in shingle mills. Moreover, some of these occupations are among the more skilled occupations and even without incentive payments would be among the highest paid in the industry.

TABLE 5.—*Straight-Time Average Hourly Earnings in Basic Lumber Industry, by Region, Branch, and Method of Wage Payment, August 1944*

Region and branch	Straight-time average hourly earnings			Percent of covered workers paid on incentive basis	Region and branch	Straight-time average hourly earnings			Percent of covered workers paid on incentive basis
	All workers	Time	Incentive			All workers	Time	Incentive	
All branches:					Plywood mills:				
United States.....	\$0.72	\$0.66	\$1.20	10.1	United States.....	\$0.73	\$0.74	\$0.67	15.0
West.....	1.18	1.07	1.77	16.0	West.....	1.03	1.03		
North.....	.73	.68	.95	20.7	North.....	.62	.57	.68	47.2
South.....	.52	.51	.71	5.8	South.....	.49	.49	.56	4.1
Logging camps:					Shingle mills:				
United States.....	.78	.68	1.23	17.9	Douglas Fir district.....	1.45	1.23	1.59	58.4
West.....	1.37	1.19	1.85	27.5	Cooperage-stock mills:				
North.....	.81	.70	1.03	30.5	United States.....	.53	.51	.67	11.9
South.....	.53	.51	.72	10.8	North.....	.59	.56	.94	7.4
Sawmills:					South.....	.55	.50	.68	12.3
United States.....	.67	.65	1.21	3.1	Veneer mills:				
West.....	1.04	1.00	1.58	6.8	United States.....	.52	.52	.61	2.1
North.....	.69	.68	.80	2.0	North.....	.62	.62	.59	7.6
South.....	.51	.51	.65	1.7	South.....	.49	.48	.74	4

As a group, incentive workers averaged \$1.20 an hour or nearly twice as much as time workers who averaged 66 cents an hour. In the West, incentive workers earned on the average 65 percent more than time workers, while in the North and South they earned 40 percent more. These differences are borne out by the distribution of workers according to straight-time average hourly earnings presented in table 6 for the country as a whole as well as for each of the three broad regions. It will be observed that for the country as a whole more than half of the incentive workers earned \$1.00 or more an hour and not far from a third earned \$1.50 or more an hour, while only a sixth of the time workers earned as much as \$1 an hour and less than 2 percent received \$1.50 or more an hour. In contrast, well over half of the time workers as against less than a tenth of the incentive workers earned less than 52.5 cents an hour. Wide differences in the distributions of time and incentive workers according to straight-time average hourly earnings were found in each of the three broad regions.

With the sole exception of veneer mills in the North, incentive workers earned substantially more than time workers in each branch and region for which comparative figures could be presented in table 5. The amount of the average differential, however, varied considerably—from 66 cents in logging camps in the West to 7 cents in plywood mills in the South.

TABLE 6.—Percentage Distribution of Workers in Basic Lumber Industry, by Straight-Time Average Hourly Earnings, Broad Region, and Method of Wage Payment, August 1944

Average hourly earnings	Total, U. S.		West		North		South	
	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive
Under 40.0 cents.....	0.4	0.4			0.2	0.1	0.5	1.0
40.0 and under 42.5 cents.....	13.3	1.0	(1)		1.3	1.0	20.0	2.3
42.5 and under 45.0 cents.....	1.5	.9	(1)		.3	.7	2.3	2.1
45.0 and under 47.5 cents.....	10.7	2.1	(1)		2.2	1.0	15.9	5.3
47.5 and under 50.0 cents.....	1.1	1.4	(1)		.4	2.0	1.7	2.8
50.0 and under 52.5 cents.....	26.0	3.8	0.1		10.6	1.8	38.3	9.5
52.5 and under 55.0 cents.....	.9	2.2	(1)	(1)	1.2	1.8	1.2	4.9
55.0 and under 57.5 cents.....	4.1	3.0	(1)		6.7	3.3	5.2	6.3
57.5 and under 60.0 cents.....	.6	2.3	(1)	(1)	2.6	2.7	.6	4.7
60.0 and under 62.5 cents.....	5.1	2.3	1	(1)	18.5	3.3	5.0	4.4
62.5 and under 65.0 cents.....	1.8	2.2	(1)	(1)	6.6	2.9	1.7	4.2
65.0 and under 67.5 cents.....	1.9	2.9	.3	0.1	9.0	4.4	1.5	5.1
67.5 and under 70.0 cents.....	.4	2.0	.1		2.6	2.5	.2	3.9
70.0 and under 72.5 cents.....	1.4	2.7	.3	.1	8.1	2.7	.8	5.5
72.5 and under 75.0 cents.....	.3	1.7	.2	.1	1.4	2.7	.2	3.1
75.0 and under 77.5 cents.....	2.1	2.3	.8	.1	7.5	3.5	1.8	4.2
77.5 and under 80.0 cents.....	.3	1.7	.3	.2	.9	3.3	.2	2.5
80.0 and under 82.5 cents.....	1.0	1.9	1.1	.2	3.4	2.8	.6	3.3
82.5 and under 85.0 cents.....	.9	1.7	2.8	.3	.7	2.2	.1	3.1
85.0 and under 87.5 cents.....	1.2	1.3	3.2	.3	2.2	2.5	.3	1.8
87.5 and under 90.0 cents.....	1.5	1.7	3.7	.4	3.8	2.6	.3	2.8
90.0 and under 92.5 cents.....	2.7	1.9	9.8	.2	1.2	5.2	.3	1.8
92.5 and under 95.0 cents.....	1.6	1.4	6.2	.5	.4	2.4	.1	1.7
95.0 and under 97.5 cents.....	2.0	1.3	7.5	.3	1.0	3.3	.1	1.2
97.5 and under 100.0 cents.....	1.2	1.5	4.8	.7	.1	2.4	(1)	1.9
100.0 and under 105.0 cents.....	3.9	2.6	12.2	1.7	4.2	4.6	.7	2.4
105.0 and under 110.0 cents.....	2.3	2.1	8.9	1.8	.4	4.1	.1	1.2
110.0 and under 115.0 cents.....	2.0	2.6	7.2	2.3	1.0	4.3	.1	1.9
115.0 and under 120.0 cents.....	2.0	2.2	7.9	2.5	.2	3.5	.1	.9
120.0 and under 125.0 cents.....	1.1	2.1	4.4	2.8	.2	3.0	(1)	.7
125.0 and under 130.0 cents.....	1.6	2.1	5.9	2.7	.8	2.4	.1	1.3
130.0 and under 135.0 cents.....	.6	2.0	2.4	3.2	.1	2.0	(1)	.7
135.0 and under 140.0 cents.....	.5	2.0	1.9	3.5	(1)	1.9	(1)	.2
140.0 and under 145.0 cents.....	.4	1.9	1.5	3.4	(1)	1.8	(1)	.3
145.0 and under 150.0 cents.....	.2	2.4	1.0	4.6		2.2	(1)	.1
150.0 and under 160.0 cents.....	.8	4.3	3.2	9.0	.2	1.8	(1)	.2
160.0 and under 170.0 cents.....	.2	3.8	.9	8.0	(1)	1.7	(1)	.3
170.0 and under 180.0 cents.....	.2	3.3	.7	7.3	(1)	1.0	(1)	.1
180.0 and under 190.0 cents.....	.1	3.7	.3	8.3	(1)	.9	(1)	.1
190.0 and under 200.0 cents.....	(1)	3.0	.1	6.8		.6	(1)	.2
200.0 cents and over.....	.1	12.3	.2	28.6	(1)	1.1	(1)	.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	298,107	33,609	73,185	13,950	29,293	7,621	195,629	12,038
Average hourly earnings.....	\$0.66	\$1.20	\$1.07	\$1.77	\$0.68	\$0.95	\$0.51	\$0.71

¹ Less than a tenth of 1 percent.

The influence of incentive methods of wage payments on wages can best be appraised by comparing the earnings of workers in those occupations in which both methods of pay are found. The comparison must of necessity be confined to logging and sawmilling occupations, however, as virtually all shingle sawyers and packers are incentive workers. It will be seen from the figures presented below for six occupations in the West that in all cases incentive workers earned considerably more than time workers. Thus, in both the Douglas Fir and Western Pine regions fallers and buckers paid on an incentive basis earned 50 percent more than fallers and buckers paid on a time basis, while in the Redwood region they earned 30.9 percent more than time workers. The general averages for time and incentive workers in both the North and the South also indicate the existence of substantial occupational differentials in favor of incentive workers.

TABLE 7.—*Straight-Time Average Hourly Earnings in Selected Occupations in the West, by Method of Wage Payment, August 1944*

Occupation	Straight-time average hourly earnings					
	Douglas Fir		Western Pine		Redwood	
	Time	Incentive	Time	Incentive	Time	Incentive
Fallers and buckers, logging.....	\$1.28	\$1.94	\$1.12	\$1.70	\$1.10	\$1.44
Car loaders, sawmill.....	.96	1.59	.94	1.65	1.00	1.41
Pilers, sawmill.....	(¹)	(¹)	1.05	2.12	.83	1.40
Pullers, green chain, sawmill.....	.96	2.15	.97	1.64	.95	1.15
Stackers, dry kiln, sawmill.....	.99	1.33	.99	1.51	(¹)	(¹)
Unstackers, dry kiln, sawmill.....	.93	1.17	.90	1.47	.87	1.36

¹ Insufficient number of incentive workers to present comparative figures.

WAGE LEVELS IN UNION AND NONUNION OPERATIONS

Unionization in the basic lumber industry is largely confined to Western operations and for that reason any analysis of the wages paid to union and nonunion workers must be restricted to this region. Furthermore, the comparison must be limited to 2 of the 4 branches of the industry studied in the West, namely logging camps and sawmills, as all plywood mills and virtually all shingle mills have collective bargaining agreements with organized labor.

Wages in union operations as a group were higher than those in nonunion operations, but the difference was slight; the respective average hourly earnings were \$1.19 and \$1.17 (see table 8). Union workers earned slightly more than nonunion workers in logging camps (\$1.38 compared to \$1.34), and the same amount in sawmills. Earnings of union workers were slightly higher than those of nonunion workers in the Douglas Fir region, but slightly lower in the other 2 regions.

TABLE 8.—*Straight-Time Average Hourly Earnings of Workers in Basic Lumber Industry in West, by Branch, Region, District, and Unionization, August 1944*

Region and district	Total, all branches		Logging camps		Sawmills		Shingle mills	Plywood mills
	Union	Non-union	Union	Non-union	Union	Non-union		
Total, West.....	\$1.19	\$1.17	\$1.38	\$1.34	\$1.04	\$1.04	\$1.45	\$1.03
Douglas Fir region.....	1.24	1.22	1.46	1.43	1.03	1.05	1.45	1.03
Western Pine region.....	1.12	1.12	1.23	1.20	1.06	1.02	-----	-----
Inland Empire district.....	1.05	1.04	1.20	1.11	.96	.98	-----	-----
Snake River district.....	1.13	1.04	1.28	1.15	1.05	.97	-----	-----
Central Washington district.....	.94	1.03	1.12	1.13	.88	.96	-----	-----
Central Oregon district.....	1.17	1.30	1.33	1.50	1.10	1.19	-----	-----
Northern California district.....	1.19	1.25	1.28	1.37	1.15	1.10	-----	-----
Central California district.....	1.18	1.17	1.19	1.32	1.18	1.03	-----	-----
Lower Rocky Mountain district.....	.94	.83	.97	.93	.91	.80	-----	-----
Redwood region.....	1.16	1.20	1.34	1.34	1.03	1.12	-----	-----

Since the Bureau's 1939-40 study revealed somewhat greater differentials in favor of union operations, it is apparent that the extraordinary conditions of wartime operated to the advantage of the lower-paid nonunion workers. Any discussion of union-nonunion wage

differences in the western lumber industry should mention a number of special factors that have tended to reduce or obscure their magnitude. One consideration is the extent and recency of union organization. In the Douglas Fir region union organization is somewhat more extensive, and operations have been organized for a longer period of time than in either the Western Pine or the Redwood regions. Other factors which may affect earnings and tend to obscure somewhat the actual influence of unionization on wages are size of operation and type of equipment. Unionization has been confined chiefly to the larger operations, whereas the smaller operations have generally been unorganized. It should also be borne in mind that, under the wage-stabilization program, trade-unions had comparatively limited opportunities to seek wage advances for their members. Furthermore, such general increases as were granted by the War Labor Board to workers in union plants which were parties to dispute cases before the Board were also authorized for all workers in basic lumber operations in the region.

SIZE OF OPERATION AS A FACTOR IN WAGE STRUCTURE

On the basis of summary figures for logging camps and sawmills in the West it appears that in August 1944 there was no consistent relationship between size of operation and level of wages. The comparison was limited to western logging camps and sawmills because of the preponderance of small operations in the North and the South and because the number of operations in the remaining four branches was small.

Summary figures for specified size groups and selected occupations are presented in table 9 for logging camps and in table 10 for sawmills. It will be seen that wages were in general slightly higher in the larger camps than in the smaller camps. In some sawmill occupations, earnings tended to vary with the size of the mill, but the amount of difference varied considerably among regions.

TABLE 9.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Logging Camps, by Region and Monthly Production of Camp, August 1944*

Occupation	Douglas Fir region				Western Pine region			
	Total	Logging camps with monthly production of—			Total	Logging camps with monthly production of—		
		25,000 M b.m. and under	10,000 M b.m. and under 25,000 M b.m.	Under 10,000 M b.m.		25,000 M b.m. and under	10,000 M b.m. and under 25,000 M b.m.	Under 10,000 M b.m.
Total, 6 selected occupations.....	\$1.55	\$1.57	\$1.55	\$1.40	\$1.32	\$1.33	\$1.36	\$1.22
Cat drivers (tractor).....	1.40	1.43	1.38	1.37	1.24	1.23	1.23	1.23
Choker setters, cat side.....	1.10	1.09	1.10	1.10	1.00	.99	1.01	1.02
Fallers and buckers, hand.....	1.78	1.82	1.75	1.53	1.59	1.63	1.64	1.38
Head loaders, mechanical loading.....	1.38	1.38	1.38	1.33	1.29	1.38	1.24	1.12
Hook tenders, cat side.....	1.47	1.48	1.44	1.46	1.26	1.29	1.14	1.30
Truck drivers, hauling.....	1.18	1.18	1.18	1.15	1.07	1.07	1.07	1.06

TABLE 10.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Sawmills, by Daily Capacity of Sawmill and by Region, August 1944*

Occupation	Total	Sawmills with daily (8-hour) capacity of—			Total	Sawmills with daily (8-hour) capacity of—		
		81 M b.m. and over	26 M b.m. and under 81 M b.m.	Under 26 M b.m.		81 M b.m. and over	26 M b.m. and under 81 M b.m.	Under 26 M b.m.
		Total, Far West			Douglas Fir region			
Total, 12 selected occupations.....	\$1.06	\$1.05	\$1.07	\$1.09	\$1.07	\$1.06	\$1.07	\$1.09
Clean-up men.....	.88	.88	.89	.86	.90	.90	.91	.88
Doggers, head rig.....	.96	.97	.96	.97	.97	.96	.97	.98
Edgermen.....	1.14	1.18	1.12	1.09	1.16	1.24	1.14	1.07
Edger off-bearers.....	.91	.90	.91	.93	.93	.93	.93	.95
Graders, finish chain.....	1.10	1.10	1.10	1.04	1.07	1.07	1.04	1.06
Graders or markers, green chain.....	1.09	1.10	1.07	1.07	1.07	1.07	1.06	1.06
Operating millwrights.....	1.19	1.19	1.18	1.24	1.20	1.19	1.22	1.21
Pondmen.....	.99	1.01	.97	.96	1.02	1.03	1.01	.99
Sawyers, head rig.....	1.50	1.59	1.48	1.38	1.54	1.68	1.48	1.42
Setters, head rig.....	1.09	1.11	1.09	1.08	1.07	1.07	1.08	1.07
Trimmermen, head mill.....	1.02	1.07	.99	1.01	1.05	1.13	1.00	.98
Utility men.....	.88	.88	.89	.93	.90	.90	.91	.91
		Western Pine region			Redwood region			
Total, 12 selected occupations.....	1.05	1.05	1.06	1.05	1.10	.99	1.19	1.27
Clean-up men.....	.86	.86	.87	.86	.85	(1)	(1)	-----
Doggers, head rig.....	.96	.98	.94	.97	.98	.93	1.01	-----
Edgermen.....	1.11	1.13	1.10	1.07	1.26	1.20	1.29	1.33
Edger off-bearers.....	.89	.87	.87	.93	.90	.86	.96	-----
Graders, finish chain.....	1.15	1.15	1.18	1.01	.99	(1)	(1)	-----
Graders or markers, green chain.....	1.11	1.13	1.08	1.04	1.10	.99	1.19	1.33
Operating millwrights.....	1.15	1.17	1.12	1.18	1.33	1.22	1.34	1.44
Pondmen.....	.95	1.00	.90	.90	.94	(1)	(1)	(1)
Sawyers, head rig.....	1.47	1.55	1.48	1.33	1.46	1.40	1.52	1.51
Setters, head rig.....	1.11	1.15	1.10	1.06	1.11	1.02	1.11	1.25
Trimmermen, head mill.....	.98	1.01	.96	.98	1.12	.95	1.24	1.21
Utility men.....	.85	.86	.85	.77	.90	.84	.97	1.00

¹ Insufficient number of plants and/or workers to justify presentation of an average.

OCCUPATIONAL AVERAGE HOURLY EARNINGS

Interbranch variations in wage levels result very largely from basic differences in occupational structure and skill requirements. This is clearly indicated by the figures presented in tables 11 to 16 for 204 selected key occupations which, as previously pointed out, are believed to be representative of the skill and earnings levels in the six branches of the industry studied. The comparatively high earnings in logging camps and shingle mills are due to the high proportion of skilled workers and, more particularly, the heavy concentration of skilled workers in three occupations customarily paid on an incentive basis, namely, fallers and buckers in logging camps and shingle sawyers and packers in shingle mills. The lower wage levels of the other branches, especially in veneer and cooperage-stock mills, reflect lower skill requirements and less incentive work.

Within each branch the difference among occupations with respect to average earnings was on the whole, quite limited. Exceptionally high earnings were evident in a few occupations where incentive pay was important or where the occupations required an unusually high

degree of skill. Saw filers in sawmills and shingle mills and fallers and buckers in logging camps were typical of the few relatively high wage occupations.

In all branches skilled maintenance workers were among the highest paid in the industry as were skilled workers in a number of processing occupations. The maintenance group of occupations included electricians, pipe fitters, machinists, millwrights, blacksmiths, truck and tractor repairmen, donkey doctors, and saw filers. Among the skilled processing workers receiving the highest wages in each of the branches are engineers operating yarding, loading and railroad engines and tractor drivers in logging camps, head sawyers in sawmills, shingle sawyers and packers in shingle mills, veneer lathe operators in veneer and plywood mills, and heading and stave sawyers in cooperage-stock mills.

TABLE 11.—*Straight-Time Average Hourly Earnings of Workers in LOGGING CAMPS, by Occupation and Broad Region, August 1944*

Occupation	Total, U. S.		West		North		South	
	Number of workers	Average hourly earnings						
Total, selected occupations.....	140,991	\$0.78	35,594	\$1.37	16,330	\$0.81	89,067	\$0.53
Blacksmiths.....	371	.94	175	1.21	124	.73	72	.66
Brakemen, head.....	260	1.14	260	1.14	(1)	(1)	(1)	(1)
Brakemen, second.....	227	1.03	227	1.03	(1)	(1)	(1)	(1)
Bull buckers.....	2,820	.85	533	1.47	185	.81	2,102	.69
Bulldozer operators.....	1,016	1.22	779	1.35	137	.87	100	.65
Cat doctors.....	360	1.17	291	1.28	27	.78	42	.62
Cat drivers (tractor).....	5,990	.79	1,601	1.29	879	.80	3,510	.56
Chasers, high lead and skidder side.....	432	1.12	432	1.12	(1)	(1)	(1)	(1)
Choker setters, cat side.....	6,041	.76	2,914	1.05	266	.68	2,861	.47
Donkey doctors.....	87	1.36	87	1.36	(1)	(1)	(1)	(1)
Engineers, high lead and skidder slackline.....	696	1.34	696	1.34	(1)	(1)	(1)	(1)
Engineers, mechanical loading.....	1,871	1.05	1,224	1.29	150	.70	497	.55
Engineers, rail transportation.....	282	1.20	282	1.20	(1)	(1)	(1)	(1)
Fallers and buckers, hand.....	58,829	.81	11,001	1.69	8,421	.92	39,407	.53
Fallers and buckers, power.....	4,828	1.00	1,623	1.85	159	.81	3,046	.57
Filers, woods.....	1,652	.97	563	1.35	59	.66	1,030	.78
Fremen, rail transportation.....	265	.99	265	.99	(1)	(1)	(1)	(1)
Head loaders, mechanical loading.....	1,686	1.04	1,055	1.34	52	.76	579	.51
Head rigging slingers, high lead and skidder slackline.....	534	1.31	534	1.31	(1)	(1)	(1)	(1)
Hook tenders, cat side.....	304	1.41	304	1.41	(1)	(1)	(1)	(1)
Hook tenders, high lead and skidder slackline.....	642	1.52	642	1.52	(1)	(1)	(1)	(1)
Landing men.....	1,305	.51	(1)	(1)	175	.65	1,130	.49
Limbers and knotters.....	2,356	.63	407	1.07	138	.73	1,811	.52
Loaders, hand.....	3,734	.52	(1)	(1)	453	.73	3,281	.50
Motor patrol operators.....	186	1.18	186	1.18	(1)	(1)	(1)	(1)
Powdermen.....	360	1.12	360	1.12	(1)	(1)	(1)	(1)
Rigging slingers, cat side.....	907	.78	422	1.11	48	.65	437	.48
Road monkeys.....	1,843	.52	(1)	(1)	598	.62	1,245	.47
Scalers, woods.....	1,165	.92	634	1.17	196	.74	335	.57
Second loaders, mechanical loading.....	2,724	.86	1,546	1.12	207	.67	971	.48
Second rigging slingers, high lead and skidder slackline.....	253	1.18	253	1.18	(1)	(1)	(1)	(1)
Section hands.....	1,943	.71	1,028	.87	212	.63	703	.49
Teamsters, skidding.....	13,003	.52	(1)	(1)	2,101	.69	10,902	.49
Tire and greasemen.....	232	1.02	232	1.02	(1)	(1)	(1)	(1)
Truck drivers, hauling.....	19,564	.66	3,838	1.11	1,677	.67	14,049	.53
Truck mechanics.....	977	1.06	676	1.21	66	.79	235	.70
Whistle punks, high lead and skidder slackline.....	524	1.07	524	1.07	(1)	(1)	(1)	(1)
Winch operators, skidding.....	722	.53	(1)	(1)	(1)	(1)	722	.53

1 No information obtained for workers in this occupation which is not commonly found in this broad region.

The lowest earnings were generally received by helpers on various machines, by material handlers and by workers in a large number of occupations in which the skill requirements were low. Somewhat higher earnings were received by workers in a number of moderately skilled occupations, many of which involve the operation of machines. Typical occupations in this group are choker setters and chasers in logging camps, cut-off saw operators and green chain graders in sawmills, veneer driers operators and veneer patchers in plywood mills and splittermen in shingle mills.

The wide regional variations indicated earlier in the summary tables are quite evident in the occupational earnings presented for each of the broad regions. In all cases workers in the West had by far the highest earnings, while workers in the North had the next highest earnings and workers in the South had the lowest earnings. Moderate variations in earnings were also found among districts within each of the three broad regions as may be seen from appendix tables G and H for logging camps, tables I and J for sawmills, table 14 for cooperage-stock mills, table 15 for veneer mills, and table 16 for plywood mills.

TABLE 12.—*Straight-Time Average Hourly Earnings of Workers in SAWMILLS, by Occupation and Broad Region, August 1944*

Occupation	Total U. S.		West		North		South	
	Number of workers	Average hourly earnings						
Total, selected occupations	170,430	\$0.67	45,981	\$1.04	16,243	\$0.69	108,206	\$0.51
<i>Sawmills, including planing mills</i>								
Blacksmiths.....	471	.84	181	1.15	71	.76	219	.62
Car loaders.....	9,136	.66	2,474	1.15	651	.65	6,011	.46
Carpenters.....	1,207	.79	420	1.12	142	.80	645	.58
Carrier drivers.....	1,435	.83	883	1.04	27	.65	525	.49
Clean-up men.....	3,350	.62	1,229	.88	226	.62	1,895	.45
Cut-off saw operators.....	3,537	.60	691	.94	804	.62	2,042	.48
Deckmen, including dragsaw men.....	8,115	.56	1,133	.96	867	.67	6,115	.48
Doggers, head rig.....	4,533	.59	717	.96	515	.67	3,301	.49
Edgermen.....	7,646	.64	1,311	1.12	940	.70	5,395	.51
Edger off-bearers.....	8,111	.53	920	.90	603	.62	6,583	.47
Electricians.....	454	1.07	321	1.20	30	.90	103	.74
Filers.....	1,521	1.14	470	1.67	170	.99	881	.89
Filers, bench.....	322	1.01	131	1.32	113	.84	78	.73
Filers' helpers.....	471	.85	252	1.10	28	.70	191	.55
Firemen.....	6,259	.59	1,309	.95	552	.63	4,398	.48
Firemen's helpers.....	923	.46	(1)	(1)	36	.62	887	.46
Gang saw off-bearers.....	28	.97	28	.97	(1)	(1)	(1)	(1)
Gang saw spotters.....	44	.94	44	.94	(1)	(1)	(1)	(1)
Gang sawyers.....	70	1.13	70	1.13	(1)	(1)	(1)	(1)
Garage mechanics.....	765	.82	258	1.14	72	.79	435	.63
Graders, finish chain.....	2,129	.80	877	1.10	36	.71	1,216	.58
Graders or markers, green chain.....	1,949	.81	808	1.08	342	.76	799	.56
Graders, rough dry chain.....	698	.82	261	1.14	64	.76	373	.62
Helpers, maintenance.....	954	.78	458	1.01	94	.71	402	.54
Hog feeders.....	939	.67	399	.91	80	.67	460	.46
Kiln tenders.....	474	.78	149	1.05	40	.85	285	.64
Knife grinders.....	394	.83	113	1.17	17	.75	264	.69
Machinists.....	689	.99	355	1.21	38	.88	296	.74
Off-bearers, head rig.....	9,546	.55	1,292	.96	827	.66	7,427	.46
Oilers.....	1,105	.71	495	.96	55	.64	555	.49
Operating engineers.....	970	.88	518	1.08	99	.75	353	.62
Operating millwrights.....	1,861	1.02	1,151	1.19	150	.81	560	.73
Pilers, yard, including timber handlers.....	14,169	.60	1,536	1.38	2,022	.64	10,611	.48
Pipe fitters.....	148	1.18	148	1.18	(1)	(1)	(1)	(1)
Planer feeders, including matcher and sizer feeders.....	2,747	.65	806	.97	168	.66	1,773	.50

See footnote at end of table.

TABLE 12.—*Straight-Time Average Hourly Earnings of Workers in SAWMILLS, by Occupation and Broad Region, August 1944—Continued*

Occupation	Total, U. S.		West		North		South	
	Number of workers	Average hourly earnings						
<i>Sawmills, Including Planing Mills—Continued</i>								
Planer off-bearers, including matcher and sizer off-bearers	2, 374	\$0. 59	657	\$0. 90	173	\$0. 58	1, 544	\$0. 45
Planer operators, including matcher and sizer operators	586	. 82	231	1. 12	87	. 66	268	. 62
Pondmen, including slipmen	2, 674	. 75	1, 406	. 96	316	. 62	952	. 46
Pullers, dry chain	1, 884	. 71	831	1. 02	69	. 59	964	. 46
Pullers, green chain	7, 839	. 79	4, 518	1. 02	427	. 62	2, 894	. 46
Resaw off-bearers, head mill	597	. 48	—	—	80	. 64	517	. 46
Resaw off-bearers, planing mill	590	. 56	124	. 90	34	. 61	432	. 45
Resawyers, head mill	915	. 78	388	1. 08	111	. 73	416	. 51
Resawyers, planing mill	573	. 62	128	. 96	—	. 63	412	. 49
Sawyers, head rig	8, 028	. 92	1, 221	1. 47	1, 255	. 93	5, 552	. 80
Setters, head rig	4, 970	. 69	1, 206	1. 06	586	. 69	3, 178	. 54
Set-up men, planing mill	1, 002	. 88	353	1. 16	24	. 78	625	. 74
Sorters, planed lumber	1, 406	. 76	928	. 91	21	. 58	457	. 47
Stacker-carrier operators	158	1. 03	156	1. 03	(1)	(1)	(1)	(1)
Stackers, dry kiln	4, 656	. 81	897	1. 22	203	. 73	3, 556	. 50
Straighteners, green chain	137	. 93	137	. 93	(1)	(1)	(1)	(1)
Tallymen	2, 179	. 81	895	1. 05	221	. 79	1, 063	. 62
Tiers and bundle sorters, planing mill	592	. 48	(1)	(1)	39	. 62	553	. 47
Tractor drivers	1, 383	. 50	(1)	(1)	151	. 69	1, 232	. 48
Transfer car operators, dry kiln	146	. 94	146	. 94	(1)	(1)	(1)	(1)
Trimmer spotters	907	. 73	476	. 95	33	. 65	398	. 47
Trimmermen, head mill	3, 050	. 69	1, 056	1. 02	369	. 66	1, 625	. 49
Trimmermen, planing mill	1, 469	. 63	462	. 96	28	. 62	979	. 48
Truck drivers, yard	5, 868	. 59	841	1. 01	1, 030	. 68	3, 997	. 48
Unstackers, dry kiln	3, 021	. 57	488	1. 10	47	. 59	2, 486	. 46
Utility men	8, 656	. 56	1, 893	. 87	676	. 58	6, 087	. 45
Watchmen, service	4, 295	. 61	1, 628	. 84	311	. 56	2, 356	. 45
Yard men, log, including hoistmen	620	. 50	(1)	(1)	35	. 56	585	. 50
<i>Boz factory</i>								
Car loaders	143	. 88	143	. 88	(1)	(1)	(1)	(1)
Cut-off saw off-bearers	455	. 81	455	. 81	(1)	(1)	(1)	(1)
Cut-off saw operators	385	1. 05	385	1. 05	(1)	(1)	(1)	(1)
Machine hikeaways	283	. 81	283	. 81	(1)	(1)	(1)	(1)
Nailing, stapling, and stitching machine operators	227	. 88	227	. 88	(1)	(1)	(1)	(1)
Planer feeders	49	. 91	49	. 91	(1)	(1)	(1)	(1)
Planermen	46	1. 15	46	1. 15	(1)	(1)	(1)	(1)
Resaw off-bearers	495	. 81	495	. 81	(1)	(1)	(1)	(1)
Resawyers	512	. 96	512	. 96	(1)	(1)	(1)	(1)
Tying machine operators	112	. 87	112	. 87	(1)	(1)	(1)	(1)

¹ No information obtained for workers in this occupation which is not commonly found in this region.

TABLE 13.—*Straight-Time Average Hourly Earnings of Workers in SHINGLE MILLS in the Douglas Fir Region, by Occupation, August 1944*

Occupation	Number of workers	Straight-time average hourly earnings	Occupation	Number of workers	Straight-time average hourly earnings
Total, selected occupations	1, 678	\$1. 45	Loaders, car and truck	56	\$1. 02
Block pilers	151	1. 07	Millwrights	11	1. 14
Cut-off operators	105	1. 35	Shingle packers	485	1. 45
Deckmen, log	54	1. 17	Shingle sawyers	548	1. 71
Filers, head	42	2. 00	Splittermen	19	1. 11
Filers' helpers	22	1. 50	Tallymen	66	1. 08
Knee bolters	68	1. 48	Watchmen, service	51	. 98

TABLE 14.—*Straight-Time Hourly Earnings of Workers in COOPERAGE-STOCK MILLS, by Occupation and Region, August 1944*

Occupation	Total		North		South					
					Total, South		Southeastern States		Southwestern States	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Total, selected occupations.....	3,669	\$0.53	241	\$0.59	3,428	\$0.52	2,459	\$0.51	909	\$0.55
Bolters.....	282	.51	18	.88	264	.48	172	.49	92	.47
Bundlers, staves and headings.....	512	.49	37	.51	475	.49	366	.48	109	.50
Car loaders.....	285	.45	2	(¹)	283	.45	271	.44	12	.50
Clean-up men, mill service.....	191	.45	17	.51	174	.44	139	.44	35	.45
Croze machine operators.....	91	.49	3	.50	88	.49	86	.49	2	(¹)
Cull stave sawyers.....	111	.46	7	.52	104	.46	69	.44	35	.49
Cut-off saw operators, log.....	201	.49	18	.56	183	.49	151	.49	32	.48
Deckmen, log.....	101	.47	5	.55	96	.46	62	.45	34	.48
Heading machine tailers.....	129	.47	3	.53	126	.47	104	.46	22	.47
Heading matchers.....	156	.63	8	.56	148	.63	85	.65	63	.59
Heading saw operators.....	102	.63	9	.68	93	.63	65	.61	28	.67
Heading turners.....	70	.69	8	.54	62	.71	39	.77	23	.62
Joiner operators.....	536	.61	43	.60	493	.61	319	.60	174	.65
Knife setters.....	27	.61	1	(¹)	26	.61	15	.57	11	.65
Millwrights.....	47	.71	2	(¹)	45	.71	34	.72	11	.69
Stave-bolter equalizers.....	139	.53	21	.56	118	.52	57	.50	61	.54
Stave-planer operators.....	63	.49	4	.52	59	.49	31	.47	28	.52
Stave-saw operators.....	232	.63	24	.61	208	.64	154	.62	54	.68
Truckers, hand.....	294	.47	6	(¹)	288	.47	170	.45	118	.49
Watchmen, service.....	100	.47	5	(¹)	95	.46	70	.46	25	.49

¹ Insufficient number of plants and/or workers to justify presentation of an average.

TABLE 15.—*Straight-Time Average Hourly Earnings of Workers in VENEER MILLS, by Occupation and Region, August 1944*

Occupation	Total		North		South	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Total, selected occupations.....	4,727	\$0.52	1,144	\$0.62	3,583	\$0.49
Barkers.....	394	.50	100	.62	294	.46
Car loaders.....	201	.47	23	.58	178	.46
Carpenters.....	32	.65	8	.79	24	.60
Clean-up men, mill service.....	269	.46	39	.56	230	.44
Clipper machine operators.....	352	.58	115	.65	237	.54
Cranemen.....	94	.58	22	.71	72	.53
Cut-off saw operators.....	59	.50	11	.71	48	.45
Machinists.....	34	.68	13	.81	21	.60
Millwrights.....	39	.82	8	.78	31	.83
Pondmen.....	258	.49	29	.62	229	.47
Truckers, hand.....	101	.47	13	.62	88	.45
Veneer driers.....	165	.53	49	.62	116	.49
Veneer drier feeders.....	561	.48	171	.55	390	.45
Veneer drier off-bearers.....	530	.46	112	.51	418	.44
Veneer graders.....	513	.51	117	.63	396	.48
Veneer lathe operators.....	228	.76	68	.86	160	.72
Veneer lathe operators' helpers.....	675	.49	176	.57	499	.47
Veneer slicing machine operators.....	58	.76	21	1.00	37	.62
Veneer tapers.....	37	.52	18	.55	19	.49
Watchmen, service.....	127	.49	31	.57	96	.47

TABLE 16.—Straight-Time Average Hourly Earnings of Workers in PLYWOOD MILLS, by Occupation and Region, August 1944

Occupation	Total, United States		West		North						South	
					Total, North		Lake States		Other Northern States			
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Total, all occupations.....	10,221	\$0.73	3,882	\$1.03	2,956	\$0.62	1,412	\$0.67	1,544	\$0.57	3,383	\$0.49
Barkers.....	251	.67	72	1.10	44	.62	35	.61	9	.67	135	.45
Blacksmiths.....	7	1.21	7	1.21	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Car loaders.....	320	.70	133	.95	78	.61	33	.70	45	.54	109	.46
Carpenters.....	85	.94	40	1.17	24	.75	12	.83	12	.67	21	.70
Clean-up men, mill service.....	274	.62	95	.90	48	.57	29	.63	19	.48	131	.43
Clipper machine operators.....	519	.71	110	1.11	215	.63	118	.68	97	.57	191	.57
Crane followers.....	16	.98	16	.98	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Crane men.....	115	.82	67	1.02	10	.58	2	(²)	8	.55	38	.53
Cut-off saw operators.....	263	.71	58	1.11	118	.68	39	.73	79	.66	92	.50
Electricians.....	39	1.21	39	1.21	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Glue-spreader catchers.....	415	.87	207	1.20	86	.61	30	.69	56	.57	122	.47
Glue-spreader feeders.....	305	.76	124	1.10	92	.59	33	.68	59	.54	89	.48
Glue-spreader helpers.....	214	.61	49	.95	65	.58	24	.67	41	.53	100	.45
Helpers, maintenance.....	77	.79	29	1.04	29	.70	17	.71	12	.68	19	.53
Inspectors.....	277	.67	70	.96	126	.60	38	.74	88	.54	81	.51
Machinists.....	70	1.00	32	1.27	14	.82	7	.84	7	.79	24	.75
Millwrights.....	152	1.08	102	1.21	35	.82	19	.87	16	.76	15	.79
Off-bearers, saws.....	351	.59	77	.91	116	.56	44	.65	72	.51	158	.46
Oilers.....	17	1.00	17	1.00	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Patchers, plywood and/or panels.....	351	1.06	285	1.16	44	.62	11	.70	33	.60	22	.60
Pipe fitters.....	20	1.19	20	1.20	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Plug cutters.....	74	.95	74	.95	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Plywood stock craters.....	105	.66	27	.96	33	.64	7	.70	26	.63	45	.48
Pondmen.....	227	.71	86	1.09	34	.62	15	.67	19	.57	107	.44
Pressmen.....	366	.81	150	1.10	117	.64	45	.70	72	.61	99	.55
Pressmen's helpers.....	395	.66	90	.95	141	.62	67	.68	74	.56	164	.52
Rip saw operators.....	190	.71	51	1.11	57	.61	12	.60	45	.62	82	.53
Truckers, hand.....	162	.57	27	.97	44	.56	14	.60	30	.54	91	.45
Truckers, power.....	40	.98	40	.98	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Veneer driers.....	177	.76	69	1.05	58	.61	27	.65	31	.58	60	.51
Veneer drier feeders.....	808	.69	352	.92	199	.59	102	.64	97	.53	257	.44
Veneer drier off-bearers.....	660	.67	277	.91	144	.61	83	.67	61	.53	239	.44
Veneer graders.....	386	.77	179	.99	101	.59	53	.60	48	.57	106	.56
Veneer jointermen.....	223	.73	77	.96	82	.65	43	.67	39	.62	64	.55
Veneer lathe operators.....	241	.89	72	1.25	89	.76	42	.85	47	.69	80	.72
Veneer lathe operators' helpers.....	633	.62	127	.99	216	.61	110	.65	106	.58	290	.46
Veneer matchers.....	136	.58	15	.99	48	.63	36	.63	12	.64	73	.47
Veneer repairers.....	495	.84	398	.92	32	.66	24	.63	8	.74	65	.44
Veneer tapers.....	547	.61	61	.99	346	.59	205	.63	141	.52	140	.51
Watchmen, service.....	216	.62	61	.90	71	.57	36	.61	35	.52	84	.47

¹ No information obtained for workers in this occupation which is not commonly found in this region.

² Insufficient number of plants and/or workers to justify presentation of an average.

OCCUPATIONAL WAGE RELATIONSHIPS

The relationship of wage rates among different occupational groups has been illustrated by the preceding discussion and the data contained in tables 11 through 16. A more convenient method of describing this relationship is to express the wages for individual occupations as a percentage of the wages of a representative unskilled job. Table 17 shows in index form the results of this computation for 100 occupations typical of the range of skills and wages found in 3 branches.

These branches, logging camps, sawmills and plywood mills, which

employ most of the workers in the industry, were studied in all regions and therefore a comparison of wage relationships on a regional basis is made possible. In logging camps, the occupation of choker setter was used as a base, while in sawmills and plywood mills the base occupation was mill clean-up man. As earnings of workers in the base occupations were generally among the lowest in the branch, the indexes of wage relationships reflect clearly the steps or gradations in wages above the base.

TABLE 17.—Indexes of Average Hourly Earnings in Selected Key Occupations in Basic Lumber Industry, by Branch and Region, August 1944

[Indexes based on weighted average hourly earnings of choker setters in logging camps and mill clean-up men in sawmills and plywood mills]

Occupation	United States	West	North	South
<i>Logging camps</i>				
Blacksmiths.....	124	115	107	140
Bull buckers.....	112	140	119	147
Bulldozer operators.....	161	129	128	138
Cat doctors.....	154	122	115	132
Cat drivers (tractor).....	104	123	118	119
Choker setters, cat side.....	100	100	100	100
Engineers, mechanical loading.....	138	123	103	117
Fallers, and buckers, hand.....	107	161	135	113
Fallers and buckers, power.....	132	176	119	121
Filers, woods.....	128	129	97	166
Head loaders, mechanical loading.....	137	128	112	109
Limbers and knotters.....	83	102	107	111
Rigging slingers, cat side.....	103	106	96	102
Scalers, woods.....	121	111	109	121
Second loaders, mechanical loading.....	113	107	99	102
Truck drivers, hauling.....	87	106	99	113
Truck mechanics.....	139	115	116	149
<i>Sawmills</i>				
Blacksmiths.....	135	131	123	138
Car loaders.....	106	131	105	102
Carpenters.....	127	127	129	129
Carrier drivers.....	134	118	105	109
Clean-up men.....	100	100	100	100
Cut-off saw operators.....	97	107	100	107
Deckmen, including dragsaw men.....	90	109	108	107
Doggers, head rig.....	95	109	108	109
Edgermen.....	103	127	113	113
Edger off-bearers.....	85	102	100	104
Electricians.....	173	136	145	164
Filers.....	184	190	180	198
Filers, bench.....	163	150	135	162
Filers' helpers.....	137	125	113	122
Firemen.....	95	108	102	107
Garage mechanics.....	132	130	127	140
Graders, finish chain.....	129	125	115	129
Graders or markers, green chain.....	131	123	123	124
Graders, rough dry chain.....	132	130	123	138
Helpers, maintenance.....	126	115	115	120
Hog feeders.....	108	103	108	102
Kiln tenders.....	126	119	137	142
Knife grinders.....	134	133	121	153
Machinists.....	160	138	142	164
Off-bearers, head rig.....	89	109	106	102
Oilers.....	115	109	103	109
Operating engineers.....	142	123	121	138
Operating millwrights.....	165	135	131	162
Filers, yard, including timber handlers.....	97	157	103	107
Planer feeders (including matcher and sizer feeders).....	105	110	106	111
Planer operators (including matcher and sizer off-bearers).....	95	102	84	100
Planer operators (including matcher and sizer operators).....	132	127	106	138
Pondmen, including slipmen.....	121	109	100	102
Pullers, dry chain.....	115	116	85	102
Pullers, green chain.....	127	116	100	102
Resaw off-bearers, planing mill.....	90	102	88	100
Resawyers, head mill.....	126	123	118	113
Resawyers, planing mill.....	100	113	110	109
Sawyers, head rig.....	148	167	150	178
Setters, head rig.....	111	123	111	120
Set-up men, planing mill.....	142	132	126	164
Sorters, planed lumber.....	123	103	84	104

TABLE 17.—*Indexes of Average Hourly Earnings in Selected Key Occupations in Basic Lumber Industry, by Branch and Region, August 1944—Continued*

[Indexes based on weighted average hourly earnings of choker setters in logging camps and mill clean-up men in sawmills and plywood mills]

Occupation	United States	West	North	South
<i>Sawmills—Continued</i>				
Stackers, dry kiln.....	131	139	118	111
Tallymen.....	131	119	127	138
Trimmer spotters.....	118	108	105	104
Trimmermen, head mill.....	111	116	106	109
Trimmermen, planing mill.....	102	109	100	107
Truck drivers, yard.....	95	115	110	107
Unstackers, dry kiln.....	92	125	95	102
Utility men.....	90	99	94	100
Watchmen service.....	98	95	90	100
<i>Plywood mills</i>				
Barkers.....	100	122	109	105
Car loaders.....	113	106	107	107
Carpenters.....	152	130	132	163
Clean-up men, mill service.....	100	100	100	100
Clipper machine operators.....	115	123	111	133
Cut-off saw operators.....	115	123	119	116
Glue-spreader operators.....	140	133	107	109
Glue-spreader feeders.....	123	122	104	112
Glue-spreader helpers.....	98	106	102	105
Helpers, maintenance.....	127	116	123	123
Inspectors.....	108	107	105	119
Machinists.....	161	141	144	174
Millwrights.....	174	134	144	184
Off-bearers, saws.....	95	101	98	105
Patchers, plywood and/or panel.....	171	129	109	140
Plywood stock craters.....	106	107	112	112
Pondmen.....	115	121	109	102
Pressmen.....	131	122	112	128
Pressmen's helpers.....	106	106	109	121
Rip saw operators.....	115	123	107	123
Truckers, hand.....	92	108	98	105
Veneer driers.....	123	117	107	119
Veneer drier feeders.....	111	102	104	102
Veneer drier off-bearers.....	108	101	107	102
Veneer graders.....	124	110	104	130
Veneer jointermen.....	118	107	114	130
Veneer lathe operators.....	144	139	133	167
Veneer lathe operators' helpers.....	100	110	107	107
Veneer matchers.....	94	110	110	109
Veneer repairers.....	135	102	116	102
Veneer tapers.....	98	110	104	119
Watchmen, service.....	100	100	100	109

It is also apparent, when the wage indexes are examined according to the skill requirements of the occupations, that skilled, semiskilled and unskilled workers have distinctive wage levels. The range in earnings within each skill group is in most instances limited and the variations found reflect degrees of skill within the group. In these cases where the variations within any group are wide, they are due for the most part either to the influence of incentive earnings or, in the case of skilled workers, to an unusually high degree of skill in some occupations. For certain skilled occupations, especially in the South, the shortage of qualified workers was so great that wages were raised more than for others; the effect of this was to widen the wage spread between skilled- and lesser-skilled jobs.

The highest level of wages and also the widest differentials among component occupations was found in the skilled group. In sawmills, for example, the earnings of workers in skilled occupations exceeded those of mill clean-up men (the base occupation) by a rather wide margin—from 20 to 40 percent for most skilled occupations in the West and from 15 to 30 percent for a majority of the skilled occupa-

tions in the North. Much wider differences were found in the South. Thus, of 19 skilled sawmill occupations for which indexes are shown in the South, 13 had earnings which were 35 percent or more above those of mill clean-up men and 8 had earnings which were higher by 50 percent or more. The greatest differences were found for head sawyers and for such maintenance occupations as saw filers, electricians, machinists, operating millwrights and knife grinders.

The earnings of semiskilled workers varied, on the whole, within a comparatively limited range. In a majority of the semiskilled sawmill occupations workers averaged from 5 to 20 percent more than mill clean-up men in the West and from 5 to 15 percent more in the North. In the South, the most common differential was from 5 to 10 percent.

In all regions, the earnings of unskilled workers deviated but little from those of workers in the unskilled base occupation. In sawmills, for example, the average earnings for most unskilled occupations were not more than 10 percentage points removed from those of mill clean-up men and in a majority of the cases they differed by less than 5 points. No unskilled sawmill occupation in the South had earnings as much as 5 percent above those of mill clean-up men; in four occupations, earnings were the same.

The three factors largely responsible for lack of uniformity in occupational wage relationships among regions, are differences in skill requirements, substantially different labor market conditions, and degree of unionization. Because western operations are on the whole larger and more highly mechanized, skill requirements, even for occupations with the same title are somewhat greater than in other regions. For example, a cat driver in the West as a rule operates a much larger tractor over generally more difficult terrain and handles much larger timber, and, as a result, is somewhat more skilled than the average cat driver in either the North or South. The same situation is found for many other occupations in both logging camps and sawmills.

The wide wage differentials in the South between skilled workers and workers in the unskilled base occupation reflect the scarcity of skilled workers, particularly maintenance workers whose special skills were in great demand in the higher-wage war industries. In contrast, the narrow differentials in earnings between other occupations and the base occupation indicate that the supply of workers below the skilled grade was more adequate.

The degree of unionization also has a direct bearing on the nature of occupational differentials in the various regions. It is well known that unions are concerned not only with the general level of wages but also, and often more particularly, with the relationship of wages among different types of work. Outside of the West there is comparatively little organization of labor, and consequently it may be inferred that the influence of unionization on wage differentials has been greater in the West than in the North or South.

The data on occupational relationships in logging camps, sawmills and plywood mills provided in table 17 should be used with care, especially in making regional comparisons. It should be borne in mind that (1) there are sharp regional differences in basic processes which are reflected in variations in occupational structure and in job

content; this is particularly true of logging camps and sawmills; (2) the figures are not based on data for identical operations (establishments) and as a result occupational differences may reflect to some extent interoperation differences in wage levels; (3) since earnings of incentive workers are generally higher than the earnings of workers paid on a time basis, the differences between certain occupations may be unduly exaggerated.

Wage and Related Practices

TYPICAL WORKDAY AND WORKWEEK

In the West the most common workweek at the time of the survey was 8 hours per day and 48 hours per week; nearly three-fourths of the logging camps, two-thirds of the sawmills, and all but three of the plywood mills were on this schedule. In the North less than two-fifths of the operations worked a 48-hour week and 8-hour day; one-fourth were on a 40-hour week and 8-hour day; about one-fourth had a workweek schedule of 50 hours or more with daily hours varying from 8 to 10. The 50-hour schedule in the North was confined primarily to logging operations and sawmills; in veneer, plywood, and cooperage-stock mills the most common workweek was 48 hours, with an 8-hour day.

The workweek was in general shorter in the South than in the other two regions, with more than half of the operations on a 40-hour week and 8-hour day. More than half of all southern logging camps and sawmills and nearly a third of the cooperage-stock mills were on this schedule. In plywood mills a 48-hour workweek with an 8-hour day was most common; in veneer mills approximately one-fifth of the operations had a 40-hour week and 8-hour day, the same proportion had a 45-hour week and 9-hour day, while one-fourth worked on a schedule of 48 hours a week and 8 hours a day.

Overtime after 40 hours a week was paid for at the rate of time and a half in three-fourths of the operations in the basic lumber industry; in nearly a fourth of the operations, the premium rate was effective after 8 hours a day. This practice appears to be most common in the West; in shingle mills, however, under the terms of an industry-wide agreement, overtime is paid for at the rate of time and a half after 36 hours a week and 6 hours a day.

SHIFT WORK AND SHIFT DIFFERENTIALS

Basic lumber operations, and especially logging, are typically single-shift operations. Less than 3 percent of all sawmills operate more than one shift, and fully three-fourths of these multiple-shift operations are large western mills. Approximately two-fifths of the plywood mills operate more than one shift, while almost two-thirds of the shingle mills operate two 6-hour shifts. Comparatively few veneer and cooperage-stock plants operate more than one shift.

Shift-differential payments are most common in the West. More than two-thirds of the western sawmills working a second shift and virtually all of those working a third shift paid a shift differential. The most common differential on both shifts was 3 cents an hour and

the next most common was $3\frac{1}{8}$ cents an hour. Less than a third of the northern sawmills operating more than one shift paid a differential which varied from 2.5 cents to 5 cents an hour. Only one southern sawmill reported paying a shift differential, and that amounted to 5 cents for workers on the second shift. All western plywood plants operating more than one shift paid a shift differential which varied from 4 cents for work on the second shift to 7 cents for work on the third shift. Few southern plywood mills and few shingle mills, veneer mills, and cooperage-stock mills paid premium rates for work on the late shift.

PAID VACATIONS AND HOLIDAYS

In general, paid vacations are confined to the West where about half of the logging camps and sawmills, all of the plywood mills, and virtually all of the shingle mills granted their workers paid vacations. With the exception of veneer and plywood mills, in which two-fifths and three-fifths of the operations, respectively, granted paid vacations, only a small number of northern operations had such policies. Very few southern operations granted paid vacations.

The length of the paid vacation varied among regions and branches of the industry. In western logging camps and sawmills the most common paid-vacation period was 1 week after 1,400 hours of work per year, 4 days after 1,120 hours of work, and 3 days after 840 hours of work. A substantial number of operations (one-fifth of the logging camps, two-fifths of the sawmills, and more than two-thirds of the plywood mills) granted 1 week of paid vacation after 1 year of service. Shingle mills had a paid vacation of 1 week, but during the war period all workers elected to remain on the job and to accept instead a flat increase of 3 cents an hour. In both the North and the South the most usual paid vacation was 1 week after 1 year of service. A few operations in these regions granted 1 week for a shorter period of service, such as 1 week after 1,000 hours of work or 6 days of pay after 6 months of service, while others required a longer period of service, such as 2 years of service for 1 week of paid vacation.

Six holidays were reported by 58 percent of western operations, 28 percent of northern, and 9 percent of southern operations. The rate of pay for holidays worked was generally time and a half.

Changes in Basic Wage Structure of Industry During War

OVER-ALL CHANGES BY REGION AND BRANCH

Comprehensive field surveys of wages in the basic lumber industry conducted by the Bureau of Labor Statistics during the fall and winter of 1939-40 and in August 1944 make it possible to appraise changes in the basic wage structure during the war period. Although overtime pay at premium rates was included in the earlier data, the figures for both periods are believed to be comparable because very little overtime was actually worked during the fall and winter of 1939-40. The comparison is limited to six segments of the industry—logging camps, sawmills, shingle mills, cooperage-stock mills, veneer mills, and plywood mills. Moreover, in order to insure proper representation of

each branch in each period (logging camps in the South and North were underrepresented in the earlier survey) and also to eliminate variations resulting from changes in the relative importance of the branches of the industry between the two periods, constant weights¹² were used in combining the data for each branch in each period. As a result, the 1939-40 figures which appear in tables 18, 19, and 20 of this report are not comparable with previously published figures¹³ for the latter were based on 1939-40 employment statistics.

In the basic lumber industry, as defined in this survey, average hourly earnings increased from 46 cents in the fall and winter of 1939-1940 to 72 cents in August 1944, an increase of 56.5 percent. (See table 18). In both periods average hourly earnings were highest in the West and lowest in the South, with the North falling in between these two. However, the percentage gain was greater in the North than in the other two regions. Earnings in the North rose from 40 cents to 73 cents per hour, a rise of 83 percent. The corresponding change for the West was from 75 cents to \$1.18, an increase of 57 percent, and for the South, from 34 to 52 cents, an increase of 53 percent. Wage increases also varied widely among branches in each region. The greatest increase (113.2 percent) was reported for logging camps in the North and the smallest increase (40 percent) for veneer mills in the South.

TABLE 18.—*Straight-Time Average Hourly Earnings of Workers in Basic Lumber Industry by Branch and Region, Fall and Winter 1939-40 and August 1944*¹

Branch and region	Fall-winter 1939-40	August 1944	Percent of increase	Fall-winter 1939-40	August 1944	Percent of increase
	United States			West		
Total, all branches.....	\$0.46	\$0.72	56.5	\$0.75	\$1.18	57.3
Logging camps.....	.46	.78	69.6	.80	1.37	71.3
Sawmills.....	.44	.67	52.3	.70	1.04	48.6
Shingle mills.....	.95	1.45	52.6	.95	1.45	52.6
Cooperage-stock mills.....	.36	.53	47.2			
Veneer mills.....	.37	.52	40.5			
Plywood mills.....	.51	.73	43.1	.73	1.03	41.1
	North			South		
Total, all branches.....	\$0.40	\$0.73	82.5	\$0.34	\$0.52	53.0
Logging camps.....	.38	.81	113.2	.34	.53	55.9
Sawmills.....	.41	.69	68.3	.34	.51	50.0
Shingle mills.....						
Cooperage-stock mills.....	.35	.59	68.6	.36	.52	44.4
Veneer mills.....	.42	.62	47.6	.35	.49	40.0
Plywood mills.....	.41	.62	51.2	.34	.49	44.1

¹ In order to overcome underrepresentation of certain branches of the industry in some areas in the earlier period (particularly logging camps in the South and also in the North) and to eliminate variations resulting from changes in the relative importance of the branches of the industry between the two periods, constant weights were used in combining the data for each branch for each period in arriving at over-all branch averages and also at an over-all average for all branches. The total employment in the branch in each region in 1944 was used in combining the data for the branch for both periods.

¹² For both periods August 1944 employment figures were used in combining the data.

¹³ The findings of the earlier survey appeared under the title, Hourly Earnings in the Lumber and Timber Products Industry, in the Monthly Labor Review for July 1941. Some of these figures also appeared in the article, Wages in the Basic Lumber Industry, 1944, in the Monthly Labor Review for October 1945.

Since the Bureau's last study of the lumber industry, considerable change took place not only in the level of wages for each branch as a whole, but also with respect to the distribution of workers within each branch. It is apparent from the figures presented in table 18 that the shift at the low end of the wage scale was considerably greater than at the high end, but in both instances the change was substantial. It is especially notable that whereas three-fifths of the workers in logging camps and sawmills and three-fourths or more of the workers in veneer mills and cooperage-stock mills received under 40 cents an hour in the fall and winter of 1939-40,¹⁴ no workers in veneer mills and less than one percent of the workers in the other three branches had as low earnings in August 1944. In plywood mills the proportion of workers receiving less than 40 cents an hour dropped from 44.5 percent in the fall and winter of 1939-40 to 0.4 percent in August 1944. In shingle mills, where wages were always much above those in other branches, the shift of workers to the higher brackets was also great. Slightly more than a third of the workers in this branch earned more than \$1.00 an hour in the fall of 1939; almost all shingle workers were found in this class in August 1944.

TABLE 19.—Percentage Distribution of Workers in Basic Lumber Industry, by Straight-Time Average Hourly Earnings and Branch, Fall and Winter 1939-40 and August 1944¹

Average hourly earnings	Fall-winter 1939-40	August 1944	Fall-winter 1939-40	August 1944	Fall-winter 1939-40	August 1944
	Logging camps		Sawmills		Veneer mills	
Under 40.0 cents.....	60.0	0.3	60.9	0.4	74.3	-----
40.0 and under 52.5 cents.....	12.4	45.9	10.9	50.9	18.5	68.9
52.5 and under 62.5 cents.....	5.1	11.9	6.3	9.7	3.7	13.0
62.5 and under \$1.....	18.1	16.0	20.0	24.6	3.3	17.5
\$1 and over.....	4.4	25.9	1.9	14.4	0.2	.6
	Shingle mills		Cooperage-stock mills		Plywood mills	
Under 40.0 cents.....	0.1	-----	78.7	0.1	44.5	0.4
40.0 and under 52.5 cents.....	-----	-----	12.6	68.8	12.4	35.2
52.5 and under 62.5 cents.....	.2	-----	4.3	13.0	5.3	10.5
62.5 and under \$1.....	62.1	6.1	4.4	17.5	36.1	34.8
\$1 and over.....	37.6	93.9	(²)	.6	1.7	19.1

¹ Method followed in combining data for both periods explained in footnote 1, table 18.

² Less than a tenth of 1 percent.

CHANGES IN OCCUPATIONAL WAGE STRUCTURE

Comparative wage data are presented in table 20 for both periods for some 70 representative occupations. This comparison is limited to processing and auxiliary occupations, as separate figures are not available for maintenance workers for the 1939-40 period. These occupations are believed to be representative of the skill and earnings levels of processing and auxiliary occupations in each branch studied and provide a dependable measure of changes in the occupational wage structure of the industry during the war period.

¹⁴ At that time the minimum rate under the Fair Labor Standards Act was 30 cents an hour.

Perhaps the most interesting observation to be drawn from these figures concerns the relative increase in earnings of the more-skilled and the less-skilled occupations between the 1939-40 period and August 1944. In terms of absolute gains, the more-skilled occupations generally appear to have enjoyed little advantage over the less-skilled workers. On a percentage basis, the wage increases in the skilled occupations have accordingly been less. This was observed in western logging camps where earnings of such skilled occupations as head loaders and engineers in the mechanical loading crew and cat drivers increased 38 cents, as against gains of 34 cents and 36 cents respectively for the less-skilled groups—cat-side choker setters and second loaders in the mechanical loading crew. Similarly in the North, the earnings of skilled cat drivers rose 38 cents and of wood scalers and engineers, 21 and 22 cents respectively. Less-skilled jobs such as hand loaders, teamsters, and cat-side choker setters had gains of 43 cents, 35 cents, and 31 cents respectively. In the South the increases for the more-skilled jobs ranged from 10 cents for mechanical loading engineers to 22 cents for hauling truck drivers. The smallest increase for southern workers in the less-skilled jobs was 16 cents for second loaders of the mechanical loading crew.

TABLE 20.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Basic Lumber Industry, by Branch and Region, Fall and Winter, 1939-40, and August 1944*¹

Occupation and branch	United States		West		North		South	
	Aug- 1944	Fall and winter, 1939-40	Aug- 1944	Fall and winter, 1939-40	Aug- 1944	Fall and winter, 1939-40	Aug- 1944	Fall and winter, 1939-40
Total, 70 occupations.....	\$0.70	\$0.44	\$1.21	\$0.77	\$0.74	\$0.40	\$0.51	\$0.34
<i>Logging camps</i>								
Total, 10 occupations.....	.75	.44	1.40	.83	.83	.38	.52	.33
Cat drivers (tractor).....	.79	.52	1.29	.91	.80	.42	.56	.36
Choker setters, cat side.....	.76	.44	1.05	.71	.68	.37	.47	.31
Engineer, mechanical loading.....	1.05	.75	1.29	.91	.70	.48	.55	.45
Fallers and buckers, hand.....	.81	.44	1.69	.87	.92	.38	.53	.34
Head loaders, mechanical loading.....	1.04	.75	1.34	.96	.76	.46	.51	.40
Loaders, hand.....	.52	.30	(?)	(?)	.73	.30	.50	.30
Scalers, woods.....	.92	.66	1.17	.84	.74	.53	.57	.40
Second loaders, mechanical loading.....	.86	.58	1.12	.76	.67	.44	.48	.32
Teamsters, skidding.....	.52	.31	(?)	.85	.69	.34	.49	.30
Truck drivers, hauling.....	.66	.39	1.11	.71	.67	.37	.53	.31
<i>Sawmills</i>								
Total, 20 occupations.....	.66	.43	1.07	.70	.69	.42	.51	.33
Car loaders.....	.66	.41	1.15	.67	.65	.38	.46	.30
Clean-up men.....	.62	.41	.88	.59	.62	.37	.45	.30
Deckmen, including drag-saw men.....	.56	.34	.96	.58	.67	.36	.48	.29
Doggers, head rig.....	.59	.36	.96	.61	.67	.39	.49	.30
Edgermen.....	.64	.43	1.12	.80	.70	.43	.51	.34
Edger off-bearers.....	.53	.33	.90	.58	.62	.35	.47	.29
Graders, finish chain.....	.80	.61	1.10	.80	.71	.55	.58	.48
Graders or markers, green chain.....	.81	.55	1.08	.73	.76	.48	.51	.39
Off-bearers, head rig.....	.55	.34	.96	.61	.66	.35	.46	.29
Pilers, yard, including timber handlers.....	.60	.38	1.38	.81	.64	.39	.48	.31
Pondmen, including slipmen.....	.75	.49	.96	.65	.62	.35	.46	.31
Pullers, dry chain.....	.71	.48	1.02	.68	.59	.39	.46	.31
Pullers, green chain.....	.79	.51	1.02	.65	.62	.38	.46	.30
Resaw off-bearers, head mill.....	.48	.32	(?)	.60	.64	.38	.46	.31
Resawyers, head mill.....	.78	.52	1.08	.71	.73	.47	.51	.36
Sawyers, head rig.....	.92	.71	1.47	1.18	.93	.64	.80	.62
Setters, head rig.....	.69	.46	1.08	.75	.69	.43	.54	.35
Tallymen.....	.81	.49	1.05	.71	.79	.40	.62	.33
Tractor and truck drivers.....	.57	.36	1.01	.68	.68	.40	.48	.30
Trimmermen, head mill.....	.69	.45	1.02	.68	.66	.38	.49	.31

See footnotes at end of table

TABLE 20.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Basic Lumber Industry, by Branch and Region, Fall and Winter, 1939-40, and August 1944*¹—Continued

Occupation and branch	United States		West		North		South	
	August 1944	Fall and winter, 1939-40	August 1944	Fall and winter, 1939-40	August 1944	Fall and winter, 1939-40	August 1944	Fall and winter, 1939-40
<i>Veneer mills</i>								
Total, 8 occupations.....	\$0.51	\$0.36	(²)	(²)	\$0.60	\$0.40	\$0.48	\$0.35
Car loaders.....	.47	.35	(²)	(²)	.58	.40	.46	.33
Clean-up men, mill service.....	.46	.31	(²)	(²)	.56	(²)	.44	.31
Clipper-machine operators.....	.58	.39	(²)	(²)	.65	.42	.54	.35
Truckers, hand.....	.47	.31	(²)	(²)	.62	(²)	.45	.31
Veneer drier feeders and off-bearers.....	.47	.32	(²)	(²)	.53	.38	.44	.32
Veneer graders.....	.51	.39	(²)	(²)	.63	.46	.48	.37
Veneer lathe operators.....	.76	.54	(²)	(²)	.86	.57	.72	.53
Veneer lathe operators' helpers.....	.49	.33	(²)	(²)	.57	.37	.47	.32
<i>Shingle mills</i>								
Total, 8 occupations.....	1.45	.96	\$1.45	\$0.96	(²)	(²)	(²)	(²)
Block pilers.....	1.07	.73	1.07	.73	(²)	(²)	(²)	(²)
Cut-off operators.....	1.35	.87	1.35	.87	(²)	(²)	(²)	(²)
Deckmen, log.....	1.17	.75	1.17	.75	(²)	(²)	(²)	(²)
Loaders, car and truck.....	1.02	.71	1.02	.71	(²)	(²)	(²)	(²)
Shingle packers.....	1.45	.92	1.45	.92	(²)	(²)	(²)	(²)
Shingle sawyers.....	1.71	1.17	1.71	1.17	(²)	(²)	(²)	(²)
Splitter men.....	1.11	.83	1.11	.83	(²)	(²)	(²)	(²)
Tallymen.....	1.08	.78	1.08	.78	(²)	(²)	(²)	(²)
<i>Cooperage-stock mills</i>								
Total, 12 occupations.....	.54	.37	(²)	(²)	.60	.42	.53	.37
Bolters.....	.51	.32	(²)	(²)	.88	(²)	.48	.32
Bundlers, staves and headings.....	.49	.31	(²)	(²)	.51	.37	.49	.31
Car loaders.....	.45	.30	(²)	(²)	(²)	(²)	.45	.30
Clean-up men, mill service.....	.45	.32	(²)	(²)	.51	(²)	.44	.32
Cut-off saw operators, log.....	.49	.33	(²)	(²)	.56	(²)	.49	.33
Deckmen, log.....	.47	.30	(²)	(²)	.55	(²)	.46	.30
Heading matchers.....	.63	.38	(²)	(²)	.56	(²)	.63	.38
Heading-saw operators.....	.63	.44	(²)	(²)	.68	(²)	.63	.44
Heading turners.....	.69	.47	(²)	(²)	.54	(²)	.71	.47
Jointer operators.....	.61	.46	(²)	(²)	.60	.43	.61	.46
Stave-planer operators.....	.49	.37	(²)	(²)	.52	(²)	.49	.37
Stave-saw operators.....	.63	.45	(²)	(²)	.61	.47	.64	.45
<i>Plywood mills</i>								
Total, 12 occupations.....	.74	.51	1.04	.73	.61	.40	.49	.33
Car loaders.....	.70	.46	.95	.65	.61	.35	.46	.31
Clipper-machine operators.....	.71	.46	1.11	.76	.63	.41	.57	.33
Glue-spreader catchers.....	.87	.67	1.20	.98	.61	.40	.47	.32
Glue-spreader feeders.....	.76	.53	1.10	.78	.59	.38	.48	.32
Patchers, plywood and/or panels.....	1.06	.69	1.16	.64	.62	.40	.60	(²)
Pressmen.....	.81	.67	1.10	.83	.64	.44	.55	.32
Truckers, hand.....	.57	.39	.97	.69	.56	.35	.45	.32
Veneer-drier feeders and off-bearers.....	.68	.47	.92	.64	.60	.37	.44	.31
Veneer graders.....	.77	.54	.99	.72	.59	.43	.56	.33
Veneer lathe operators.....	.89	.68	1.25	.97	.76	.57	.72	.53
Veneer lathe operators' helpers.....	.62	.41	.99	.69	.61	.37	.46	.31
Veneer matchers.....	.58	.40	.99	.70	.63	.43	.47	.32

¹ Method followed in obtaining data for both periods explained in footnote 1, table 18.

² No information obtained for workers in this occupation, which is not commonly found in this broad region.

³ No data obtained for veneer and cooperage-stock mills in the West, as these two branches of the industry are relatively unimportant in that area.

⁴ No data obtained for shingle mills in the North or South as that branch of the industry is relatively unimportant in these two areas.

Of the 20 sawmill occupations listed in table 20, edgemen, finish chain graders, green chain graders, head sawyers, head mill re-sawyers, head rig setters, and trimmermen are among the more skilled. The increases in hourly earnings between the 1939-40 period and August 1944 for this group ranged from 29 to 37 cents in the West, from 16 to 29 cents in the North, and from 10 to 19 cents in the South. In contrast, the gains for the less-skilled occupations varied from

29 to 38 cents in the West, from 20 to 31 cents in the North and from 15 to 19 cents in the South.

In the veneer mills, lathe operators, the outstanding skilled occupation, had the largest absolute increase (29 and 19 cents, respectively) in both the North and the South. Among the less-skilled jobs, the gains varied from 23 cents for clipper-machine operators in the North to 12 cents for veneer drier feeders and off-bearers in the South.

In shingle mills, block pliers, cut-off operators, log deckmen, car and truck loaders, and tallymen are representative of the less-skilled occupations. For these jobs the absolute gains varied from 31 cents to 48 cents. Splitter men, a relatively skilled occupation, showed an increase of only 28 cents. Shingle sawyers and packers, most of whom are paid on an incentive basis, showed increases of 54 and 53 cents, respectively.

Adequate comparative figures for occupations in cooperage-stock mills are available only for the South. The absolute gains for the less-skilled jobs ranged from 12 to 25 cents and for the more-skilled, from 12 to 24 cents.

In plywood mills the earnings of lathe operators, one of the most skilled of processing occupations, rose by 28 cents in the West, and by 19 cents in the North and in the South. As in the case of several other branches of the industry the range of absolute increases for the less-skilled jobs was somewhat greater.

The greater relative increases received by unskilled workers resulted very largely from the type of wage increase granted during the war period. As pointed out earlier in this report, many of the increases were flat amounts granted to all workers which led to proportionately greater gains for the lower-paid unskilled workers. Unskilled workers also profited most from the establishment of minimum rates of pay under the provisions of the Fair Labor Standards Act and from General Order No. 30 of the War Labor Board and its subsequent revisions under which operators were authorized to raise wage rates to 40 cents, 50 cents, and finally to 55 cents. The greater increases granted unskilled workers narrowed somewhat the occupation differentials.

APPENDIX TABLES

TABLE A.—Percentage Distribution of Workers in LOGGING CAMPS, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings	Total, United States	West				North						South		
		Total	Douglas Fir region	Western Pine region	Redwood region	Total	Prairie States	Lake States	North Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
Under 40.0 cents	0.3					0.2	0.6	0.1	1.2	0.1	0.9	0.5	0.5	0.3
40.0 and under 42.5 cents	9.3					.7	.9	.7	1.1	.5	.3	14.5	16.4	6.1
42.5 and under 45.0 cents	.7					.4		.6	.1	.5	.3	1.1	1.0	1.4
45.0 and under 47.5 cents	8.1					.5		.4	.9	.2	.4	12.6	12.0	14.8
47.5 and under 50.0 cents	.9					.3	.3		(1)	6.2	3.3	1.3	1.1	2.3
50.0 and under 52.5 cents	26.9	(1)		0.1		5.3	17.5	1.3	14.3	1.0	.4	41.5	42.4	37.7
52.5 and under 55.0 cents	1.0	(1)		(1)		.7	2.2	.6	.8	5.1	2.5	1.4	1.1	2.8
55.0 and under 57.5 cents	4.4	(1)		(1)		3.8	2.8	2.5	8.3	.5	1.8	6.2	6.2	6.3
57.5 and under 60.0 cents	1.0	(1)		(1)		3.3	.3	7.6	2.4	14.3	14.7	1.0	.8	1.9
60.0 and under 62.5 cents	5.5	(1)		1		15.3	5.9	8.9	29.9	5.5	3.7	5.7	6.0	4.7
62.5 and under 65.0 cents	2.4	(1)		(1)		4.9	2.5	5.1	7.0	7.6	2.8	3.0	3.0	2.9
65.0 and under 67.5 cents	1.9	0.2		.4		6.0	7.8	7.3	9.0	1.4	1.3	1.9	1.8	2.3
67.5 and under 70.0 cents	.6	(1)		(1)		1.9	2.2	2.7	2.2	10.3	3.9	.6	.4	1.1
70.0 and under 72.5 cents	1.4	(1)	(1)	.1		6.6	3.1	7.6	8.1	2.0	.8	1.0	.9	1.7
72.5 and under 75.0 cents	.5	.1	(1)	.1		1.6	.9	2.3	1.7	9.5	5.8	.5	.4	.9
75.0 and under 77.5 cents	2.1	.3		.9		6.5	8.8	6.1	5.3	1.7	1.1	2.0	1.9	2.5
77.5 and under 80.0 cents	.4	.1	(1)	.2		1.5	5.9	2.2	.5	7.0	3.1	.4	.2	1.3
80.0 and under 82.5 cents	1.0	.2		.5		3.3	3.4	2.7	1.5	.8	.6	.9	.9	1.2
82.5 and under 85.0 cents	.6	.8	(1)	1.9	2.8	1.0	.9	1.7	.7	2.6	2.1	.4	.3	.9
85.0 and under 87.5 cents	.6	.6	.1	1.6		2.6	2.5	3.8	1.7	5.2	9.9	.3	.2	.4
87.5 and under 90.0 cents	1.3	1.4	.1	3.4	2.0	5.2	5.3	2.2	.2	2.0	4.3	.6	.5	1.0
90.0 and under 92.5 cents	1.2	2.7	2.6	3.0	.5	2.9	.9	2.8	.9	.8	1.6	.3	.2	.8
92.5 and under 95.0 cents	.7	1.3	.2	3.0	2.6	1.3	1.3	1.9	.1	.2	2.0	.3	.2	.7
95.0 and under 97.5 cents	.5	.9	.3	1.9	.2	1.4	.3	2.1	.3	.7	1.2	.2	.1	.4
97.5 and under 100.0 cents	.8	2.2	.3	5.2	.2	1.0	1.3	1.5	.1	4.4	7.3	.2	.2	.4
100.0 and under 105.0 cents	2.6	6.9	2.3	13.7	12.2	5.0	6.6	4.5	.7	.5	2.6	.5	.4	.8
105.0 and under 110.0 cents	2.5	8.7	9.3	7.5	12.3	2.0	7.5	2.8	.1	1.8	4.4	.2	.1	.4
110.0 and under 115.0 cents	2.4	7.6	6.3	9.0	14.5	2.8	1.3	2.9	.4	1.0	2.0	.3	.3	.3
115.0 and under 120.0 cents	2.6	9.4	11.8	6.0	7.3	1.6	.3	2.6		.7	1.8	.1	.1	.3
120.0 and under 125.0 cents	1.7	6.0	6.7	4.8	5.9	1.4	1.9	2.0		1.6	2.8	.1	.1	.2
125.0 and under 130.0 cents	2.5	8.8	9.7	7.8	5.8	1.8	1.6	1.7	.1	.5	1.3	.2	.2	.1
130.0 and under 135.0 cents	1.2	4.1	4.4	3.5	4.1	.9		1.2		.6	1.0	.1	.1	.2
135.0 and under 140.0 cents	1.0	3.6	3.9	3.0	3.6	.9	.3	1.3	(1)	.4	1.3	(1)	(1)	.1
140.0 and under 145.0 cents	.9	3.0	3.7	1.9	2.5	.9		1.0		.2	1.0	(1)	(1)	.2

¹ Less than a tenth of 1 percent.

TABLE A.—Percentage Distribution of Workers in LOGGING CAMPS, by Straight-Time Average Hourly Earnings and Region, August 1944—Continued

Average hourly earnings	Total, United States	West				North					South			
		Total	Douglas Fir region	Western Pine region	Redwood region	Total	Prairie States	Lake States	North Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
145.0 and under 150.0 cents.....	.8	2.6	3.3	1.6	.9	1.0	1.3	2.1	-----	0.5	1.7	(¹)	(¹)	(¹)
150.0 and under 160.0 cents.....	2.0	7.3	9.7	3.9	4.0	1.0	1.3	.9	0.1	.6	1.4	(¹)	(¹)	0.1
160.0 and under 170.0 cents.....	.9	3.0	3.1	2.8	2.5	-----	-----	.5	.1	.3	.9	(¹)	(¹)	.1
170.0 and under 180.0 cents.....	.9	3.2	3.8	2.2	2.8	-----	-----	.2	.1	.3	.8	(¹)	-----	(¹)
180.0 and under 190.0 cents.....	.8	3.1	3.6	2.4	1.9	-----	-----	.3	-----	.3	.4	(¹)	(¹)	(¹)
190.0 and under 200.0 cents.....	.6	2.4	2.6	2.1	.6	-----	-----	.2	.1	.6	.5	(¹)	-----	(¹)
200.0 cents and over.....	2.5	9.5	12.1	5.4	10.8	-----	-----	.7	-----	-----	-----	0.1	-----	.4
Total, all workers.....	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
Number of workers.....	140,991	35,594	20,898	13,441	1,255	16,330	320	4,687	2,670	2,624	6,029	89,067	72,063	17,004
Average hourly earnings.....	\$0.78	\$1.37	\$1.45	\$1.24	\$1.34	\$0.81	\$0.78	\$0.84	\$0.63	\$0.77	\$0.89	\$0.53	\$0.52	\$0.58

¹ Less than a tenth of 1 percent.

TABLE B.—Percentage Distribution of Workers in SAWMILLS, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings	Total, United States	West				North					South			
		Total	Douglas Fir region	Western Pine region	Redwood region	Total	Prairie States	Lake States	North Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
Under 40.0 cents.....	0.4	-----	-----	-----	-----	0.1	-----	-----	0.2	-----	-----	0.6	0.7	0.6
40.0 and under 42.5 cents.....	14.2	(¹)	-----	(¹)	-----	1.1	4.2	0.2	.9	2.1	1.3	22.2	26.1	10.3
42.5 and under 45.0 cents.....	1.8	(¹)	-----	(¹)	-----	.2	-----	-----	.1	(¹)	.6	2.8	2.0	5.3
45.0 and under 47.5 cents.....	10.9	(¹)	-----	(¹)	-----	1.4	4.5	.1	1.8	.4	2.8	16.9	16.4	18.7
47.5 and under 50.0 cents.....	1.3	(¹)	(¹)	(¹)	-----	.4	-----	-----	.8	.8	.2	1.9	1.4	3.6
50.0 and under 52.5 cents.....	22.7	0.1	0.1	0.1	-----	10.6	29.9	5.5	20.9	8.3	6.7	34.1	33.8	35.2
52.5 and under 55.0 cents.....	1.0	(¹)	(¹)	(¹)	-----	1.1	.3	.9	1.1	1.2	1.3	1.5	1.0	2.9
55.0 and under 57.5 cents.....	3.6	(¹)	(¹)	(¹)	0.2	7.3	7.6	4.7	10.3	9.1	6.7	4.5	4.1	6.1
57.5 and under 60.0 cents.....	.6	.1	.1	.1	-----	1.9	1.2	1.2	2.6	2.1	2.0	.6	.4	1.1
60.0 and under 62.5 cents.....	4.5	.2	(¹)	.4	.2	17.6	7.0	14.5	27.0	24.8	8.8	4.3	3.8	5.9

¹ Less than a tenth of 1 percent.

62.5 and under 65.0 cents.....	1.3	.1		.1	
65.0 and under 67.5 cents.....	2.0	.4	(1)	.9	
67.5 and under 70.0 cents.....	.6	.2	(1)	.4	
70.0 and under 72.5 cents.....	1.5	.5	.1	1.0	
72.5 and under 75.0 cents.....	.3	.3		.6	
75.0 and under 77.5 cents.....	2.2	1.1	.1	2.1	.5
77.5 and under 80.0 cents.....	.4	.4		.9	.1
80.0 and under 82.5 cents.....	1.2	1.6	.1	3.1	1.6
82.5 and under 85.0 cents.....	1.2	4.0	.1	7.1	13.1
85.0 and under 87.5 cents.....	1.7	4.7	.1	9.0	8.1
87.5 and under 90.0 cents.....	1.8	4.9	.3	9.4	6.6
90.0 and under 92.5 cents.....	3.6	11.7	17.4	6.6	3.9
92.5 and under 95.0 cents.....	2.3	8.0	11.8	4.5	4.8
95.0 and under 97.5 cents.....	3.0	10.1	15.9	5.0	3.1
97.5 and under 100.0 cents.....	1.5	5.2	6.1	4.2	6.9
100.0 and under 105.0 cents.....	4.8	13.5	16.3	11.0	9.9
105.0 and under 110.0 cents.....	2.0	7.1	9.4	4.8	5.8
110.0 and under 115.0 cents.....	1.7	5.4	5.2	5.5	6.6
115.0 and under 120.0 cents.....	1.4	4.9	6.0	4.0	2.0
120.0 and under 125.0 cents.....	.8	2.7	2.3	3.1	2.6
125.0 and under 130.0 cents.....	.9	2.8	2.7	2.4	8.1
130.0 and under 135.0 cents.....	.4	1.5	1.0	1.9	2.8
135.0 and under 140.0 cents.....	.3	1.2	.7	1.5	3.7
140.0 and under 145.0 cents.....	.3	.9	.7	1.1	1.1
145.0 and under 150.0 cents.....	.2	.7	.4	.9	.9
150.0 and under 160.0 cents.....	.5	1.7	1.0	2.2	4.6
160.0 and under 170.0 cents.....	.3	1.1	.7	1.5	1.2
170.0 and under 180.0 cents.....	.2	.6	.5	.8	.8
180.0 and under 190.0 cents.....	.1	.4	.2	.6	.6
190.0 and under 200.0 cents.....	.1	.3	.2	.4	.1
200.0 cents and over.....	.4	1.6	.5	2.8	.1
Total, all workers.....	100.0	100.0	100.0	100.0	100.0
Number of workers.....	170,430	45,981	22,102	22,019	1,860
Average hourly earnings.....	\$0.67	\$1.04	\$1.03	\$1.05	\$1.06

¹ Less than a tenth of 1 percent.

6.9	1.6	12.9	4.3	4.2	4.2	1.0	1.0	.7
9.8	3.9	12.6	9.6	9.1	7.8	1.4	1.4	1.6
3.0	.4	7.0	1.5	.5	1.5	.3	.3	.6
7.8	15.0	7.9	4.9	8.8	8.2	1.0	.9	1.4
1.5	1.0	2.9	.3	.8	1.4	.2	.1	.2
7.8	3.1	7.0	3.9	10.1	11.5	1.9	2.0	1.6
1.2	3.1	1.8	.3	.8	1.1	.2	.2	.2
3.6	3.3	4.1	.7	4.6	5.0	.7	.7	.6
.8	.7	1.2	1.2	.5	.4	.2	.1	.3
2.3	2.1	3.1	1.7	1.8	2.2	.4	.4	.4
2.7	.3	.7	.7	1.6	8.4	.4	.4	.2
1.4	1.5	1.9	.6	2.1	.9	.4	.5	.4
.3		.2	.1		.8	.2	.1	.2
1.5	2.8	3.3	.4	.5	.9	.2	.2	.2
.2	1.5	.3	.1		.1	.1	(1)	.1
4.4	2.7	3.2	1.9	3.2	9.3	1.2	1.3	.9
.4	.6	.5	.3	.6	.4	.2	.1	.3
.9	.6	.8	1.0	.4	1.4	.2	.2	.2
.3	.4	.3	.1	.2	.5	.1	.1	(1)
.4	.1	.4	.1	.1	.8	.1	.1	.1
.7		.3	.2	.6	2.0	.2	.2	.1
.1		.2	(1)	.1	.1		(1)	(1)
.1	.4	.1	.1	(1)		(1)	(1)	(1)
(1)	.1	(1)				(1)	(1)	(1)
(1)			.1	.3	.5	(1)	(1)	(1)
(1)					.1	(1)	(1)	(1)
(1)			.1		.1	(1)	(1)	(1)
(1)			.1	.1				
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16,243	671	5,105	3,483	3,030	3,954	108,206	82,502	25,704
\$0.69	\$0.64	\$0.70	\$0.62	\$0.67	\$0.74	\$0.51	\$0.50	\$0.52

TABLE C.—Percentage Distribution of Workers in VENEER MILLS, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings	Total, United States	North	South
40.0 and under 42.5 cents.....	22.1	3.4	27.9
42.5 and under 45.0 cents.....	5.3	.3	7.6
45.0 and under 47.5 cents.....	19.7	5.6	24.1
47.5 and under 50.0 cents.....	1.9	1.7	1.9
50.0 and under 52.5 cents.....	18.0	16.6	18.5
52.5 and under 55.0 cents.....	1.3	1.8	1.1
55.0 and under 57.5 cents.....	6.6	11.0	5.2
57.5 and under 60.0 cents.....	1.8	1.9	1.8
60.0 and under 62.5 cents.....	5.8	11.6	4.0
62.5 and under 65.0 cents.....	2.0	5.8	.8
65.0 and under 67.5 cents.....	4.3	13.6	1.4
67.5 and under 70.0 cents.....	1.8	5.3	.7
70.0 and under 72.5 cents.....	2.1	5.5	1.0
72.5 and under 75.0 cents.....	1.0	2.7	.5
75.0 and under 77.5 cents.....	1.5	4.3	.6
77.5 and under 80.0 cents.....	.3	-----	.4
80.0 and under 82.5 cents.....	.7	1.4	.5
82.5 and under 85.0 cents.....	.1	.4	.5
85.0 and under 87.5 cents.....	.5	1.0	.3
87.5 and under 90.0 cents.....	.3	.7	.1
90.0 and under 92.5 cents.....	.6	2.0	.1
92.5 and under 95.0 cents.....	.1	.2	.1
95.0 and under 97.5 cents.....	.2	.3	.2
97.5 and under 100.0 cents.....	-----	-----	-----
100.0 and under 105.0 cents.....	.7	1.1	.5
105.0 and under 110.0 cents.....	.1	.3	.1
110.0 and under 115.0 cents.....	.4	1.0	.3
115.0 and under 120.0 cents.....	(¹)	-----	(¹)
120.0 and under 125.0 cents.....	.1	.3	-----
125.0 and under 130.0 cents.....	.2	-----	.3
130.0 and under 135.0 cents.....	(¹)	.1	-----
135.0 and under 140.0 cents.....	(¹)	.1	(¹)
Total, all workers.....	100.0	100.0	100.0
Number of workers.....	4,727	1,144	3,583
Average hourly earnings.....	\$0.52	\$0.62	\$0.46

¹ Less than a tenth of 1 percent.

TABLE D.—Percentage Distribution of Workers in COOPERAGE-STOCK MILLS, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings	Total, United States	North	South		
			Total	South-eastern States	South-western States
Under 40.0 cents.....	0.1		0.1	0.1	
40.0 and under 42.5 cents.....	16.3	0.8	17.4	20.5	9.6
42.5 and under 45.0 cents.....	1.4		1.5	2.0	.2
45.0 and under 47.5 cents.....	19.9	19.5	19.9	23.3	11.0
47.5 and under 50.0 cents.....	5.6		6.0	5.1	8.4
50.0 and under 52.5 cents.....	25.6	27.8	25.4	22.0	33.8
52.5 and under 55.0 cents.....	1.6		1.7	2.0	.7
55.0 and under 57.5 cents.....	4.1	12.0	3.5	3.7	3.0
57.5 and under 60.0 cents.....	1.1		1.2	1.1	1.5
60.0 and under 62.5 cents.....	6.2	9.1	6.0	3.6	12.3
62.5 and under 65.0 cents.....	4.0	5.0	3.0	4.6	2.3
65.0 and under 67.5 cents.....	3.3	10.4	2.8	2.4	3.9
67.5 and under 70.0 cents.....	1.1	2.5	1.0	1.1	.7
70.0 and under 72.5 cents.....	1.8		1.9	1.2	3.7
72.5 and under 75.0 cents.....	.5	1.7	.4	.4	.4
75.0 and under 77.5 cents.....	1.5	2.9	1.4	1.0	2.4
77.5 and under 80.0 cents.....	.7	.4	.8	.8	.7
80.0 and under 82.5 cents.....	1.0	.4	1.1	.8	1.8
82.5 and under 85.0 cents.....	1.2		1.3	1.7	.4
85.0 and under 87.5 cents.....	.8	1.7	.8	1.0	.3
87.5 and under 90.0 cents.....	.1		.1	.2	.1
90.0 and under 92.5 cents.....	.5		.6	.4	1.0
92.5 and under 95.0 cents.....	.2		.2	.2	.2
95.0 and under 97.5 cents.....	.6		.6	.5	1.0
97.5 and under 100.0 cents.....	.2		.2	.2	
100.0 and under 105.0 cents.....	.4	3.3	.1	(¹)	.4
105.0 and under 110.0 cents.....	.1		.1	.1	.2
110.0 and under 115.0 cents.....	(¹)	.4			
115.0 and under 120.0 cents.....	.1	1.7			
120.0 and under 125.0 cents.....					
125.0 and under 130.0 cents.....	(¹)	.4			
Total, all workers.....	100.0	100.0	100.0	100.0	100.0
Number of workers.....	3,669	241	3,428	2,459	969
Average hourly earnings.....	\$0.53	\$0.59	\$0.52	\$0.51	\$0.55

¹ Less than a tenth of 1 percent.

TABLE E.—Percentage Distribution of Workers in PLYWOOD MILLS, by Straight-Time Average Hourly Earnings and Region, August 1944

Average hourly earnings	Total, United States	West	North			South
			Total	Lake States	Other northern States	
Under 40.0 cents.....	0.4		(¹)		0.1	1.2
40.0 and under 42.5 cents.....	10.0		3.7	0.4	6.6	27.0
42.5 and under 45.0 cents.....	3.3		1.3	.2	2.3	8.7
45.0 and under 47.5 cents.....	11.0		11.2	6.9	14.9	23.8
47.5 and under 50.0 cents.....	2.1		4.1	4.2	4.0	2.8
50.0 and under 52.5 cents.....	8.8		13.2	12.0	14.3	15.0
52.5 and under 55.0 cents.....	2.1		6.3	5.6	6.9	.9
55.0 and under 57.5 cents.....	4.1		8.1	6.9	9.2	5.4
57.5 and under 60.0 cents.....	1.3		3.9	2.6	5.1	.5
60.0 and under 62.5 cents.....	3.0		6.1	3.0	8.8	3.6
62.5 and under 65.0 cents.....	1.6		5.3	6.0	4.7	.1
65.0 and under 67.5 cents.....	2.9		7.9	12.7	3.5	1.9
67.5 and under 70.0 cents.....	1.0		3.1	4.7	1.6	.2
70.0 and under 72.5 cents.....	2.2	(¹)	5.1	1.7	8.2	2.0
72.5 and under 75.0 cents.....	.6		2.0	3.0	1.1	.2
75.0 and under 77.5 cents.....	1.5		3.1	4.1	2.2	2.0
77.5 and under 80.0 cents.....	.9		2.8	5.9	.1	.2
80.0 and under 82.5 cents.....	.7		2.0	2.2	1.7	.5
82.5 and under 85.0 cents.....	.8		1.9	3.5	.5	.7
85.0 and under 87.5 cents.....	.9	0.3	1.1	1.8	.5	1.2
87.5 and under 90.0 cents.....	.4	.4	.7	1.3	.3	(¹)
90.0 and under 92.5 cents.....	8.1	20.1	1.1	1.6	.6	.5
92.5 and under 95.0 cents.....	4.6	11.2	1.3	2.3	.4	(¹)
95.0 and under 97.5 cents.....	4.9	11.4	1.5	2.1	1.0	.3
97.5 and under 100.0 cents.....	3.7	9.0	.9	1.2	.6	.1
100.0 and under 105.0 cents.....	3.8	9.0	1.2	2.1	.5	.3
105.0 and under 110.0 cents.....	2.6	5.8	.7	1.4	.1	.5
110.0 and under 115.0 cents.....	3.5	8.9	.2	.3	.1	.1
115.0 and under 120.0 cents.....	4.6	11.9	.1	.2		.1
120.0 and under 125.0 cents.....	2.0	5.1				.1
125.0 and under 130.0 cents.....	2.3	6.0	.1	.1	.1	.1
130.0 and under 135.0 cents.....	.3	.7				
135.0 and under 140.0 cents.....	(¹)	.1				
140.0 and under 145.0 cents.....	(¹)	.1				
145.0 and under 150.0 cents.....	(¹)	(¹)				
150.0 and under 160.0 cents.....	(¹)					.1
Total, all workers.....	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	10,221	3,882	2,956	1,412	1,544	3,383
Average hourly earnings.....	\$0.73	\$1.03	\$0.62	\$0.67	\$0.57	\$0.49

¹ Less than a tenth of 1 percent.

TABLE F.—Percentage Distribution of Workers in BASIC LUMBER INDUSTRY, by Straight-Time Average Hourly Earnings, Branch of Industry, and Method of Wage Payment, August 1944

Average hourly earnings	Total, all branches		Logging camps		Sawmills		Veneer mills ¹		Shingle mills ²		Cooperage-stock mills ¹		Plywood mills	
	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive
Under 40.0 cents.....	0.4	0.4	0.3	0.4	0.4	0.3						0.5	0.5	0.1
40.0 and under 42.5 cents.....	13.3	1.0	11.0	1.0	14.6	.6	22.3	3.0			18.3	1.8	11.2	3.9
42.5 and under 45.0 cents.....	1.5	.9	.8	.6	1.8	1.8	5.9	3.0			1.5	.5	3.5	2.2
45.0 and under 47.5 cents.....	10.7	2.1	9.3	1.9	11.1	3.1	19.9	2.0			22.3	1.6	12.6	3.1
47.5 and under 50.0 cents.....	1.1	1.4	.8	1.2	1.3	.8	1.6	15.0			5.4	7.3	1.4	6.0
50.0 and under 52.5 cents.....	26.0	3.8	31.7	3.6	23.1	4.6	18.2	7.0			27.5	9.2	9.3	5.7
52.5 and under 55.0 cents.....	.9	2.2	.8	1.9	1.0	2.7	1.3	1.0			1.6	.9	1.3	6.8
55.0 and under 57.5 cents.....	4.1	3.0	4.7	2.9	3.6	2.8	6.5	12.0			4.1	4.3	3.6	7.0
57.5 and under 60.0 cents.....	.6	2.3	.8	2.2	.5	2.0	1.6	13.0			.6	5.2	.5	5.7
60.0 and under 62.5 cents.....	5.1	2.3	6.1	2.2	4.6	2.1	5.7	13.0			5.6	11.2	2.8	4.0
62.5 and under 65.0 cents.....	1.8	2.2	2.5	2.2	1.3	1.5	2.0	1.0			3.3	9.3	1.0	4.7
65.0 and under 67.5 cents.....	1.9	2.9	1.8	2.6	2.0	1.7	4.1	14.0			3.4	3.0	1.3	12.1
67.5 and under 70.0 cents.....	.4	2.0	.3	1.8	.5	2.3	1.9				.5	5.5	.4	3.8
70.0 and under 72.5 cents.....	1.4	2.7	1.1	2.8	1.5	1.9	2.1	3.0			.6	10.4	2.1	2.3
72.5 and under 75.0 cents.....	.3	1.7	.2	1.8	.3	1.1	1.0			0.3	2.3	2.3	.1	3.5
75.0 and under 77.5 cents.....	2.1	2.3	2.0	2.5	2.3	1.6	1.5	1.0			1.5	1.6	1.2	3.5
77.5 and under 80.0 cents.....	.3	1.7	.2	1.6	.3	1.3	.3	4.0			.3	4.1	(³)	5.7
80.0 and under 82.5 cents.....	1.0	1.9	.8	2.0	1.2	1.5	.7	2.0			.7	3.9	.5	2.0
82.5 and under 85.0 cents.....	.9	1.7	.4	1.8	1.3	.9	.1				.7	5.2	.3	3.3
85.0 and under 87.5 cents.....	1.2	1.3	.5	1.3	1.7	.8	.5				.2	5.5	.5	2.9
87.5 and under 90.0 cents.....	1.5	1.7	1.2	2.1	1.9	.7	.3	1.0			.1	1.2	.2	1.3
90.0 and under 92.5 cents.....	2.7	1.9	1.0	2.2	3.7	1.0	.6				.3	2.3	9.3	1.5
92.5 and under 95.0 cents.....	1.6	1.4	.5	1.4	2.3	1.2	.1				.2	.5	5.1	2.1
95.0 and under 97.5 cents.....	2.0	1.3	.3	1.4	3.1	.8	.2			6.4	.6	.9	5.4	1.9
97.5 and under 100.0 cents.....	1.2	1.5	.6	1.6	1.5	1.5				9.7	.1	1.5	4.2	1.1
100.0 and under 105.0 cents.....	3.9	2.7	2.6	2.6	4.8	3.4	.7			18.6	.2	1.4	4.2	1.9
105.0 and under 110.0 cents.....	2.3	2.1	2.6	2.1	2.0	2.6	.2			14.4	1.2		2.8	1.3
110.0 and under 115.0 cents.....	2.0	2.6	2.4	2.6	1.6	3.6	.4	4.0		5.3	2.3		4.0	.3
115.0 and under 120.0 cents.....	2.0	2.2	2.7	2.3	1.4	2.7		1.0		6.6	.4		5.0	.3
120.0 and under 125.0 cents.....	1.1	2.1	1.7	2.0	.7	3.2	.1			4.7	3.7		2.3	

¹ Does not include data for veneer and cooperage-stock mills in the West, as these two branches of the industry are relatively unimportant in that area.

² Based only on data for shingle mills in the Douglas Fir region of the Far West, which produced approximately 95 percent of all shingles manufactured in the United States.

³ Less than a tenth of 1 percent.

TABLE F.—Percentage Distribution of Workers in BASIC LUMBER INDUSTRY, by Straight-Time Average Hourly Earnings, Branch of Industry, and Method of Wage Payment, August 1944—Continued

Average hourly earnings	Total, all branches		Logging camps		Sawmills		Veneer mills ¹		Shingle mills ²		Cooperage-stock mills ¹		Plywood mills	
	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive	Time	Incentive
125.0 and under 130.0 cents.....	1.6	2.1	2.7	2.0	0.9	3.3	0.2	-----	4.4	3.7	(³)	-----	2.7	-----
130.0 and under 135.0 cents.....	.6	2.0	1.1	1.8	.4	3.4	(³)	-----	2.2	5.0	(³)	-----	.3	-----
135.0 and under 140.0 cents.....	.5	2.0	.9	1.7	.3	3.4	(³)	-----	3.9	5.7	(³)	-----	.1	-----
140.0 and under 145.0 cents.....	.4	1.9	.7	1.7	.2	2.8	(³)	-----	1.9	7.5	(³)	-----	(³)	-----
145.0 and under 150.0 cents.....	.2	2.4	.5	2.2	.1	3.1	(³)	-----	2.8	8.9	(³)	-----	(³)	-----
150.0 and under 160.0 cents.....	.8	4.3	1.6	3.6	.3	6.4	(³)	-----	8.1	15.9	(³)	-----	(³)	-----
160.0 and under 170.0 cents.....	.2	3.8	.2	3.8	.2	3.0	(³)	-----	1.9	15.9	(³)	-----	(³)	-----
170.0 and under 180.0 cents.....	.2	3.3	.3	3.4	.1	2.7	(³)	-----	2.2	9.4	(³)	-----	(³)	-----
180.0 and under 190.0 cents.....	.1	3.7	.1	4.2	(³)	2.3	(³)	-----	2.3	9.2	(³)	-----	(³)	-----
190.0 and under 200.0 cents.....	(³)	3.0	(³)	3.3	(³)	1.6	(³)	-----	1.3	6.4	(³)	-----	(³)	-----
200.0 cents and over.....	.1	12.3	.1	13.7	.1	11.9	(³)	-----	3.3	4.8	(³)	-----	(³)	-----
Total, all workers.....	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
Number of workers.....	298,107	33,609	115,806	25,185	165,119	5,311	4,627	100	639	1,039	3,230	439	8,686	1,535
Average hourly earnings.....	\$0.66	\$1.20	\$0.68	\$1.23	\$0.65	\$1.21	\$0.52	\$0.61	\$1.23	\$1.59	\$0.51	\$0.67	\$0.74	\$0.67

¹ Does not include data for veneer and cooperage-stock mills in the West, as these two branches of the industry are relatively unimportant in that area.
² Based only on data for shingle mills in the Douglas Fir region of the Far West, which produces approximately 95 percent of all shingles manufactured in the United States.
³ Less than a tenth of 1 percent.

TABLE G.—Straight-Time Average Hourly Earnings of Workers in Logging Camps in West, by Occupation and Region, August 1944

Occupation	Total, West		Douglas Fir region		Western Pine region		Redwood region	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Total, selected occupations.....	35,594	\$1.37	20,898	\$1.45	13,441	\$1.24	1,255	\$1.34
Blacksmiths.....	175	1.21	105	1.28	61	1.10	9	1.18
Brakemen, head.....	260	1.14	167	1.18	82	1.07	11	1.07
Brakemen, second.....	227	1.03	133	1.07	77	.98	17	.95
Bull buckers.....	533	1.47	350	1.53	164	1.36	19	1.21
Bulldozer operators.....	779	1.35	355	1.44	399	1.27	25	1.29
Cat doctors.....	291	1.28	97	1.39	182	1.23	12	1.25
Cat drivers (tractor).....	1,601	1.29	572	1.40	948	1.23	81	1.22
Chasers, high lead and skidder side.....	432	1.12	432	1.12	(¹)	(¹)	(¹)	(¹)
Choker setters, cat side.....	2,914	1.05	1,526	1.10	1,289	1.00	99	1.06
Donkey doctors.....	87	1.36	87	1.36	(¹)	(¹)	(¹)	(¹)
Engineers, high lead and skidder slackline.....	696	1.34	696	1.34	(¹)	(¹)	(¹)	(¹)
Engineers, mechanical loading.....	1,224	1.29	699	1.33	490	1.25	35	1.16
Engineers, rail transportation.....	282	1.20	182	1.23	89	1.17	11	1.11
Fallers and buckers, hand.....	11,001	1.69	7,002	1.78	3,746	1.56	253	1.29
Fallers and buckers, power.....	1,623	1.85	848	1.97	469	1.60	306	1.90
Filers, woods.....	563	1.35	395	1.44	147	1.15	21	1.19
Firemen, rail transportation.....	265	.99	163	1.01	92	.96	10	.92
Head loaders, mechanical loading.....	1,055	1.34	707	1.38	305	1.29	43	1.20
Head rigging slingers, high lead and skidder slackline.....	534	1.31	534	1.31	(¹)	(¹)	(¹)	(¹)
Hook tenders, cat side.....	304	1.41	199	1.47	79	1.26	26	1.36
Hook tenders, high lead and skidder slackline.....	642	1.52	642	1.52	(¹)	(¹)	(¹)	(¹)
Limbers and knotters.....	407	1.07	17	.98	390	1.07	4	(²)
Motor patrol operators.....	186	1.18	79	1.21	103	1.16	4	(²)
Powdermen.....	360	1.12	202	1.20	145	1.02	13	1.08
Rigging slingers, cat side.....	422	1.11	167	1.24	235	1.02	20	1.21
Scalers, woods.....	634	1.17	331	1.29	284	1.03	19	1.09
Second loaders, mechanical loading.....	1,546	1.12	584	1.20	907	1.07	55	1.07
Second rigging slingers, high lead and skidder slackline.....	253	1.18	253	1.18	(¹)	(¹)	(¹)	(¹)
Section hands.....	1,028	.87	546	.90	427	.83	55	.85
Tire and grease men.....	232	1.02	124	1.06	106	.97	2	(²)
Truck drivers, hauling.....	3,838	1.11	1,786	1.18	1,946	1.05	106	1.10
Truck mechanics.....	676	1.21	394	1.26	279	1.14	3	(²)
Whistle punks, high lead and skidder slackline.....	524	1.07	524	1.07	(¹)	(¹)	(¹)	(¹)

¹ No information obtained for workers in this occupation which is not commonly found in this district.
² Insufficient number of plants and/or workers to justify presentation of an average.

TABLE H.—Straight-Time Average Hourly Earnings of Workers in Logging Camps in North and South, by Occupation and Region, August 1944

Occupation	North						South		
	Total	Prairie States	Lake States	North-Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
Average hourly earnings									
Total, selected occupations..	\$0. 81	\$0. 78	\$0. 84	\$0. 63	\$0. 77	\$0. 89	\$0. 53	\$0. 52	\$0. 58
Blacksmiths.....	.73		.75	(1)	.79	.68	.66	.67	.62
Bull buckers.....	.81	(1)	.88	.68	.91	.79	.69	.71	.66
Bulldozer operators.....	.87	(1)	.86	(1)	(1)	.87	.65	.65	.62
Cat docters.....	.78		.71	(1)	(1)	.86	.62	.61	.69
Cat drivers (tractor).....	.80	.94	.82	.69	.77	.87	.56	.56	.60
Choker setters, cat side.....	.68	(1)	.73	.62	.66	.64	.47	.47	.44
Engineers, mechanical loading.....	.70	(1)	.69	.80	.71	(1)	.55	.55	.6
Fallers and buckers, hand.....	.92	.81	.97	.63	.85	1.01	.53	.51	.61
Fallers and buckers, power.....	.81		.91	.65	.76	.91	.57	.57	.53
Filers, woods.....	.66	(1)		.66	(1)	.62	.78	.57	1.23
Head loaders, mechanical loading.....	.76	.75	.81		.67	(1)	.51	.50	.55
Landing men.....	.65		.67	.63	.58	.67	.49	.49	.49
Limbers and knotters.....	.73		(1)	.57	.66	(1)	.52	.52	.47
Loaders, hand.....	.73	.64	.69	.54	.67	.79	.50	.50	.48
Rigging slingers, cat side.....	.65		.64	(1)			.48	.48	.51
Road monkeys.....	.62	.78	.62	.60	.71	.58	.47	.47	.46
Scalers, woods.....	.74	.52	.82		.70	.73	.57	.60	.54
Second loaders, mechanical loading.....	.67	.78	.67	(1)	.70	(1)	.48	.48	.49
Section hands.....	.63		.68	.60			.49	.50	.47
Teamsters, skidding.....	.69	.64	.71	.65	.69	.69	.49	.49	.50
Truck drivers, hauling.....	.67	.74	.72	.60	.67	.70	.53	.53	.53
Truck mechanics.....	.79		.79	(1)	.78	.87	.70	.72	.66
Winch operators, skidding.....	(2)	(2)	(2)	(2)	(2)	(2)	.53	.53	(2)
Number of workers									
Total, selected occupations..	16, 330	320	4, 687	2, 670	2, 624	6, 029	89, 067	72, 063	17, 004
Blacksmiths.....	124		65	4	15	40	72	60	12
Bull buckers.....	185	1	17	56	68	43	2, 102	1, 584	518
Bulldozer operators.....	137	3	98	10	3	23	100	89	11
Cat docters.....	27		6	8	3	10	42	36	6
Cat drivers (tractor).....	879	18	270	129	237	225	3, 510	3, 307	203
Choker setters, cat side.....	266	7	116	81	32	30	2, 861	2, 803	58
Engineers, mechanical loading.....	150	1	119	15	14	1	497	457	40
Fallers and buckers, hand.....	8, 421	189	2, 255	1, 205	1, 171	3, 601	39, 407	31, 107	8, 300
Fallers and buckers, power.....	159		38	10	85	26	3, 048	2, 942	104
Filers, woods.....	59	1		24	5	29	1, 030	705	325
Head loaders, mechanical loading.....	52	4	29		16	3	579	456	123
Landing men.....	175		62	46	24	43	1, 130	1, 046	84
Limbers and knotters.....	138		14	54	31	39	1, 811	1, 709	102
Loaders, hand.....	453	8	72	19	89	265	3, 281	3, 074	207
Rigging slingers, cat side.....	48		46	2			437	362	75
Road monkeys.....	568	2	117	104	125	250	1, 245	1, 060	185
Scalers, woods.....	196	6	54		19	117	335	168	167
Second loaders, mechanical loading.....	207	4	178	14		2	971	658	313
Section hands.....	212		85	127	9		703	488	215
Teamsters, skidding.....	2, 101	20	551	288	332	910	10, 902	8, 279	2, 623
Truck drivers, hauling.....	1, 677	56	463	462	334	362	14, 049	10, 793	3, 256
Truck mechanics.....	66		32	12	12	10	235	158	77
Winch operators, skidding.....							722	722	

¹ Insufficient number of plants and/or workers to justify presentation of an average.

² No information obtained for workers in this occupation which is not commonly found in this region.

TABLE I.—Straight-Time Average Hourly Earnings of Workers in Sawmills in West, by Occupation and Region, August 1944

Occupation	Total, West		Douglas Fir region		Western Pine region		Redwood region	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Total, selected occupations.....	45,981	\$1.04	22,102	\$1.03	22,019	\$1.05	1,860	\$1.06
<i>Sawmills, including planing mills</i>								
Blacksmiths.....	181	1.15	69	1.21	107	1.11	5	1.11
Car loaders.....	2,474	1.15	1,412	1.06	992	1.26	70	1.40
Carpenters.....	420	1.12	161	1.16	213	1.11	46	1.05
Carrier drivers.....	883	1.04	561	1.05	299	1.01	23	.99
Clean-up men.....	1,229	.88	680	.90	495	.85	64	.85
Cut-off saw operators.....	691	.94	448	.98	228	.88	15	.99
Deckmen, including dragsaw men.....	1,133	.96	473	.98	603	.94	57	.97
Doggers, head rig.....	717	.96	419	.97	282	.95	16	.98
Edgermen.....	1,311	1.12	524	1.16	713	1.08	64	1.26
Edger off-bearers.....	920	.90	419	.93	465	.87	36	.90
Electricians.....	321	1.20	157	1.21	147	1.19	17	1.12
Filers.....	470	1.67	202	1.62	250	1.72	18	1.57
Filers, bench.....	131	1.32	70	1.37	54	1.28	7	1.23
Filers, helpers.....	252	1.10	131	1.12	108	1.07	13	1.01
Firemen.....	1,309	.95	580	.99	679	.92	50	.97
Gang saw off-bearers.....	28	.97	28	.97	(1)	(1)	(1)	(1)
Gang saw spotters.....	44	.94	44	.94	(1)	(1)	(1)	(1)
Gang sawyers.....	70	1.13	70	1.13	(1)	(1)	(1)	(1)
Garage mechanics.....	258	1.14	98	1.15	143	1.12	17	1.25
Graders, finish chain.....	877	1.10	444	1.07	401	1.15	32	.99
Graders or markers, green chain.....	808	1.08	429	1.07	328	1.10	51	1.10
Graders, rough dry chain.....	261	1.14	50	1.06	208	1.16	3	(2)
Helpers, maintenance.....	458	1.01	314	1.04	125	.94	19	.99
Hog feeders.....	399	.91	212	.95	163	.86	24	.88
Kiln tenders.....	149	1.05	50	1.05	88	1.04	11	1.11
Knife grinders.....	113	1.17	55	1.17	50	1.18	8	1.11
Machinists.....	355	1.21	156	1.25	163	1.18	36	1.18
Off-bearers, head rig.....	1,292	.96	548	.98	692	.94	52	1.02
Oilers.....	495	.96	238	1.00	237	.92	20	1.01
Operating engineers.....	518	1.08	216	1.13	279	1.04	23	1.11
Operating millwrights.....	1,151	1.19	685	1.20	412	1.15	54	1.33
Pilers, yard, including timber handlers.....	1,536	1.38	538	.95	932	1.65	66	1.12
Pipe fitters.....	148	1.18	71	1.14	69	1.23	8	1.06
Planer feeders, including matcher and sizer feeders.....	806	.97	482	1.00	303	.91	21	1.02
Planer off-bearers, including matcher and sizer off-bearers.....	657	.90	379	.94	248	.83	30	.88
Planer operators, including matcher and sizer operators.....	231	1.12	143	1.10	87	1.14	1	(2)
Pondmen, including slipmen.....	1,406	.96	764	1.00	607	.93	35	.93
Pullers, dry chain.....	831	1.02	272	.93	546	1.05	13	(2)
Pullers, green chain.....	4,518	1.02	2,738	.97	1,527	1.11	253	.99
Resaw off-bearers, planing mills.....	124	.90	64	.92	42	.87	13	.92
Resawyers, head mill.....	388	1.08	280	1.10	91	1.04	17	1.01
Resawyers, planing mills.....	128	.99	48	.98	70	1.00	10	(2)
Sawers, head rig.....	1,221	1.47	499	1.54	654	1.42	68	1.46
Setters, head rig.....	1,206	1.08	495	1.07	656	1.09	55	1.11
Set-up men, planing mill.....	353	1.16	233	1.18	115	1.13	5	(2)
Sorters, planed lumber.....	928	.91	617	.93	311	.87	-----	-----
Stacker-carrier operators.....	156	1.03	49	1.07	92	.97	15	1.25
Stackers, dry kiln.....	897	1.22	401	1.05	482	1.36	14	1.26
Straighteners, green chain.....	137	.93	137	.93	(1)	(1)	(1)	(1)
Tallymen.....	895	1.05	543	1.06	300	1.03	52	1.06
Transfer car operators, dry kiln.....	146	.94	45	.97	101	.94	-----	-----
Trimmer spotters.....	476	.95	283	.97	165	.93	28	.88
Trimmermen, head mill.....	1,056	1.02	486	1.05	502	.97	68	1.12
Trimmermen, planing mill.....	462	.96	348	.98	101	.91	13	.89
Truck drivers, yard.....	841	1.01	299	1.04	532	.99	10	(2)
Unstackers, dry kiln.....	488	1.10	192	.98	262	1.18	34	(2)
Utility men.....	1,893	.87	918	.90	872	.84	103	.90
Watchmen, service.....	1,628	.84	825	.87	731	.81	72	.82
<i>Box factory</i>								
Car loaders.....	143	.88	(1)	(1)	143	.88	-----	-----
Cut-off saw off-bearers.....	455	.81	(1)	(1)	455	.81	-----	-----
Cut-off saw operators.....	385	1.05	(1)	(1)	385	1.05	-----	-----
Machine hikeaways.....	283	.81	(1)	(1)	283	.81	-----	-----
Nailing, stapling, and stitching machine operators.....	227	.88	(1)	(1)	227	.88	-----	-----
Planer feeders.....	49	.91	(1)	(1)	49	.91	-----	-----
Planer men.....	46	1.15	(1)	(1)	46	1.15	-----	-----
Resaw off-bearers.....	495	.81	(1)	(1)	495	.81	-----	-----
Resawyers.....	512	.96	(1)	(1)	512	.96	-----	-----
Tying machine operators.....	112	.87	(1)	(1)	112	.87	-----	-----

¹ No information obtained for workers in this occupation which is not commonly found in this region.

² Insufficient number of plants and/or workers to justify presentation of an average.

TABLE J.—Straight-Time Average Hourly Earnings of Workers in Sawmills in North and South, by Occupation and Region, August 1944

Occupation	North						South		
	Total	Prairie States	Lake States	North Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
Average hourly earnings									
Total, selected occupations.....	\$0.69	\$0.64	\$0.70	\$0.62	\$0.67	\$0.74	\$0.51	\$0.51	\$0.52
Blacksmiths.....	.76	(1)	.78	(1)	.76	.71	.62	.61	.64
Car loaders.....	.65	.68	.66	.59	.61	.74	.46	.46	.47
Carpenters.....	.80	(1)	.91	.74	.75	.74	.58	.57	.60
Carrier drivers.....	.65		(1)				.65	.49	.48
Clean-up men.....	.62	.58	.71	.55	.52	.68	.45	.44	.47
Cut-off saw operators.....	.62	.57	.59	.58	.64	.65	.48	.48	.48
Deckmen, including dragsaw men.....	.67	.55	.64	.56	.64	.76	.48	.47	.49
Doggers, head rig.....	.67	.56	.64	.59	.65	.73	.49	.49	.51
Edgermen.....	.70	.62	.71	.63	.71	.74	.51	.51	.54
Edger off-bearers.....	.62	.56	.63	.55	.65	.65	.47	.47	.48
Electricians.....	.90		.91	.94	(1)	(1)	.74	.70	.78
Filers.....	.99	.88	1.05	.99	.96	.84	.89	.90	.89
Filers, bench.....	.84		.81	.94	.83	.94	.73	.68	.80
Filers' helpers.....	.70	(1)	.68	.81	(1)	(1)	.55	.54	.57
Firemen.....	.63	.55	.70	.60	.59	.62	.48	.48	.51
Firemen's helpers.....	.62		.67	(1)	(1)	(1)	.46	.45	.48
Garage mechanics.....	.79	(1)	.79	.84	.74	.78	.63	.64	.61
Graders, finish chain.....	.71	.72	.73	(1)	(1)	(1)	.58	.59	.57
Graders or markers, green chain.....	.76	.73	.77	.67	.74	.80	.56	.57	.54
Graders, rough dry chain.....	.76	(1)	.82	.64	.76	(1)	.62	.64	.67
Helpers, maintenance.....	.71		.74	.62	.69	.76	.54	.51	.58
Hog feeders.....	.67	(1)	.70	(1)	.64	.65	.46	.46	.47
Kiln tenders.....	.85		1.04	.71	(1)	.75	.64	.64	.64
Knife grinders.....	.75	(1)	.79	.72		(1)	.69	.70	.68
Machinists.....	.88		.91	.74	1.06	.84	.74	.72	.82
Off-bearers, head rig.....	.66	.56	.64	.58	.63	.75	.46	.46	.48
Oilers.....	.64	(1)	.66	.61	(1)	.63	.49	.48	.50
Operating engineers.....	.75		.77	.71	.95	.72	.62	.59	.65
Operating millwrights.....	.81	.82	.80	.85	.82	.83	.73	.74	.73
Pilers, yard, including timber handlers.....	.64	.59	.63	.57	.63	.71	.48	.47	.50
Planer feeders, including matcher and sizer feeders.....	.66	.60	.67	.61	.66	.67	.50	.49	.52
Planer off-bearers, including matcher and sizer off-bearers.....	.58	(1)	.62	.55	.55	.60	.45	.45	.48
Planer operators, including matcher and sizer operators.....	.66	(1)	.63	.64	.65	.74	.62	.63	.57
Pondmen, including slipmen.....	.62	.63	.67	.57	.64	.59	.46	.46	.48
Pullers, dry chain.....	.59		.63	.58	(1)	(1)	.46	.46	.46
Pullers, green chain.....	.62	.67	.67	.54	.58	.65	.46	.45	.48
Resaw off-bearers, head mill.....	.64	.63	.65	.57	.55	.76	.46	.45	.48
Resaw off-bearers, planing mill.....	.61	(1)	.64	.59	(1)	(1)	.45	.44	.45
Resawyers, head mill.....	.73	.86	.79	.60	.58	.71	.51	.51	.53
Resawyers, planing mill.....	.68	(1)	.71	.66	(1)	(1)	.49	.49	.52
Sawyers, head rig.....	.93	.85	.90	.91	.89	.99	.80	.80	.80
Setters, head rig.....	.69	.66	.73	.65	.68	.68	.54	.53	.54
Set-up men, planing mill.....	.78	(1)	.81		(1)	(1)	.74	.74	.73
Sorters, planed lumber.....	.58	(1)	.65	(1)			.47	.47	.48
Stackers, dry kiln.....	.73	(1)	.89	.55	(1)	.69	.50	.48	.54
Tallymen.....	.79	(1)	.84	.77	.75	.76	.62	.62	.62
Tiers and bundle sorters, planing mill.....	.62		.59	(1)		.64	.47	.45	.49
Tractor drivers.....	.69	.71	.70	.59	.75	.65	.48	.47	.49
Trimmer spotters.....	.65		.65		.58	(1)	.47	.45	.49
Trimmermen, head mill.....	.66	.68	.71	.59	.66	.59	.49	.48	.51
Trimmermen, planing mill.....	.62	.59	(1)	.63	(1)	(1)	.48	.47	.49
Truck drivers, yard.....	.68	.72	.67	.58	(1)	.74	.48	.48	.48
Unstackers, dry kiln.....	.59		.61	.54		(1)	.46	.46	.48
Utility men.....	.58	.59	.59	.57	.58	.58	.45	.45	.47
Watchmen, service.....	.56	.55	.63	.52	.52	.61	.45	.44	.47
Yard men, log, including hoistmen.....	.56	.54		.56	(1)		.50	.50	.50

TABLE J.—Straight-Time Average Hourly Earnings of Workers in Sawmills in North and South, by Occupation and Region, August 1944—Continued

Occupation	North						South		
	Total	Prairie States	Lake States	North Central States	Middle Atlantic States	New England States	Total	South-eastern States	South-western States
	Number of workers								
Total, selected occupations.....	16,243	671	5,105	3,483	3,030	3,954	108,206	82,502	25,704
Blacksmiths.....	71	3	43	6	10	9	219	133	86
Car loaders.....	651	49	221	192	76	113	6,011	4,391	1,620
Carpenters.....	142	2	45	36	43	16	645	425	220
Carrier drivers.....	27	1	1	1	1	26	525	388	137
Clean-up men.....	226	14	71	74	26	41	1,895	1,241	654
Cut-off saw operators.....	804	34	109	218	230	213	2,042	1,794	248
Deckmen, including dragsaw men.....	807	44	238	112	124	349	6,115	5,238	877
Doggers, head rig.....	515	3	98	94	89	226	3,301	2,492	809
Edgermen.....	940	40	288	194	181	237	5,395	4,507	888
Edger off-bearers.....	608	27	200	107	123	151	6,583	5,898	685
Electricians.....	30	1	19	6	2	3	103	45	58
Filers.....	170	9	68	51	22	20	881	602	279
Filers, bench.....	113	6	73	14	16	10	76	43	35
Filers' helpers.....	28	2	6	6	12	2	191	127	64
Firemen.....	552	23	157	160	123	89	4,398	3,292	1,106
Firemen's helpers.....	36	1	19	7	8	2	887	580	307
Garage mechanics.....	72	6	21	6	29	10	435	301	134
Graders, finish chain.....	36	5	10	10	1	1	1,216	795	421
Graders or markers, green chain.....	342	7	72	62	27	174	799	580	219
Graders, rough dry chain.....	64	3	23	19	13	6	373	242	131
Helpers, maintenance.....	94	3	38	16	17	23	402	232	170
Hog feeders.....	80	1	55	6	6	12	460	264	196
Kiln tenders.....	40	1	16	14	4	6	285	189	96
Knife grinders.....	17	1	6	8	2	2	264	173	91
Machinists.....	38	1	18	10	5	5	296	228	68
Off-bearers, head rig.....	827	35	162	174	156	300	7,427	6,581	846
Oilers.....	55	3	35	11	2	4	555	368	187
Operating engineers.....	99	1	57	25	4	13	353	209	144
Operating millwrights.....	150	6	74	14	26	30	560	363	197
Pilers, yard, including timber hand- lers.....	2,022	69	545	485	391	532	10,611	7,958	2,653
Pipe fitters.....									
Planer feeders, including matcher and sizer feeders.....	168	6	60	22	28	52	1,773	1,277	496
Planer off-bearers, including matcher and sizer off-bearers.....	173	2	65	37	40	29	1,544	1,282	262
Planer operators, including matcher and sizer operators.....	87	1	30	20	15	21	268	215	53
Pondmen, including slipmen.....	316	23	105	51	51	86	952	665	287
Pullers, dry chain.....	69	1	16	43	7	3	964	582	382
Pullers, green chain.....	427	22	185	145	15	60	2,894	1,878	1,016
Resaw off-bearers, head mill.....	80	4	43	4	17	12	517	408	109
Resaw off-bearers, planing mill.....	34	2	21	6	2	3	432	315	117
Resawyers, head mill.....	111	5	56	7	22	21	416	321	95
Resawyers, planing mill.....	33	2	20	5	3	3	412	313	99
Sawyers, head rig.....	1,255	40	272	243	266	434	5,552	4,756	796
Setters, head rig.....	586	23	241	186	75	61	3,178	2,511	687
Set-up men, planing mill.....	24	3	15	5	5	1	625	458	167
Sorters, planed lumber.....	21	8	8	5	5	1	457	284	173
Stackers, dry kiln.....	203	4	105	77	9	8	3,556	2,586	970
Tallymen.....	221	3	65	41	56	56	1,063	785	278
Tiers and bundle sorters, planing mill.....	39	7	12	12	12	20	553	306	247
Tractor drivers.....	151	10	94	12	12	23	1,232	963	269
Trimmer spotters.....	33	1	27	2	2	4	398	221	177
Trimmermen, head mill.....	369	16	154	58	80	61	1,625	1,101	524
Trimmermen, planing mill.....	28	3	9	7	3	6	979	695	284
Truck drivers, yard.....	1,030	55	287	46	355	287	3,997	3,551	446
Unstackers, dry kiln.....	47	1	25	19	19	3	2,486	1,559	927
Utility men.....	676	21	286	184	143	42	6,087	3,874	2,213
Watchmen, service.....	311	19	112	92	55	33	2,356	1,550	806
Yard men, log, including hoistmen.....	35	8	1	24	3	1	585	367	218

¹ Insufficient number of plants and/or workers to justify presentation of an average.