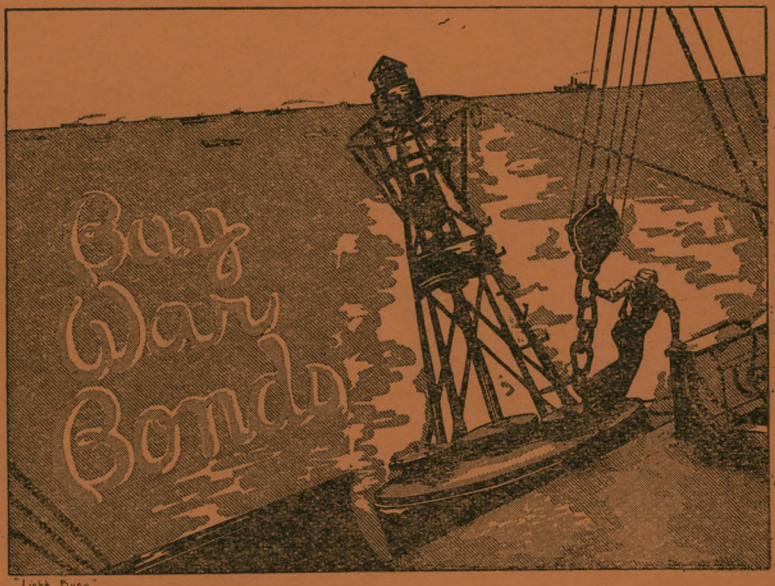
KALAMAZOO PUBLIC LIBRARY
MAY 29 1944

MAY 1944

Monthly LABOR Review

VOL. 58 • NO. 5



"Light Duty"

In this Issue . . . Post-war construction . . Strikes in 1943 . . Employment in shipbuilding . . Earnings of white-collar workers

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

ized for FRASER
://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

UNITED STATES DEPARTMENT OF LABOR

FRANCES PERKINS, *Secretary*

✦

BUREAU OF LABOR STATISTICS

ISADOR LUBIN, *Commissioner* (on leave)

A. F. HINRICHS, *Acting Commissioner*

DONALD DAVENPORT, Chief, Employment and Occupational Outlook Branch

HENRY J. FITZGERALD, Chief, Business Management Branch

HUGH S. HANNA, Chief, Editorial and Research

ARYNESS JOY WICKENS, Chief, Prices and Cost of Living Branch

N. ARNOLD TOLLES, Chief, Working Conditions and Industrial Relations Branch

SIDNEY W. WILCOX, Chief Statistician

DIVISIONS

Construction and Public Employment, Herman B. Byer

Consumer's Prices, Ethel D. Hoover

Cost of Living, Faith M. Williams

Employment Statistics, Alexander Sturges (acting chief)

General Price Research, Walter G. Keim

Historical Studies of Wartime Problems, Stella Stewart

Industrial Hazards, Max D. Kossoris

Industrial Prices, J. M. Cutts

Industrial Relations, Florence Peterson

Labor Information Service, Boris Stern

Machine Tabulation, Joseph Drager

Occupational Outlook, Charles Stewart

Post-War Labor Problems, John H. G. Pierson

Productivity and Technological Development, W. Duane Evans

Wage Analysis, Robert J. Myers

The MONTHLY LABOR REVIEW *is for sale by the Superintendent of Documents. U. S. Government Printing Office, Washington 25, D. C. Price, 30 cents a copy. Subscription price per year in the United States, Canada, and Mexico, $3.50; other countries, $4.75.*

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

KALAMAZOO PUBLIC LIBRARY

MAY 29 1944

MONTHLY LABOR REVIEW

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

+ HUGH S. HANNA, EDITOR +

CONTENTS

MAY 1944, Vol. 58, No. 5

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

This Issue in Brief

Strikes in 1943.

Strike activity increased in 1943 over the preceding year but was still far less than in 1941. More than two-thirds of all strike idleness in 1943 was in the coal-mining industry. Most of the strikes were short stoppages and unauthorized by the unions. Wages were the most common issues. The National War Labor Board was directly concerned with about 40 percent of the strikes. Page 927.

Post-war capacity and characteristics of the construction industry.

Productive capacity of the construction industry can expand rapidly after the end of the war, and can be $11,000,000,000 per year at 1940 price levels a year after the defeat of Japan. Construction machinery and equipment are depleted and deteriorated, but can be augmented rapidly. The reconversion problems of building-material manufacturers are moderate, but restoration of trade inventories will require from 6 months to a year for several important materials. It is estimated that the construction workers in civilian life will be sufficient in number for the construction rate stated. However, the post-war expansion of capacity can be retarded seriously by avoidable complications. Page 913.

Employment in shipbuilding, 1935–43.

The labor force in the shipbuilding industry expanded from 63,000 workers in January 1935 to 1,722,000 in December 1943. The industry has been characterized by a high rate of labor turnover, fairly high rates of absenteeism, and an expanding proportion of female employees. Mass-production methods have helped to reduce the man-hour requirements per vessel and to raise productivity. Page 948.

Effect of the draft of men under 26 on the petroleum industry.

Less than 40 percent of the men employed in the petroleum industry are subject to Selective Service, and less than 5 percent are between 18 and 26 years of age. Among the group of technical employees, however, carrying great responsibility for engineering, exploration, and other scientific processes, nearly 60 percent are subject to Selective Service and 11 percent of the total are subject to immediate call under the new regulations. An analysis of the effect of the draft upon the various scientific and technical occupations in the industry is given in the article on page 967.

Labor conditions in the Netherlands Indies.

Native Indonesians form over 97 percent of the population of the Netherlands Indies. Farming on small land holdings is the predominant occupation. Concentration of over two-thirds of the inhabitants on the Island of Java, which has only one-fifteenth of the land area, is the basic problem. A program of industrialization was encouraged by the Government in the 1930's to ease the effects of overpopulation and of unemployment. Owing to the difficulty of legislating for natives, who were often employed in remote areas and small enterprises, wage and hour regulation was slow in being introduced. The Japanese occupation forces failed to utilize Indonesian labor and resources for their war effort, and introduced a labor draft early in 1944. Page 972.

Shipyard injuries during 1943.

A reduction of 6 percent in accidents as compared with 1942 was achieved by the shipbuilding industry in 1943, the injury-frequency rate falling from 33.1 to 31.2 per million employee-hours worked. This was the result of intensified safety programs by private shipyards working on contracts of the Navy and the Maritime Commission. Page 1004.

ized for FRASER
://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Preventive medicine in Chile.

Since 1938, the social-insurance in funds Chile have provided rest treatment and other benefits designed especially for the prevention of tuberculosis and cardiovascular diseases, which are the chief causes of death among persons of working age in that country. In the 4-year period, 1938–41, a total of 19,687 persons had treatment. Page 1009.

Legal provisions on collection of unpaid wages.

Laws dealing with payment of wages have been enacted by 46 States, Alaska, Hawaii, and Puerto Rico; and 14 States also authorize some State agency to act in collecting unpaid wages. The laws are of various degrees of coverage and efficacy. Their provisions are analyzed in the article on page 1015.

Trend of earnings among white-collar workers during the war.

Earnings of the approximately 11 million white-collar employees in the United States have increased, since the war began, decidedly less than those of factory and other industrial workers. Although salaries of clerical, professional, and other white-collar workers have shown increases ranging in some employments as high as 30 percent or more, factory operatives' hourly earnings have risen by about 45 percent since January 1941 and their weekly earnings by almost 70 percent. An analysis of white-collar earnings in various private and public employments is given on page 1033.

Average hourly earnings in the airframe industry, 1943.

In December 1943 the straight-time earnings of workers in the metal-airframe industry averaged 95 cents per hour. Nearly a fourth of the workers were averaging $1 or more, and over a half between 85 cents and $1. Page 1050.

Hours and earnings in Great Britain and Northern Ireland, July 1943.

Actual hours of labor in 16 important industry groups in Great Britain and Northern Ireland averaged 50 per week in July 1943, as compared with 46½ in the pre-war period of October 1938. In the same interval, weekly earnings rose 75.7 percent to 93s. 7d. on the average. Average hourly earnings were 1s. 10½d. in July 1943. Page 1070.

Building construction in 1943.

The building construction started in 1943 aggregated (in terms of estimated valuation as shown on building permits) 52 percent less than that for 1942. Both Federally and privately financed projects declined, the former mainly because of the completion of war projects and the latter largely because of restrictions on residential building. Page 1096.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

MONTHLY LABOR REVIEW

FOR MAY 1944

Post-War Capacity and Characteristics of the Construction Industry[1]

Summary

RAPID expansion of construction activity is commonly expected to provide a major source of employment opportunity in the post-war period. By 1943 construction expenditures (adjusted for the 1940 cost level) had already dropped from the 1942 peak of almost $11,500,000,000 to approximately $5,900,000,000, as a result of the enforced curtailment of all nonessential construction as well as the completion of major war construction programs. Although the 1943 total was the lowest since 1938 and, until Germany is defeated, further reduction is expected, the total is not expected in any event to fall below $3,000,000,000 at 1940 costs.

The accumulating demands for construction raise the question of the productive capacity of the construction industry in the post-war period. In the appraisal of the industry's post-war capacity given in this article it was assumed that Germany would be defeated before Japan and that reduced military requirements during the Asiatic phase of the war would permit the extensive release of industrial plant and a corresponding reduction in the war use of materials. It was further assumed that the factors governing the selection of establishments for total or partial release would include (1) their importance in the civilian economy and (2) their importance in industrial preparation for the post-war period.

On the basis of these assumptions it appears that the productive capacity of the construction industry can expand rapidly and, within a year after the end of the war with Japan, can reach an annual rate of $11,000,000,000 at the 1940 level of building costs. The characteristic flexibility in the organization and methods of operation of the construction industry permits a rapid expansion in the volume of work; members of the industry are accustomed to starting work on short notice and to expanding their operations rapidly.

Construction equipment is now sufficient for a rate of at least $12,000,000,000 per year, and is likely to remain so. Its age and condition will present some difficulties during the early months after the war if no prior improvement is possible, but will not restrict volume. During the period when hostilities continue against Japan only, repair parts and replacement machines will probably be produced in considerable quantity for civilian buyers. Within a short time

[1] Prepared in the Bureau's Division of Construction and Public Employment by Alexander C. Findlay.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

after the defeat of Japan these will be available in any desired quantity. The construction-machinery industry expanded its operations for the war to a rate which, if maintained after military purchases cease, would replace the civilian inventory within about 2 years.

Productive capacity for all types of building materials, except plumbing fixtures and lumber, is sufficient for a construction rate of $15,000,000,000 per year. In the lumber industry, the plant limitation is logging equipment, which is badly deteriorated but can be restored rapidly; sawmill capacity is sufficient. Capacity for plumbing fixtures is adequate for a construction program of $12,000,000,000 per year, with likelihood of expansion before this rate is reached.

Reconversion is a problem only as regards metal products, and varies considerably in importance among them. If reconversion is started after war requirements are completely met, it should be finished within 6 months for all products except electric refrigerators; for many products reconversion should be well advanced, if not completed, within 3 months or less. If, as is more likely, reconversion is started soon after the defeat of Germany and extended progressively as cancellation and reduction of military orders permit, the reconversion process will extend over a much longer period but will be closer to completion at any specific date than if no start were to be made until the end of the war.

Resumption of civilian manufacture, with or without reconversion, will in some cases require official action regarding Government-owned machinery. In some plants this is so interspersed with privately owned machinery that there is no productive entity except for governmental orders.

Inventories of many materials are virtually exhausted. With civilian production resumed at the end of the war, it would take 6 months to restore such commodities to basic working volume and variety, and another 6 months to approximate their pre-war level. The problem is the most serious for electrical supplies. Expansion of civilian production during the interim period after Germany's defeat will ease the inventory situation greatly, and for most materials will probably mean that inventories can reach at least a basic working level by the end of the war. The rate of inventory accumulation will, however, be governed more by current expectations regarding sales volume and price level than by considerations of capacity, particularly in the case of such materials as lumber for which prices have increased sharply. Both manufacturers and dealers will be hesitant to accumulate large inventories if major price decreases seem likely.

There will be keen competition among materials, especially since pre-war usages have been modified so greatly in order to conserve critical materials. Some war-expanded industrial capacity will probably be used for increasing the output of building materials formerly produced only in small amounts. Some products introduced during the war are likely to be improved considerably and reduced in price, and a few other products are scheduled for introduction early in the post-war period. Beyond question, however, building materials on the whole will be very similar to those of the recent past, and subsequent changes in the entire building-material pattern will be gradual.

Little change in buildings themselves is anticipated. Designers will have somewhat greater choice of materials, and there will be an increasing range and acceptance of factory-made assemblies ready for

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

installation. At the same time, revolutionary changes in design or materials are most unlikely.

On the whole, personnel will be sufficient for expanded manufacture of building materials and related products. Before demobilization of the armed forces, reduction or termination of war orders will release workers. Many of those released will have skills useful in the manufacture of building materials. Because of the specialization of factory work and the feasibility of brief training courses, other necessary jobs can be filled by workers with little or no experience.

For increased lumber production, however, additional skilled woodsmen are essential. These have been lost in great numbers, both for military service and for work in shipyards and airplane plants.

The personnel situation for construction proper is difficult to predict. It will be controlled to some degree by the demobilization pattern of the armed services and war industry, in conjunction with the extent to which construction skills have been acquired in military service and in war employment. Available data indicate that, within a year after the end of the war, the number of construction workers will be sufficient for a construction rate of $11,000,000,000 per year at 1940 costs.

Unbalanced prices of building materials can be a serious hindrance to production and the accumulation of inventories. Unduly low prices will discourage production. On the other hand, possibility of inventory losses on items for which price reductions seem likely will discourage the piling up of inventories. Competition among various materials and products would probably correct the price situation ultimately, but in the meantime the post-war construction program might be needlessly delayed.

Unless the situation is changed before the end of the war, the most serious obstacle to rapid expansion of the construction industry is likely to be lack of preparation on the part of owners, including private corporations and public agencies. The rate of expansion will also be affected greatly by construction costs. These considerations and others related to demand will be discussed in a later report.

Factors Governing Capacity

The construction industry is subject to wide cyclical and seasonal fluctuations. After the previous war construction expenditures rose gradually and were sustained at a level of approximately $11,000,000,000 per year[2] for the 5 years from 1925 through 1929. This was followed by a period of rapid decline to approximately $3,000,000,000 in 1933. The downward trend was reversed in 1934, but improvement was gradual and even as late as 1940 the total was below $7,000,000,000. The war construction program brought expenditures to a peak of almost $11,500,000,000 in 1942. The tapering off of this program and shortages of materials for other construction reduced the 1943 total to approximately $5,900,000,000.

These changes in volume as well as the changes in proportions of privately and publicly financed projects shown in the accompanying table have been considered in evaluating the factors governing the industry's physical capacity for resuming activity in the post-war period. The great changes in relative volumes of different types of work have also been considered. The following four types of supply factors are analyzed in the sections which follow: Organization and

[2] To permit approximate comparisons of physical volume, all expenditure figures were converted to 1940 cost levels.

ized for FRASER
://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

method of operation of the construction industry, its plant facilities, supplies of building materials and related products, and availability of construction labor.

New Construction Expenditures in Continental United States, 1920–43 [1]

Year	Expenditures (in millions of dollars) at current cost levels [2]			Expenditures (in millions of dollars) converted to 1940 cost levels [3]		
	Total	Private	Public	Total	Private	Public
1920	5,791	4,458	1,333	5,488	4,379	1,109
1921	5,380	3,841	1,539	5,974	4,547	1,427
1922	6,814	5,158	1,656	8,239	6,582	1,657
1923	8,341	6,744	1,597	8,221	6,844	1,377
1924	9,263	7,402	1,861	9,733	8,122	1,611
1925	10,154	8,046	2,108	10,763	8,863	1,900
1926	10,697	8,584	2,113	11,274	9,345	1,929
1927	10,739	8,371	2,368	11,279	9,109	2,170
1928	10,382	7,976	2,406	10,794	8,569	2,225
1929	10,337	7,926	2,411	10,689	8,346	2,343
1930	8,207	5,430	2,777	8,647	5,928	2,719
1931	6,225	3,648	2,577	7,132	4,307	2,825
1932	3,523	1,729	1,794	4,772	2,387	2,385
1933	2,416	1,200	1,216	2,979	1,568	1,411
1934	2,965	1,479	1,486	3,272	1,761	1,511
1935	3,357	1,908	1,449	3,864	2,291	1,573
1936	4,904	2,730	2,174	5,473	3,188	2,285
1937	5,545	3,507	2,038	5,647	3,656	1,991
1938	5,248	3,162	2,086	5,370	3,264	2,106
1939	6,035	3,530	2,505	6,541	3,968	2,573
1940	6,986	4,232	2,754	6,986	4,232	2,754
1941	11,135	5,251	5,884	10,790	5,283	5,507
1942	13,544	2,877	10,667	11,487	2,437	9,050
1943 [4]	7,353	1,606	5,747	5,899	1,228	4,671

[1] Includes all new construction—building, highway, utility and other—performed on contract or by force account, but not construction performed on work-relief projects; includes alterations and additions, but not maintenance or minor repairs.

[2] Estimates for the years 1920 through 1938 derived from estimates of Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, by omission of certain maintenance expenditures. Estimates for the years 1939 through 1943 made by Bureau of Labor Statistics.

[3] Conversions of data in first 3 columns to 1940 cost levels made separately for each major type of construction by use of cost index for construction of that type. These conversions subject to revision after further study of construction cost levels.

[4] Preliminary.

Information was secured from published sources and, especially in the case of the current status and post-war changes necessary for specific industries, through interviews with officials in governmental agencies, trade associations, and companies manufacturing building materials and equipment.

ORGANIZATION OF THE CONSTRUCTION INDUSTRY

The construction industry has been made up principally of general contractors,[3] special-trade contractors,[4] and builders.[5] Their method of operation has prepared these three groups for rapid expansion. Prefabricators were a small element in the field prior to the war, but have since expanded their activities greatly.

[3] General contractors construct all or the major part of buildings and other structures on contract for owners. They sublet part of the work to special trade contractors, and usually execute the work of one or more major trades themselves. Their field of operatons is divided into buildings, highways, and heavy construction, with most contractors engaging in only one of these divisions.

[4] Special-trade contractors perform the work of a single trade (or two or more related trades, such as roofing and sheet-metal work) on buildings and other structures. This work is done for the general contractors in some cases, and in other cases directly for the owners.

[5] Builders construct buildings (usually residential) initiated on their own account, for sale or for investment, and assume the coordinating responsibilities of general contractors on such projects.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Operations of both general contractors and special-trade contractors are characterized by great flexibility. The normal operation of any firm consists of a series of separate projects, each with its own distinctive pattern of work to be done and site conditions, and each marked by fairly rapid expansion to peak activity. Production must be governed by contracts on hand and readiness of related work at the construction sites. Any production during dull periods in anticipation of future contracts is obviously impossible for site work, and is severely limited as regards items manufactured by the special trade contractors in their shops because most of these are made to individual measurements. There are major seasonal variations in the total volume of construction, caused mainly by weather conditions, and very great cyclical variations.

The contractors as a group have adjusted their manner of operation to these conditions by maintaining much higher flexibility of employment than is customary in most other fields. The general procedure is to reduce to a nuclear organization when necessary, retaining foremen and a few carefully selected workmen for such work as can be obtained, or even laying these off when the firm has no work. The contractors are prepared to expand within a very short time—a few days, if necessary—by hiring workmen, foremen, and even superintendents, as needed.

Each project is a distinct entity, for which a working force must be assembled at the site. As the structure progresses, the number of mechanics, helpers, and laborers for the various trades changes continually in response to the changing pattern of work to be done. On most jobs, requirements for machinery and equipment change similarly. Under these circumstances, the starting of one or more projects by a contractor who has been idle scarcely differs from the starting of additional projects when he is busy, except that he must hire all the site workers instead of transferring some from work approaching completion.

According to the 1939 Census of Construction, there were more than 35,000 general contractors and more than 176,000 special-trade contractors, of whom 14,900 and 14,500, respectively, received contracts or performed work totaling $25,000 or more during that year. The organization and method of operation of these contractors will permit them to expand their operations in response to any predictable increase in demand.

The builders differ from contractors in that they initiate construction, rather than perform work authorized by others. Under nonwar circumstances most of their projects consist of one-family houses built for immediate sale, and the projects built for rent have commonly been intended for ultimate sale as investment properties. In any event, operations have been carried on only when a quick and profitable market was expected, and in general have not been continuous. Promotional building has usually been done as part of a dual enterprise or as a side line, which need not yield a continuous income.

One of the principal requirements for a successful builder has beed ability to evaluate and respond quickly to the potential market. The work itself can be started or expanded on short notice, ordinarily within a very few days after financing arrangements have been made,

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

because land is usually available without further preparation, there are many local contractors capable of doing the work which is to be sublet, and usually stock plans and materials are used, with or without minor variations. Since rapid expansion has been the customary response to favorable sales conditions, the builders' rate of expansion may be expected to match the demand for promotional structures.

Prefabrication [6] was such a small part of total construction prior to the war that it may be regarded as a new element in the industry. Its wartime growth, stimulated by a combination of favorable circumstances, has been phenomenal. Extensive changes in organization and in manner of operation are to be expected among the prefabricators, and it seems most unlikely that all present firms will remain in the field. Those remaining will be sufficient for the effective demand for buildings of this type during the early post-war years.

PLANT FACILITIES OF THE INDUSTRY

The plant facilities of the construction industry are made up of a wide range of items, within the following major classifications:

Permanent shop equipment, in reality factory equipment, used by the special-trade contractors in fabricating materials which they later install. The prefabricators' plant may be regarded as belonging in this classification.

Miscellaneous field equipment, consisting of motor trucks, air compressors, scaffolding, ladders, work benches, space heaters, certain power-operated hand tools and a great variety of other items.

Construction machinery proper, consisting mainly of larger power-operated units and of numerous supplementary items.

The distinction between the second and third classifications is somewhat arbitrary. In general, the construction-machinery industry regards its field as including equipment for moving or processing bulk materials used in construction, along with supplementary items except trucks.

Availability of Machinery and Equipment

Shop equipment.—The permanent shop equipment of the special-trade contractors has been affected only slightly by the war. Little of it has been suitable for war work other than fabricating materials for war construction or closely similar work. It will therefore be available when needed without reconversion. As in most competitive fields, the firms have generally provided shop capacity for the volume of business which they expected to attain. Hence, within any area of operation, capacity of all shops for a given trade has ordinarily been ample for the peaks of construction activity.

Prefabricators have multiplied shop capacity greatly during the war because of governmental purchases of prefabricated units for war housing projects. Current factory capacity is at least 165,000 houses [7] per year, and a number of firms plan post-war expansion which would increase this rate to at least 200,000 houses per year. Whether or not these plans are carried out, it is apparent that in plant equip-

[6] Prefabrication as here used means the assembly of structural elements (floors, walls, partitions, roof) prior to erection, for complete buildings to be permanently attached to land. Thus it excludes manufacture of trailers and other portable units. It could, but ordinarily does not, include some degree of pre-erection assembly of plumbing, heating and electric work. It may be carried out in a temporary plant near the construction site (on-site prefabrication) or in a permanent factory (off-site or factory prefabrication).

[7] This figure excludes trailers, "huts," tent houses, and nonresidential buildings.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

ment the industry is prepared for increased public acceptance and more effective distribution channels.

Field equipment.—Miscellaneous field equipment, other than motor-trucks, will likewise present few problems. Some of it is extremely durable, some of it can be improvised, and much of it consists of items which individually are simple and can be manufactured quickly. Manufacture of many items for civilian use has been virtually stopped, so that civilian inventory has been wearing out. Nevertheless, the total amount and condition of this equipment is sufficient for the post-war construction activity permitted by other supply factors.

The situation with respect to trucks is less definite. Since the construction industry has operated only a small part of all trucks, changes in the total national inventory do not warrant conclusions regarding this industry.

The types of trucks used in construction include almost all those manufactured, but most of them are medium (gross weight over 9,000 pounds, but less than 16,000 pounds) or heavy (gross weight 16,000 pounds or more). For many types of construction the larger heavy-duty trucks with power-operated dump bodies are especially important, and for some types of work off-the-highway models are needed.

Production of trucks of all capacities for civilian use was greatly reduced during 1942 and then virtually discontinued, followed later by limited resumption. A considerable quantity of trucks in manufacturers' and dealers' stocks was subsequently released to private buyers and governmental agencies, but these were only a small part of a normal year's output and a disproportionately small number were of heavy-duty types.

Meanwhile production rates for light trucks (gross weight under 9,000 pounds) and medium trucks have been reduced from pre-war figures, while the rate for heavy trucks has been increased well above any peacetime figure, because of military requirements. Since much of the output for military purposes has mechanical features or equipment which were relatively uncommon in civilian production, a considerably larger number of civilian trucks can be produced with the same facilities and manpower. Furthermore, the increased production of heavy units has brought changes toward mass-production methods which are likely to mean a permanent increase in the capacity of existing plants.

No real reconversion will be involved in a change from military to civilian production of medium and heavy trucks, although designs differ substantially. A reduction in military requirements will therefore permit prompt expansion of output for civilian users, if material and manpower conditions permit. It seems likely that such expansion will occur after Germany is defeated, and possibly even earlier. Whenever expansion comes, however, construction and related industries will have to share the output with others.

Trade inventories of new trucks are very low. That situation will mean some delay until shipments are received, but will not be a serious obstacle to distribution. There will be military inventories of relatively new trucks in this country at the end of the war, but because of special designs only a minority of these will be suitable for construction and related uses.

Construction machinery.—The output of the construction-machinery industry in 1943—valued at approximately $700,000,000—was the

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

highest in its history. Deflation for minor price increases gives a valuation, at 1940 prices, of almost $650,000,000, which is more than twice the previous peak. Even greater production is expected in 1944.

Although figures cannot be presented, it may be stated that a large part of the current output of construction machinery is purchased by the Army, the Navy, and other Governmental agencies for direct war use. All but a negligible percentage of this consists of standard models suitable for construction use, although the distribution by type and size differs from the pre-war pattern.

The civilian inventory of construction machinery proper has been reduced during the past 2 years. Private purchase of new machines has been severely limited, and the inventory of privately owned units has been bought in considerable quantity by the Government, largely through recapture.[8] An incomplete inventory taken by the War Production Board, as of March 15, 1943, listed 310,000 pieces of all descriptions in civilian ownership, from which the Board estimated the total as 450,000 pieces. Other information indicates that this estimated total may be somewhat low, and is certainly not too high.

No information on construction machinery was obtained in the 1939 Census of Construction. Because of differences in the extent of coverage of different types of equipment, the inventory does not permit an estimate of the number of units of each type. There are, however, numerous indications that all types are available. One indication is found in the classified advertising section of an engineering magazine which for many years has been the principal advertising medium for used construction machinery and equipment. In recent issues the space occupied by items offered for sale greatly exceeded that for items wanted, the ratio being in some issues as high as 20 to 1. The items offered for sale included those bought and recaptured by the Government in largest quantities—power shovels, cranes, tractors and tractor-powered units such as bulldozers.

Total valuation, when new, of privately owned machinery is estimated by persons in the industry at $1,300,000,000. An independent estimate made by the Bureau of Labor Statistics by an entirely different method gives almost the same figure. To this should be added at least $400,000,000 for trucks and $250,000,000 for miscellaneous equipment, giving a total inventory of $1,950,000,000 for all construction equipment.

The WPB tabulation shows that more than a third of the machinery was produced before 1930, approximately a quarter from 1930 through 1937, and more than a third from 1938 through 1942. It is thought that the average age of the machinery is probably less than indicated, because of more complete reporting of older units. The age distribution of different items varies considerably. Some machines are in poor condition, and some are of obsolete designs, but they are not junk; all are at least potentially usable. Most items are basically of great durability, and although certain parts are subject to severe wear, the units can be kept in service almost indefinitely by adequate repairs with rebuilding at longer intervals. This process is not profitable indefinitely, especially for items which are becoming obsolete, but during any temporary shortage of specific items it permits use of

[8] "Recapture" is the purchase of machinery or other equipment for which rent has been paid. It occurs ordinarily at the option of the purchaser, by payment of the difference between total rent which he has paid and the agreed value of the unit involved, or automatically and without further payment when total rent payments reach a stipulated figure.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

machines which under other circumstances would be scrapped. Feasibility of this procedure is shown by the long-standing practice in the construction-machinery trade of rebuilding deteriorated units for sale. It is noted that machinery manufacturers in recent advertisements have started to emphasize the satisfactory service obtained by users of rebuilt machinery.

However, it seems likely that military need for construction machinery and other products manufactured by the industry will be reduced after Germany is defeated. Use of the released facilities to produce replacement parts freely for civilian buyers would facilitate greatly their preparedness for postwar construction work. The greatly expanded capacity of the industry makes it seem likely that complete new machines will also be available to some appreciable extent during this interim period. If so, there will be at least limited opportunity for increasing the total civilian inventory, less post-war need for temporary use of obsolete units having low productivity, and reduction in the rebuilding of obsolete and badly deteriorated units.

Moreover, the construction-machinery industry is practically intact, and small as well as large companies are busy. On conclusion of the war it could operate at a rate which would replace all existing machinery within approximately 2 years. It will, of course, be able within a few months to produce replacement parts sufficient for rebuilding of deteriorated machinery.

An additional favorable factor is that although most machinery now being purchased by the Government is for ultimate use overseas, it obviously cannot be shipped directly from the factory to the point of use. Consequently, there is at any time a substantial quantity of unused machinery in the distribution channels of the owning agencies within this country and to some degree at primary distribution points abroad. It seems most unlikely that machinery which has been used abroad in conjunction with combat activities or for rehabilitation will be returned to this country. However, that remaining in primary depots abroad and that within military distribution channels in the United States at the end of the war will be modern new machinery, available for such use as may be officially authorized. Prompt release of these items to civilians by sale or even by rental would permit immediate replacement of the oldest and most deteriorated units in the private inventory. The extent to which this measure will be advisable will depend on the production of parts and complete machines for civilian buyers after the defeat of Germany. The unused military inventory can also be lent to contractors for use on publicly financed projects, and provided to governmental units for their construction and maintenance work.

Requirements for Machinery and Equipment

The machinery and equipment needed for a given dollar volume of construction vary greatly with the type of work. Most compilations on the subject are misleading because comparisons are made with work actually performed, uncorrected for extensive idle time between contracts. In addition there are uncertainties about the valuations used, and about the equipment items included.

For highway construction, equipment having a value, when new, of 15 percent of a full season's completed work is sufficient, with some margin for unfavorable conditions. This estimate was made

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

by a civil engineer with many years of highway experience, who has acted as equipment consultant to numerous road contractors and as a consultant on special problems to State highway departments. It assumed capable planning of operations resulting in efficient use of equipment, continuous work throughout the season with no idle time between contracts, reasonable proximity of successive projects, and average weather. The ratio varies for different kinds of highway work, but does not exceed 15 percent for any. This figure was regarded by the engineer making the estimate as providing a sufficient margin for unfavorable conditions to be applicable to a complete program, although it may be insufficient for some individual projects. This ratio means that a highway program of $3,000,000,000 per year would require machinery and equipment having new value of $450,000,000.

Heavy construction (dams and reclamation work, tunnels, dredging, etc.) is commonly regarded as requiring only slightly less equipment than highway work for the smaller projects, although of course the distribution among types of equipment is considerably different. A partial compilation made by a prominent trade association, of work of this type done by some of its members, indicates that a ratio of 15 percent is sufficient for this type of work. For the largest projects, using specially designed installations of machinery and equipment, the ratio is higher—approximately 25 percent. For heavy construction as a whole, a reasonable ratio is 20 percent. Thus, a heavy-construction program of $3,000,000,000 per year would require machinery and equipment costing $600,000,000.

Building construction requires very much less equipment than do either of the other major fields. Mechanization is most extensive in the bulk operations, such as excavation, concrete work, and hoisting of materials, but these constitute a minor part of the total work at the site. The remainder is largely hand work, in which mechanization does not extend beyond a limited range of power-operated hand tools. The new value of equipment needed on building construction is not more than 5 percent of a year's contracts for the entire range of work, provided there is continuity of work to keep it in efficient use. A large part of this equipment consists of trucks and nonmechanical items such as scaffolding, outside the field of construction machinery proper. A building-construction program of $6,000,000,000 per year would require construction equipment costing $300,000,000.

A total program of $12,000,000,000 per year in the three subdivisions of construction would require machinery and equipment with new value of $1,350,000,000. The new value of that likely to be on hand at the end of the war is estimated at $1,950,000,000, plus any additions which may take place after the defeat of Germany. The difference would provide a margin for some shortages in individual items not revealed by over-all figures, and for lower productivity of some of the older equipment. However, a construction rate of $12,000,000,000 per year will not be attained immediately on conclusion of hostilities, probably not for much more than a year at the least. The period until post-war construction reaches a sustained volume will be sufficient for overcoming shortages of individual items and for replacement of equipment to whatever extent the construction industry believes necessary.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

BUILDING MATERIALS AND RELATED PRODUCTS

Post-war limitations on the supply of building materials will in general be temporary, caused by reconversion and inventory problems rather than by more permanent circumstances. When these are overcome, the supply of all materials except plumbing fixtures and lumber will be sufficient for a construction program of $15,000,000,000 per year. The productive capacity for plumbing fixtures will permit a program of $12,000,000,000 per year, with appreciable likelihood that this capacity will be increased rather promptly. The lumber supply will be restricted for a time by shortages of logging equipment and skilled woods labor, but these should be overcome without serious delay.

Availability of building materials in the quantities and varieties needed will be governed by four principal factors, although not all of these represent problems for all materials. These are productive plant (reconversion, restoration, and pre-war capacity), trade inventories, supply of basic materials, and labor supply.

Reconversion will be a problem only for the fabricated metal products, and for these its importance is roughly proportional to the degree of fabrication. It is less serious than seems to be generally surmised. For most materials reconversion will be well advanced, if not completed, within 3 months after it is started and for all except electric refrigerators will be completed in 6 months.

Restoration of physical plant will be essential for logging operations, if output is not to fall seriously. Trucks, tractors, and tractor-operated equipment have had exceedingly hard service in getting out logs for war use, replacements have been available in only the most limited quantities, and there has been a serious shortage of repair parts. Trucks and other equipment will be needed for gravel-pit operations, although the need there will be considerably less urgent than for lumber. For other materials, little physical replacement of plant will be necessary.

For some of the more highly complicated products, removal of legal barriers will be necessary. The larger companies engaged in the more complex manufacturing operations are those which have converted most completely to war products. This conversion has been accompanied by mixture of company-owned and Government-owned machinery in single plants, with the result that in such plants no complete production entity exists, except for war products. Resumption of civilian manufacture in these will be impossible until some provision is made for removal or use of the Government-owned machinery.

Some persons primarily concerned with reconstruction in Europe and China believe that the demand for building materials may be so great as to create a world-wide shortage. Further information is needed before an appraisal can be made as to whether essential foreign rebuilding may limit building activity in the United States. It would seem, however, that export requirements will be greatest for lumber and considerably less for those products for which productive capacity abroad can be expanded by construction of additional factories near the areas of consumption.

Wartime depletion of inventories has been serious for lumber and for fabricated metal products. The time required for restoration will be greatest for those types of materials, such as electrical supplies, which consist of a great number of different items. Production and

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

purchase for inventory purposes may be hindered by uncertainty regarding future price levels, in the case of those materials the prices of which have increased most sharply.

All statements and forecasts made by representatives of the building-materials industry regarding ability to proceed with peacetime production were predicated on availability of materials as needed. Any delay, whether from failure to modify wartime restrictions promptly or from other causes, will retard the entire construction program.

These statements and forecasts were also predicated on the availability of workmen as needed. In general, this assumption is unchallenged. The industries extensively converted to war products, primarily those producing or using metals, are in most cases operating at higher employment levels than before the war. Their problem will be little more than that of shifting employees between departments or products, and in many cases not even that change will be necessary. Some manufacturers think that experienced production workers temporarily promoted to supervisory positions in the manufacture of war products may be dissatisfied with their former work, but this should not be a serious difficulty. Workers with skills useful in the manufacture of building materials will be released from other war plants, and inexperienced workers can be used for many factory operations.

For lumber production, however, there has been a serious shortage of capable woods labor for which corrective measures are necessary.[9]

CONSTRUCTION LABOR

Information is considerably less complete on the supply of construction labor than on other factors bearing on post-war construction volume. No direct statements may be made regarding the number of shilled construction workers who have entered the armed services, because those tabulations which have been made to date are confidential.

More than half of the construction mechanics [10] reported in 1940 Census of Occupations as employed or as experienced and seeking work were above the maximum age now established for general military service. In only three major classifications—electricians, roofers and sheet-metal workers, and structural- and ornamental-metal workers—were half of those then employed under 40 years of age. In all other major classifications, half of those employed were 42 or over. In all classifications, those experienced and seeking work were older than those employed. Although skilled construction workers above the normal age range for enlisted men have been accepted for specialized groups such as the "Seabees," the total strength of these groups is small compared to the armed services as a whole.

Construction laborers were considerably younger than the mechanics. More than 55 percent of those reported in the 1940 Census as employed, and slightly over 50 percent of those experienced and seeking work, were under 38 years old. It is to be expected therefore that the number of these in the armed services is proportionately greater than the number of mechanics. This will be a negligible limitation on the

[9] Data on the supply situation as regards individual materials, omitted here for lack of space, were included in Bulletin No. 779.

[10] Craftsmen, as distinguished from helpers and laborers.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

volume of construction, however, because the operations performed can be learned quickly.

To obtain the number of construction workers in 1940, it is necessary to adjust the Census figures for those in specific occupations, because they combine maintenance workers with construction workers for the various building trades. Maintenance workers are a considerable part of the total for certain trades, especially carpentry, painting and paperhanging.

It is estimated that there will be 1,120,000 construction mechanics in civilian life in the country at the end of the war, exclusive of maintenance mechanics in the same trades. In addition, it is estimated that there will be 440,000 helpers and experienced laborers. To these can be added 400,000 inexperienced persons capable of doing construction laborers' work, to bring the group into balance with the mechanics.

An indefinite but large number of all of these workers are now employed in war industries. Many will be released at the end of the war, and it is likely that others will resign voluntarily when jobs in their own trades are available.

These workers are sufficient for a construction program of approximately $8,750,000,000 per year at 1940 cost levels, if employed steadily. Steady employment is regarded as 1,650 hours per year, or 50 weeks of 33 hours each, which is 40 hours per week minus time lost for bad weather, and without overtime. The time lost because of weather varies seasonally, of course, and also differs between sections of the country. The possible volume will be increased as demobilization proceeds, and will also be increased through gradually increasing productivity. It is estimated at $11,000,000,000 per year, 1 year after the defeat of Japan.

As already mentioned, there is likely to be strong competition among materials and products. Substitution of materials, as between metal and wood, will be further stimulated by any local shortages of a customary product when another satisfactory product for the same use is available. Such circumstances might call for adjustments between the various construction unions involved, with new agreements clarifying their respective fields of work, and providing a greater degree of flexibility in the materials which specific craftsmen may use.

Measures to Facilitate Post-War Construction

It is apparent that, within a year after the end of the war, physical capacity can be sufficient for a construction volume about equal to the greatest peaks that have been attained in the past. It is equally apparent, however, that capacity at the end of this first post-war year can be cut down greatly by avoidable complications. The following measures would be valuable in preventing unnecessary delays and limitations:

1. Provision for removal or private use of Government-owned factory machinery which has replaced or is intermingled with privately owned machinery, as soon as no longer needed for war production. If policies for permanent disposition can not be formulated now, authorization of removal and temporary storage of those machines not suited to the plants' post-war operations, and of some form of lease for machines which they can use effectively, pending adoption of permanent policies.

583621—44——2

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

2. Permission for reconversion of machines or plants as soon as it is known that they will not be needed for further war production.

3. Periodic review, from the standpoint of changed military requirements, of Governmental inventories and purchasing schedules of building materials, construction machinery, trucks, and related products, and prompt effectuation of any indicated reductions. Surpluses would be sold for civilian use, to the extent that these can be absorbed readily. Sale would be made to users through normal trade channels with the purpose of relieving shortages without bringing price disorganization, and with every reasonable precaution to prevent sale of scarce commodities to speculators.

In selecting establishments in which war orders are to be reduced or cancelled, the importance of their normal products to the peacetime economy would be among the criteria used.

4. (a) Permission—as soon as reduced military requirements give a margin of productive capacity and to the extent that the manpower and material situation allows—for increased production for civilian use of construction machinery, trucks, and building materials. (b) Temporary control of distribution of those articles for which the shortage is most serious. Thus, new machines for logging (off-the-highway trucks, tractors, and certain units based on or operated by tractors) would be given priority, with logging operators given preference in the purchase of these items until their shortage is no longer a limitation on lumber production.

5. A detailed study of costs of production and distribution in comparison with ceiling prices for all major building materials, especially those for which prices have risen most sharply. This would be followed by revisions in ceiling prices to correct imbalance and thus remove potentially serious impediments to inventory accumulation and increased production in the post-war period.

6. All possible efforts to stimulate prompt revision of building codes with respect to permitted construction materials for various uses and the quantities of materials required. Development of new products, improvement of the strength or other characteristics of older products, and improved control giving greater uniformity and reliability in products have occurred since many of the codes were adopted. Consequently many of them require use of materials which must be considered wasteful by newer standards. Inefficient use of materials and needless variations in local standards would be particularly detrimental during the period of inventory shortages.

The Building Code Correlating Committee of the American Standards Association, the membership of which includes representatives of numerous professional and trade associations in fields allied to construction, is working currently on this problem. Pending completion of its work, valuable correction can be brought about by the activity of local groups interested in construction, even though further revisions are likely to result from the committee's recommendations.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Strikes in 1943[1]

Summary

THERE were 3,752 strikes during the year 1943, in which 1,981,279 workers were involved. Idleness during these strikes amounted to 13,500,529 man-days, which was equivalent to fifteen one-hundredths of 1 percent of the available working time. About 69 workers in each 1,000 employed wage earners were involved in strikes during the year.

A large share of the 1943 strike activity occurred in the coal-mining industry, over 69 percent of the total strike idleness resulting from coal-mining stoppages. Excluding all coal strikes, there were 3,322 strikes in other industries, involving 1,376,182 workers and 4,153,646 man-days of idleness.

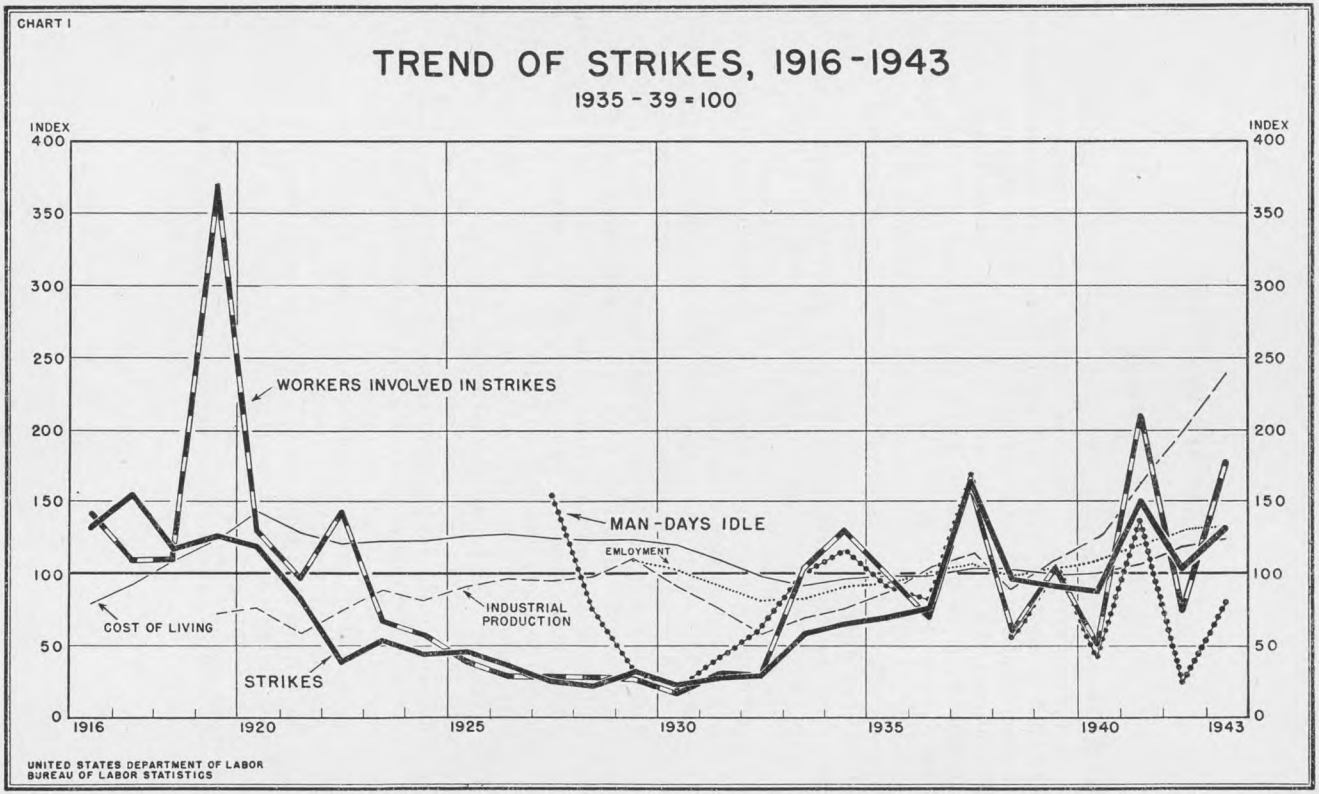
Most of the strikes in 1943 were of short duration, and a large majority were spontaneous stoppages of employees that were unauthorized by unions. Considerably more than half of the strikes were over wage issues and registered the dissatisfaction of the workers with the wartime wage-stabilization policy.

In June 1943 when the large coal strikes seriously threatened to interfere with production of war materials, Congress passed the War Labor Disputes Act (over the President's veto) making illegal any strikes that would interfere with war work, until 30 days after a notice had been filed and a formal strike vote had been taken under Government supervision. This law was in effect during the last 6 months of the year, but only 34 of the 1,919 strikes occurring during this period took place after strike votes were taken under its provisions.

The National War Labor Board was concerned with approximately 39 percent of the total strikes during 1943. In 674 cases the strikes took place before the issues were submitted to the Board; 565 strikes occurred while the disputes were under Board consideration; and 200 took place after the Board rendered its decisions. Some of the last group represented workers' protests against Board awards, while others were called to obtain compliance by employers. In at least 300 of the strikes that took place while the issues were pending before the Board, delay in Board decisions was cited as a major factor in causing the stoppage.

[1] Prepared by Don Q. Crowther and Ruth S. Cole of the Bureau's Industrial Relations Division.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis



itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Strikes in the United States, 1916 to 1943*

Year	Number of strikes	Workers involved in strikes		Man-days idle		Index of (1935–39 = 100)—		
		Number [1]	Percent of total employed [2]	Number	Percent of available working time [3]	Strikes	Workers involved	Man-days idle
1916 [1]	3,789	1,599,917	8.4	(4)	(4)	132	142	(4)
1917	4,450	1,227,254	6.3	(4)	(4)	155	109	(4)
1918	3,353	1,239,989	6.2	(4)	(4)	117	110	(4)
1919	3,630	4,160,348	20.8	(4)	(4)	127	370	(4)
1920	3,411	1,463,054	7.2	(4)	(4)	119	130	(4)
1921	2,385	1,099,247	6.4	(4)	(4)	83	98	(4)
1922	1,112	1,612,562	8.7	(4)	(4)	39	143	(4)
1923	1,553	756,584	3.5	(4)	(4)	54	67	(4)
1924	1,249	654,641	3.1	(4)	(4)	44	58	(4)
1925	1,301	428,416	2.0	(4)	(4)	45	38	(4)
1926	1,035	329,592	1.5	(4)	(4)	36	29	(4)
1927	707	329,939	1.4	26,218,628	0.37	25	29	155
1928	604	314,210	1.3	12,631,863	.17	21	28	75
1929	921	288,572	1.2	5,351,540	.07	32	26	32
1930	637	182,975	.8	3,316,808	.05	22	16	20
1931	810	341,817	1.6	6,893,244	.11	28	30	41
1932	841	324,210	1.8	10,502,033	.23	29	29	62
1933	1,695	1,168,272	6.3	16,872,128	.36	59	104	100
1934	1,856	1,466,695	7.2	19,591,949	.38	65	130	116
1935	2,014	1,117,213	5.2	15,456,337	.29	70	99	91
1936	2,172	788,648	3.1	13,901,956	.21	76	70	82
1937	4,740	1,860,621	7.2	28,424,857	.43	166	165	168
1938	2,772	688,376	2.8	9,148,273	.15	97	61	54
1939	2,613	1,170,962	4.7	17,812,219	.28	91	104	105
1940	2,508	576,988	2.3	6,700,872	.10	88	51	40
1941	4,288	2,362,620	8.4	23,047,556	.32	150	210	136
1942	2,968	839,961	2.8	4,182,557	.05	104	75	25
1943	3,752	1,981,279	6.9	13,500,529	.15	131	176	80

[1] The number of workers involved in some strikes which occurred between 1916 and 1926 is not known. However, the missing information is for the smaller disputes and it is believed that the totals here given are fairly accurate.

[2] "Total employed workers" as used here includes all workers except those in occupations and professions where strikes rarely if ever occur. In general, the term "total employed workers" includes all employees except the following groups: Government workers, agricultural wage earners on farms employing less than 6 workers, managerial and supervisory employees, and certain groups which because of the nature of their work cannot or do not strike (such as college professors, clergymen, and domestic servants). Self-employed and unemployed persons are, of course, excluded.

[3] "Available working time" was estimated for purposes of this table by multiplying the average number of employed workers each year by the number of days worked by most employees during the year.

[4] Not available.

Statistical Analysis of Strikes in 1943

STRIKES, BY MONTHS

The number of strikes in 1943 ranged from 192 in January to 433 in June, and the number of workers involved in new strikes ranged from 38,841 in February to 557,558 in May. In addition to more than 400 local strikes over a variety of issues, there were 4 general stoppages in the coal-mining industry—1 in May, 2 in June, and 1 in November. These stoppages were, in effect, resumptions of the same dispute and the workers involved are included only once under the column headed "Workers involved in strikes beginning in month", although they, of course, are included for each of the months under the column headed "Workers involved in strikes in progress during month." [2]

[2] See p. 945 for account of the coal stoppages.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

The proportion of total employed workers involved in strikes ranged from 0.15 percent in February to 2.3 percent in May. The greatest amount of idleness during strikes was in the month of June, when the coal miners stopped work two different times. Idleness during all strikes ranged from 0.2 percent of the available working time in February and March to 0.62 percent in June.

TABLE 2.—*Strikes in 1942 and 1943, by Months*

Month	Number of strikes		Workers involved in strikes—			Man-days idle during month	
	Beginning in month	In progress during month	Beginning in month	In progress during month		Number	Percent of available working time [2]
				Number	Percent of total employed [1]		
1942							
January	156	239	26,929	43,223	0.15	330,567	0.05
February	181	255	58,122	75,961	.26	357,333	.06
March	234	297	67,292	79,691	.27	401,739	.06
April	277	357	56,038	85,701	.29	367,400	.06
May	285	373	68,820	79,170	.26	322,085	.05
June	345	421	109,611	126,160	.42	586,408	.09
July	388	471	99,676	113,697	.37	416,741	.06
August	330	430	92,226	107,915	.35	448,712	.07
September	274	349	87,904	100,515	.32	387,150	.06
October	207	269	61,593	67,183	.22	243,756	.04
November	144	172	52,481	55,361	.18	128,164	.02
December	147	169	59,269	61,735	.20	192,502	.03
1943							
January	192	207	91,214	95,129	.33	452,192	.06
February	200	226	38,841	43,540	.15	117,279	.02
March	248	272	73,943	76,805	.27	179,093	.02
April	384	416	219,186	228,209	.79	661,738	.09
May	412	458	557,558	661,617	2.30	1,467,728	.20
June	433	475	186,677	584,615	2.02	4,698,796	.62
July	369	408	121,298	201,451	.70	695,458	.09
August	310	347	105,601	118,416	.41	356,510	.05
September	237	267	66,664	72,049	.25	209,514	.03
October	287	320	121,253	264,453	.92	1,012,534	.14
November	325	348	135,804	537,421	1.86	2,862,607	.38
December	355	395	263,240	274,532	.95	787,080	.11

[1] See footnote 2 to table 1.
[2] See footnote 3 to table 1.

INDUSTRIES AFFECTED

The mining industries, with 9,370,000 man-days idle, were affected to a far greater extent by strikes than any other industry group in 1943. Nearly all of this idleness was in bituminous-coal and anthracite mining. The iron and steel industry, with 726,000 man-days, ranked second in amount of strike idleness during the year and was followed by the automobile industry with 441,000, transportation-equipment manufacturing (except automobile) with 382,000, and the textile-mill products industry with 306,000 man-days idle. In terms of severity, measured by the ratio of strike idleness to available working time, the rubber and tobacco industries came next to mining. Idleness in the mining industries amounted to 4.25 percent of the available working time; in the rubber industries it amounted to 0.44 percent; in the tobacco industry it was 0.38 percent; in the automobile industry, 0.20 percent; in the leather industries, 0.17 percent; and in iron and steel industries, 0.14 percent.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

The iron and steel industries experienced 650 strikes during the year, the greatest number for any industry group. There were 463 in mining industries (all except 33 of these were in coal mining); 284 in transportation, communication, and other public utilities; 210 in the machinery-manufacturing industries; and 192 in transportation-equipment manufacturing (except automobile).

TABLE 3.—*Strikes in 1943, by Industry Groups*

Industry group	Number of strikes beginning in 1943	Workers involved		Man-days idle during 1943	
		Number	Percent of total employed workers [1]	Number	Percent of available working time [2]
All industries	3,752	1,981,279	6.9	13,500,529	0.15
Manufacturing					
Food and kindred products	135	26,567	2.7	98,645	.03
Tobacco manufactures	16	24,865	27.3	91,161	.38
Textile-mill products	177	54,361	4.4	306,170	.10
Apparel and other finished products made from fabrics and similar materials	142	54,485	6.4	175,149	.08
Lumber and timber basic products	72	11,367	2.4	55,675	.04
Furniture and finished lumber products	66	11,055	3.1	46,226	.04
Paper and allied products	38	21,304	6.8	95,540	.10
Printing, publishing, and allied industries	23	1,981	.6	7,946	.01
Chemicals and allied products	76	21,267	2.9	68,395	.03
Products of petroleum and coal	29	4,017	3.2	14,801	.04
Rubber products	73	89,303	46.8	260,308	.44
Leather and leather products	93	27,491	8.2	147,901	.17
Stone, clay, and glass products	109	26,952	7.6	144,728	.13
Iron and steel and their products	650	351,238	20.4	726,129	.14
Nonferrous metals and their products	133	46,619	11.2	89,617	.07
Machinery (except electrical)	210	62,125	5.0	138,544	.04
Electrical machinery	61	33,235	4.7	95,008	.04
Transportation equipment (except automobiles)	192	154,753	6.9	382,077	.05
Automobiles and automobile equipment	153	186,293	26.8	441,123	.20
Miscellaneous manufacturing industries	43	9,451	2.4	48,313	.04
Nonmanufacturing					
Agriculture, forestry, and fishing	16	8,667	[3]	96,386	[3]
Mining	463	609,678	86.2	9,370,218	4.25
Construction	188	35,659	3.4	140,827	.04
Trade	119	25,482	[3]	90,711	[3]
Finance, insurance, and real estate	26	3,099	[3]	15,106	[3]
Transportation, communication, and other public utilities	284	55,588	[3]	183,298	[3]
Services—personal, business, and other	114	14,142	[3]	122,069	[3]
Other nonmanufacturing industries	51	10,235	[3]	48,458	[3]

[1] "Total employed workers" as used here includes all workers except those in occupations and professions where strikes rarely, if ever, occur. In general, the term includes all employees except the following groups: Government workers, agricultural wage earners on farms employing less than 6, managerial and supervisory employees, and certain groups which because of the nature of their work cannot or do not strike, such as college professors, commercial travelers, clergymen, and domestic servants. Self-employed and unemployed persons are, of course, excluded.

[2] "Available working time" was estimated for purposes of this table by multiplying the total employed workers in each industry or group by the number of days worked by most employees in the respective industry or group.

[3] Data not available.

In the mining industries 86.2 percent of the employed workers were involved in strikes during the year. This figure is somewhat inflated because of the double counting of workers in the coal-mining strikes. Approximately 150,000 workers who were involved in the general coal-mining stoppages were also involved in other local strikes during the year. Eliminating this duplication, the percentage would be 65.0. In the rubber industries 46.8 percent of the employed workers were involved in strikes, in tobacco manufacturing 27.3 percent, in auto-

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

biles and automobile equipment 26.8 percent, and in iron and steel 20.4 percent. The figures for the tobacco industry are affected also by some repeated counting of workers involved, owing to the fact that about 5,000 workers in Tampa, Fla., were involved in 3 different strikes during the year.

A few industries were relatively free from strikes during the year, notably the printing and publishing industries with only 0.6 percent of the employed workers involved in strikes. Idleness during strikes was only 0.03 percent of the available working time in the food and chemical industries and only 0.04 percent in the construction, lumber, furniture, petroleum and coal products, machinery, and electrical-machinery industries.

The 1943 strikes are classified in table 3 on the basis of the normal or pre-war products and services of the firms involved, rather than on the basis of war products to which they have temporarily converted.

STATES AFFECTED

There were more than 100 strikes in each of 13 States during 1943. About 56 percent of the workers involved in all strikes were in four States—Pennsylvania, Ohio, Michigan, and Illinois. In Pennsylvania there were more strikes, more workers involved, and more idleness than in any other State; about 21 percent of the total workers involved in strikes and 32 percent of the total idleness were in Pennsylvania. Ohio had 15 percent of the total workers involved, Michigan 14 percent, and Illinois about 7 percent.

Nearly 60 percent of the total man-days of idleness was concentrated in four States—Pennsylvania, West Virginia, Kentucky, and Ohio. In the first three States this idleness was accounted for principally by coal-mine strikes, and in Ohio by strikes in the rubber industry and iron and steel industries as well as in coal mining.

TABLE 4.—*Strikes in 1943, by States*

State	Number of strikes beginning in 1943	Workers involved		Man-days idle during 1943	
		Number	Percent of total	Number	Percent of total
All States	[1] 3,752	1,981,279	100.0	13,500,529	100.0
Alabama	72	53,802	2.7	825,885	6.1
Arizona	13	2,923	.1	6,927	.1
Arkansas	15	4,822	.2	77,935	.6
California	109	29,602	1.5	83,479	.6
Colorado	9	7,356	.4	99,153	.7
Connecticut	36	9,099	.5	23,194	.2
Delaware	14	1,558	.1	5,213	(2)
District of Columbia	9	1,203	.1	2,789	(2)
Florida	38	29,446	1.5	99,294	.7
Georgia	35	5,689	.3	80,564	.6
Idaho	5	1,527	.1	6,875	.1
Illinois	343	132,059	6.7	772,229	5.7
Indiana	130	80,058	4.0	433,780	3.2
Iowa	26	9,213	.5	57,635	.4
Kansas	12	1,902	.1	17,061	.1
Kentucky	133	78,076	3.9	1,086,823	8.1
Louisiana	20	11,761	.6	51,211	.4
Maine	12	8,803	.4	19,331	.1
Maryland	36	18,471	.9	114,328	.8
Massachusetts	127	37,269	1.9	254,005	1.9
Michigan	413	274,531	13.9	592,270	4.4

See footnotes at end of table.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 4.—*Strikes in 1943, by States*—Continued

State	Number of strikes beginning in 1943	Workers involved		Man-days idle during 1943	
		Number	Percent of total	Number	Percent of total
Minnesota	13	666	(2)	5,056	(2)
Mississippi	18	8,300	0.4	36,371	0.3
Missouri	106	32,257	1.6	144,610	1.1
Montana	5	1,526	.1	15,241	.1
Nebraska	6	475	(2)	2,813	(2)
Nevada	2	207	(2)	207	(2)
New Hampshire	20	7,705	.4	15,686	.1
New Jersey	177	57,283	2.9	169,490	1.3
New Mexico	6	2,870	.1	37,467	.3
New York	296	91,272	4.6	307,323	2.3
North Carolina	57	18,511	.9	103,368	.8
North Dakota	4	114	(2)	322	(2)
Ohio	467	297,145	15.0	1,019,039	7.5
Oklahoma	25	6,003	.3	41,937	.3
Oregon	31	4,720	.2	13,924	.1
Pennsylvania	571	414,012	21.2	4,265,225	31.7
Rhode Island	45	18,565	.9	64,516	.5
South Carolina	16	5,804	.3	37,915	.3
South Dakota	1	31	(2)	438	(2)
Tennessee	105	32,168	1.6	227,566	1.7
Texas	34	4,999	.3	29,679	.2
Utah	6	4,897	.2	43,537	.3
Vermont	4	465	(2)	1,730	(2)
Virginia	54	29,982	1.5	365,306	2.7
Washington	27	10,279	.5	64,436	.5
West Virginia	110	123,176	6.2	1,700,429	12.6
Wisconsin	29	4,792	.2	33,082	.2
Wyoming	3	3,885	.2	43,835	.3

[1] The sum of this column is more than 3,752. This is because 41 strikes which extended across State lines have been counted in this table as separate strikes in each State affected, with the proper allocation of workers involved and man-days idle.

[2] Less than a tenth of 1 percent.

WORKERS INVOLVED

About 46 percent of the strikes involved fewer than 100 workers each, and about an equal percent involved from 100 up to 1,000, while about 7 percent involved 1,000 or more workers each. Each of 10 strikes during the year involved more than 10,000 workers. These strikes were as follows:

	Month strike began	*Approximate number of workers involved*
Dress-manufacturing industry, New York, New Jersey, Connecticut, and Pennsylvania.	January	16,000
Anthracite miners, eastern Pennsylvania	January	20,000
Bituminous-coal miners, industry-wide	April [1]	[1] 360,000
Anthracite miners, Eastern Pennsylvania	May [1]	[1] 73,500
Chrysler Corporation, Detroit and Hamtramck, Mich.	May	27,100
Firestone, General, Goodrich, and Goodyear rubber companies, Akron, Ohio.	May	49,300
Packard Motor Car Co., Detroit, Mich	May	24,300
Ladies' cloak and suit industry, New York City	June	15,000
Cramp Shipbuilding Co., Philadelphia, Pa	October	17,000
Steelworkers, Connecticut, Illinois, Indiana, Kentucky, Michigan, New Jersey, New York, Ohio, Pennsylvania and West Virginia.	December	134,400

[1] About 90,000 bituminous-coal miners were out in April. The industry-wide stoppages began May 1. Most of the same workers were out also in general stoppages over the same dispute which began June 1, June 21, and November 1.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 5.—*Strikes Beginning in 1943, Classified by Number of Workers Involved and Industry Group*

Industry group	Number of strikes	Median number of workers involved	Number of strikes in which the number of workers involved was—							
			6 and under 20	20 and under 100	100 and under 250	250 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and over
All industries:										
Number	3,752	117	464	1,252	870	521	359	252	24	10
Percent	100.0		12.4	33.3	23.2	13.9	9.6	6.7	0.6	0.3
Manufacturing										
Food and kindred products	135	66	19	61	29	10	12	4		
Tobacco manufactures	16	673		4	2		5	3	2	
Textile-mill products	177	130	22	52	51	23	17	11	1	
Apparel and other finished products made from fabrics and similar materials	142	82	17	60	32	21	9	1		2
Lumber and timber basic products	72	80	11	29	22	5	3	2		
Furniture and finished lumber products	66	76	5	34	13	9	4	1		
Paper and allied products	38	288	6	3	7	9	7	6		
Printing, publishing, and allied industries	23	48	6	11	4	2				
Chemicals and allied products	76	101	10	28	19	7	6	6		
Products of petroleum and coal	29	81	4	11	11	2		1		
Rubber products	73	272		15	20	14	13	9	1	1
Leather and leather products	93	90	15	35	13	11	11	8		
Stone, clay, and glass products	109	128	15	33	30	21	5	5		
Iron and steel and their products	650	165	57	173	160	136	74	49		1
Nonferrous metals and their products	133	165	10	46	29	22	16	9	1	
Machinery (except electrical)	210	149	28	62	49	32	26	13		
Electrical machinery	61	243	4	18	9	10	11	9		
Transportation equipment (except automobiles)	192	162	15	54	48	21	22	21	10	1
Automobiles and automobile equipment	153	340	9	31	26	20	24	37	4	2
Miscellaneous manufacturing industries	43	93	6	16	11	5	2	3		
Nonmanufacturing										
Agriculture, forestry, and fishing	16	107	3	4	3	2		4		
Mining	463	179	23	131	140	79	65	19	3	3
Construction	188	59	34	85	41	10	9	8	1	
Trade	119	40	36	44	19	9	4	7		
Finance, insurance, and real estate	26	42	10	10	4		2			
Transportation, communication, and other public utilities	284	60	61	125	50	27	9	11	1	
Services—personal, business, and other	114	45	31	48	22	9	1	3		
Other nonmanufacturing industries	51	62	7	29	6	5	2	2		

SEX OF WORKERS

Male workers exclusively were concerned in almost 61½ percent of the total strikes in 1943, while women were the only workers concerned in 2½ percent; in 36 percent both men and women were involved. Of the total number of workers involved in strikes during the year, approximately 87 percent were men and 13 percent were women.

NUMBER OF ESTABLISHMENTS INVOLVED

About 88 percent of the strikes in 1943, including approximately half of the total workers involved and accounting for slightly more than one-fifth of the total strike idleness, were stoppages confined to

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

single plants or establishments. About 10 percent of the strikes involved from 2 to 10 establishments each. Some of these involved different employers; others, several plants of the same company. Slightly more than 2 percent of the strikes were widespread in character, involving 11 or more establishments. The strikes in the latter group included 36 percent of the total workers involved and accounted for 71 percent of all strike idleness during the year. The widespread coal-mining stoppages were the largest in this group.

TABLE 6.—*Strikes Ending in 1943, by Number of Establishments*

Number of establishments involved	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	3,734	100.0	1,965,151	100.0	13,298,654	100.0
1 establishment	3,277	87.8	972,497	49.5	2,799,777	21.1
2 to 5 establishments	311	8.3	204,657	10.4	692,948	5.2
6 to 10 establishments	61	1.6	76,190	3.9	326,495	2.5
11 establishments and over	85	2.3	711,807	36.2	9,479,434	71.2

LABOR ORGANIZATIONS INVOLVED

Unions affiliated with the American Federation of Labor and the Congress of Industrial Organizations were involved in approximately the same proportion of strikes (37 percent), although the A. F. of L. strikes included about 20 percent of the total workers and 11 percent of the total idleness, while the C. I. O. strikes included 44 percent of the total workers and 16 percent of the total idleness involved in all strikes. Unions affiliated with neither of the major labor organizations were involved in 586 strikes, or 16 percent of the total; these strikes included nearly one-third of the total workers involved and accounted for 71 percent of the total strike idleness during the year. In most of these strikes (466 out of 586) members of the United Mine Workers of America were involved. Other unaffiliated unions having strikes were the International Association of Machinists (during the period that this union was not affiliated with the A. F. of L.), the Mechanics Educational Society of America, and the International Typographical Union. No other unaffiliated union had more than 5 strikes during the year.

The classification of strikes according to affiliation of the unions involved does not mean that these organizations sanctioned or authorized the strikes but indicates merely the affiliations of the unions to which the striking workers belonged. Usually the strikes were unauthorized and the union officials disclaimed responsibility for them.

Most of the strikes involving two rival unions were strikes in which both A. F. of L. and C. I. O. unions were involved. "Company unions" were involved in slightly over 1 percent of the strikes.[3] In 7 percent of the strikes—mostly small disputes scattered throughout the various industries—no unions were involved.

[3] Company unions are organizations whose membership is confined to the employees of a single plant or company.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 7.—*Strikes Ending in 1943, by Affiliations of Labor Organizations Involved*

Labor organizations involved	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	3,734	100.0	1,965,151	100.0	13,298,654	100.0
American Federation of Labor	1,395	37.3	384,924	19.6	1,427,055	10.7
Congress of Industrial Organizations	1,368	36.6	870,949	44.3	2,127,048	16.0
Unaffiliated unions	586	15.7	638,330	32.5	9,436,743	71.1
Railroad brotherhoods	7	.2	2,655	.1	6,532	(1)
2 rival unions	67	1.8	26,600	1.4	150,679	1.1
Company unions	43	1.2	10,506	.5	58,941	.4
No organization	268	7.2	31,187	1.6	91,656	.7

[1] Less than a tenth of 1 percent.

DURATION OF STRIKES

Strikes in 1943 lasted on the average 5 calendar days as compared with 12 in 1942, 18 in 1941, 21 in 1940, and 23 in 1939. The workers involved in 1943 strikes were idle 6.8 working days on the average as compared with 5 days in 1942, 9.8 in 1941, 11.6 in 1940, and 15.2 in 1939.

About 80 percent of all strikes in 1943 lasted less than a week—most of them only 1 to 3 days. Nearly two-thirds of the total workers involved were in these brief stoppages. About 18 percent of the strikes lasted from 1 week to 1 month and, although these strikes included only one-third of the total workers involved, they accounted for 77 percent of the total man-days of idleness. The coal miners involved in the four general stoppages were idle about 19¾ working days on the average. Less than 2 percent of the strikes lasted a month or more and these strikes accounted for slightly more than 2 percent of all strike idleness.

TABLE 8.—*Duration of Strikes Ending in 1943*

Duration of strikes	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	3,734	100.0	1,965,151	100.0	13,298,654	100.0
1 day	943	25.3	296,236	15.1	296,236	2.2
2 to 3 days	1,325	35.5	644,599	32.8	1,222,843	9.2
4 days and less than 1 week	716	19.2	372,692	19.0	1,248,210	9.4
1 week and less than ½ month	506	13.6	151,034	7.7	932,988	7.0
½ and less than 1 month	177	4.7	491,638	25.0	9,300,368	69.9
1 and less than 2 months	60	1.6	8,493	.4	267,816	2.0
2 and less than 3 months	5	.1	402	(1)	22,665	.2
3 months or more	2	(1)	57	(1)	7,528	.1

[1] Less than a tenth of 1 percent.

CAUSES OF STRIKES

Most strikes are caused by a complex set of factors, some human and some economic. Although it is impossible for the Bureau to obtain the background of each dispute and to weigh the numerous elements that influence a decision to strike, in most cases the major economic issues involved can be determined. Such issues form the basis of the classification of strikes in table 9.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

During the past 2 years decreasing proportions of strikes have been concerned with questions of union recognition, discrimination, etc. From 1935 through 1941, half or more of the total strikes were due chiefly to disputes over union-organization matters. Such matters were of major importance in less than one-third of the 1942 strikes and in less than 16 percent in 1943. In many of these, the question of wages was of secondary, if not primary, importance.

TABLE 9.—*Major Issues Involved in Strikes Ending in 1943*

Major issue	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All issues	3,734	100.0	1,965,151	100.0	13,298,654	100.0
Wages and hours	1,906	51.0	1,216,360	61.9	10,687,799	80.4
Wage increase	1,280	34.2	872,747	44.4	9,932,592	74.7
Wage decrease	85	2.3	21,116	1.1	57,390	.4
Wage increase, hour decrease	18	.5	2,311	.1	8,209	.1
Hour increase	10	.3	3,967	.2	6,861	.1
Other	513	13.7	316,219	16.1	682,747	5.1
Union organization, wages and hours	232	6.2	57,324	2.9	272,349	2.0
Recognition, wages, and/or hours	152	4.0	30,541	1.5	126,460	.9
Strengthening bargaining position, wages, and/or hours	15	.4	5,164	.3	77,214	.6
Closed or union shop, wages, and/or hours	47	1.3	12,066	.6	42,899	.3
Discrimination, wages, and/or hours	15	.4	8,179	.4	23,603	.2
Other	3	.1	1,374	.1	2,173	(1)
Union organization	353	9.5	168,567	8.6	470,844	3.5
Recognition	92	2.5	14,440	.7	71,168	.5
Strengthening bargaining position	37	1.0	18,696	1.0	44,893	.3
Closed or union shop	99	2.6	29,672	1.5	118,039	.9
Discrimination	96	2.6	52,559	2.7	118,524	.9
Other	29	.8	53,200	2.7	118,220	.9
Other working conditions	1,094	29.3	461,808	23.5	1,404,634	10.6
Job security	461	12.3	173,233	8.8	508,432	3.8
Shop conditions and policies	506	13.6	242,426	12.4	718,690	5.5
Work load	91	2.4	34,317	1.7	150,000	1.1
Other	36	1.0	11,832	.6	27,512	.2
Interunion or intraunion matters	149	4.0	61,092	3.1	463,028	3.5
Sympathy	5	.1	510	(1)	952	(1)
Union rivalry or factionalism	77	2.2	27,916	1.4	159,059	1.2
Jurisdiction	53	1.4	9,362	.5	40,544	.3
Union regulations	13	.3	23,135	1.2	262,304	2.0
Other	1	(1)	169	(1)	169	(1)

[1] Less than a tenth of 1 percent.

In considerably more than half of the strikes ending in 1943 the most important issue was that of wages. These strikes included nearly two-thirds of the total workers involved and more than four-fifths of the total idleness during all strikes. During the last half of the year, especially, strikes registered the growing pressure of labor to obtain wage increases commensurate with increased living costs. Most of the wage strikes were demands for increased rates. Although there were few, if any, general reductions in wage levels as such, many strikes occurred in protest against adjustments of time or piece rates, which the workers felt would result in lower earnings. There were also many strikes over the application of overtime rates, incentive systems, etc.

More than one-fourth of the total strikes resulted from disputes over local working conditions and company policies with respect to seniority, disciplinary methods, racial questions, supervision, work loads and numerous other questions which arise in the process of hiring and training new workers, filling vacancies by promotions, adopting new

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

procedures, and converting to new products. Racial questions caused 50 strikes during the year. In some of these there were objections to hiring Negroes to work in the same departments with white workers or promoting them to skilled occupations; others were in protest against racial discrimination. Four percent of the strikes were due to interunion or intraunion matters, most of them involving questions of union rivalry and jurisdiction.

RESULTS OF STRIKES

In 1943 the results of strikes depended more than ever before on decisions of Federal Government agencies. In normal times, when strikes are allowed to take their course with little or no Government intervention, they are won, lost, or compromised according to the bargaining strength of the parties involved. Since the beginning of the war, however, the tendency has been for union and Government representatives to persuade the strikers (who in most cases have struck spontaneously and without union authorization) to return to work without delay, leaving the issues in dispute to be decided by Government agencies. As the National War Labor Board has been empowered to make final determination of disputes that threaten to interfere with the war effort, and has been charged with the responsibility of stabilizing wages, a large majority of wage strikes go to the Board.

The processing of the thousands of cases before the Board requires time, and many strikes have occurred in protest against delay in obtaining decisions. At the time this report was prepared, the results of more than one-tenth of the 1943 strikes were still unknown; the majority of these cases were still pending before the War Labor Board.

When decisions by Government agencies are rendered or when strikes are otherwise settled, the Bureau of Labor Statistics attempts to evaluate the results of individual strikes by comparing what the workers obtained with what they demanded. The strikes are then classified into three principal categories to indicate whether the workers obtained substantially all they demanded, whether they compromised the issues and obtained only part of their original demands, or whether they gained little or nothing.

TABLE 10.—*Results of Strikes Ending in 1943*

Result	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Total	3,734	100.0	1,965,151	100.0	13,298,654	100.0
Substantial gains to workers	1,145	30.7	355,476	18.1	994,708	7.5
Partial gains or compromises [1]	957	25.6	862,253	43.8	9,807,944	73.8
Little or no gains to workers	959	25.7	314,154	16.0	962,388	7.2
Interunion or intraunion settlements	139	3.7	59,009	3.0	459,431	3.5
Indeterminate	104	2.8	215,976	11.0	457,416	3.4
Not reported [2]	430	11.5	158,283	8.1	616,767	4.6

[1] The major coal stoppages accounted for 22 percent of the workers involved and 64.5 percent of the man-days idle.

[2] A majority of the strikes in this group were awaiting decisions of the National War Labor Board or other agencies to which they were submitted for settlement.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Of all strikes ending in 1943, about 31 percent were substantially successful from the workers' point of view, 26 percent were compromised or brought partial gains to the workers, and 26 percent resulted in little or no gains. About 18 percent of the total workers involved obtained substantially all they demanded, 44 percent obtained part of their demands, and 16 percent gained little or nothing. About 7½ percent of the strike idleness resulted from the successful strikes; 74 percent, largely because of the general coal-mining stoppages, resulted from the strikes which were followed by partial gains; and 7 percent of the idleness resulted from strikes which brought the workers little or no gains.

Workers won most of their demands in a large proportion of the strikes in which union-organization issues were the most important, but a small proportion where wage-and-hour issues were involved. About 55 percent of the workers involved in wage-and-hour strikes (including the large coal disputes) obtained only part of what was demanded, 10 percent won their demands, and 10 percent gained little or nothing. About 56 percent of the workers involved in strikes principally over union-organization issues substantially won their demands. (See table 11.)

TABLE 11.—*Results of Strikes Ending in 1943, in Relation to Major Issues Involved*

Major issue	Total		Strikes resulting in—			
	Number	Percent	Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Other [1]
	Strikes		Percent of strikes			
All issues	3,734	100.0	30.7	25.6	25.7	18.0
Wages and hours	1,906	100.0	28.6	27.1	24.3	20.0
Union organization, wages, and hours	232	100.0	31.0	35.4	15.5	18.1
Union organization	353	100.0	44.8	19.2	24.1	11.9
Other working conditions	1,094	100.0	33.7	26.4	34.0	5.9
Interunion or intraunion matters	149	100.0	1.3	1.3	1.3	96.1
	Workers		Percent of workers involved			
All issues	1,965,151	100.0	18.1	43.9	16.0	22.0
Wages and hours	1,216,360	100.0	10.3	[2] 55.4	10.3	24.0
Union organization, wages, and hours	57,324	100.0	23.8	38.1	17.4	20.7
Union organization	168,567	100.0	55.9	18.7	16.4	9.0
Other working conditions	461,808	100.0	26.5	29.0	32.7	11.8
Interunion or intraunion matters	61,092	100.0	.8	.4	.3	98.5

[1] Includes strikes awaiting decisions of the National War Labor Board and other agencies; a few for which sufficient information was not available; and those involving rival unions and questions of jurisdiction, the results of which cannot be evaluated in terms of their effect on the welfare of all workers concerned.
[2] Excluding the general coal stoppages, this figure would be about 31 percent.

METHODS OF NEGOTIATING SETTLEMENTS

The large majority (nearly 70 percent) of the strikes ending in 1943 were settled with the assistance of Government officials or boards. These strikes included 82 percent of all workers involved and accounted for 93 percent of the strike idleness during the year.

The proportion of strikes settled with the assistance of Government agencies has increased during recent years. In 1935 and 1936 less than a third of the strikes were adjusted through Government inter-

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

vention. The proportion increased to 43 percent in 1940, 53 percent in 1941, 62 percent in 1942, and 70 percent in 1943. The proportion of total workers involved and of man-days idle included in these strikes has usually been high, because Government conciliators and other agencies have intervened in the larger and more serious strikes. Previous to 1941 the intervening Government agencies were the U. S. Department of Labor Conciliation Service, the National Labor Relations Board, and, for railroad disputes, the National Mediation Board. The National Defense Mediation Board was active in 1941 and its successor, the National War Labor Board, during the past 2 years. Since two or more of these agencies may cooperate in settling a dispute, it is not possible to classify the strike by the particular Government agency that was responsible for its settlement.

About 22 percent of the strikes in 1943 were settled directly between employers and union officials, while over 5 percent were terminated without formal settlements. Many of the latter were short protest strikes in which the workers had no intention of remaining out until specific demands were granted. Others were strikes which were abandoned by the workers involved when they returned to work on the employers' terms. In still other cases the striking workers obtained jobs elsewhere and new workers were hired to fill their places.

TABLE 12.—*Methods of Negotiating Settlements of Strikes Ending in 1943*

Agency carrying on negotiations toward settlements	Strikes		Workers involved		Man-days idle	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
All agencies	3,734	100.0	1,965,151	100.0	13,298,654	100.0
Employers and workers directly	72	1.9	6,125	.3	26,504	.2
Employers and representatives of organized workers directly	827	22.1	266,060	13.5	645,035	4.9
Government officials or boards	2,602	69.7	1,613,261	82.1	12,344,430	92.9
Private conciliators or arbitrators	17	.5	5,265	.3	19,003	.1
Terminated without formal settlement	210	5.6	73,424	3.7	259,116	1.9
Not reported	6	.2	1,016	.1	4,566	(1)

[1] Less than a tenth of 1 percent.

Strikes Under War Labor Disputes Act

The War Labor Disputes Act [4] became effective on June 25, 1943. It gave the President power to take immediate possession of any plant in which a labor dispute threatened seriously to interrupt war production and made it unlawful for workers to strike in any plant thus possessed. It provided that, before strikes should take place on any work connected with the war effort, the following procedure should be followed:

(1) Representatives of employees should file a notice of the dispute with the Secretary of Labor, the National War Labor Board, and the National Labor Relations Board, giving a statement of the issues involved.

(2) Work should then continue for 30 days under the same conditions prevailing when the dispute arose unless modified by mutual agreement or decision of the National War Labor Board.

[4] 57 Stat. 163 (1943).

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

(3) On the thirtieth day after filing of notice the National Labor Relations Board should conduct a secret ballot among the employees concerned, to determine whether they wished to permit an interruption of war production. The ballots should include a concise statement of the major issues involved and the facilities being utilized for settlement of the dispute. Results of the ballots were to be certified promptly and made public.

A fine of not to exceed $5,000 or imprisonment for not more than 1 year, or both, constituted the penalty specified for any person willfully instigating or encouraging a strike in a plant or facility possessed by the United States. Any person striking in a war plant not so possessed was made liable for resulting damages to anyone injured thereby.

Between June 25 and the end of the year there were 1,919 strikes in which 825,758 workers were involved. During this period the National Labor Relations Board conducted 117 strike ballots. In 102 cases the workers voted in favor of striking and in 15 cases, voted against. Of the total votes cast, 68 percent were in favor of striking.

The 102 cases where workers approved strike action did not all develop into strikes, however. Only 34 strikes occurred following strike ballots conducted by the National Labor Relations Board. These constituted less than 2 percent of all strikes during the period, and the number of workers involved (24,171) was less than 3 percent of the total workers involved in all strikes during the period.

The average number of workers involved in the 34 strikes was 711, and the average duration was about 11 days, as compared with 5 days for all strikes during the year 1943. The strikes ranged in duration from 1 to 66 days. Some of them occurred on the same day the strike ballot was taken, while in other cases the workers waited several weeks before striking. On the average, 18½ days elapsed between the ballot and the strike.

Most of these strikes were over wage questions, and all except 1 case went to the National War Labor Board at some stage of the dispute. In 12 cases the disputes went to the War Labor Board after the strikes began; in 10 cases the disputes were pending before the Board when the strikes occurred; and 10 strikes were in protest against decisions of the War Labor Board.

Strikes of Direct Concern to National War Labor Board

The National War Labor Board was established in January 1942 [5] for the purpose of settling those disputes which could not be adjusted through mediation of the U. S. Conciliation Service. In October 1942 the Board's authority was expanded under the Anti-Inflation Act,[6] so that no adjustments in wage rates, or, with certain exceptions, in salary rates under $5,000 per year, could be made without the Board's approval. The Board's added responsibilities connected with wage stabilization naturally resulted in a great increase in the number of disputes referred to the Board; also, its efforts to stabilize wages caused a relative increase in wage disputes compared to disputes for other causes. This is revealed in the following analysis of the strikes occurring in 1942 and 1943 in which the Board was directly concerned.

In 1943 there were 1,439 strikes that were of direct concern to the National War Labor Board. These involved 1,288,359 workers and

[5] Executive Order No. 9017, issued January 12, 1942.
[6] Executive Order No. 9250, issued October 3, 1943.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

caused 11,302,181 man-days of idleness. Less than one-third of that number—420 strikes, involving 238,485 workers and causing 818,244 man-days of idleness—concerned the Board in 1942.

The 1,439 strikes in 1943 represented almost 40 percent of all strikes; they included 65 percent of the total workers involved in strikes and accounted for almost 85 percent of the man-days of idleness. Excluding the general coal stoppages in April, May, June, October, and November, 55 percent of the total workers and about the same percentage of the total man-days of idleness were included in strikes of Board concern. In 1942 about 14 percent of the strikes, 28 percent of the workers involved, and about 20 percent of the man-days of idleness were connected with strikes in which the Board intervened.

Most of the strikes with which the National War Labor Board was concerned were referred to the Board as "dispute" cases, the employers and unions not having reached an agreement before the cases went to the Board. In some of the strikes on wage issues, the employers and unions had agreed upon terms for settlement and these were submitted as "voluntary" cases to the Board for final approval under the stabilization program.

The strikes of direct concern to the War Labor Board fall into three principal categories so far as time of occurrence is concerned: (1) Strikes occurring before the issues went to the Board for settlement. Some of these were certified to the Board while the stoppages were in progress, while in others work was resumed with the understanding that the issues would be submitted to the Board for decision or approval of terms agreed upon. (2) Strikes occurring in establishments which had cases pending before the Board. In a few instances the issues involved in these strikes were only indirectly related to the fact that cases were pending before the Board, but in most instances the issues were the same and the object was to hasten Board decisions. (3) Strikes following WLB decisions in which the workers objected to their terms or struck to force reluctant employers to accept terms of the decisions.

TREND OF STRIKES

The period from January 1942 through December 1943 covers the first 2 years of the Board's existence, as well as a period of expanding Board responsibility.

In the first 5 months of 1942 only 4 percent of the total strikes, including 14 percent of the total workers involved, and accounting for 10 percent of the total man-days idle, were of concern to the Board. Following the President's message to Congress in April, outlining a 7-point anti-inflation program dealing in part with wage-stabilization policy, and following the Board's decision in the "Little Steel" cases in July, there was a substantial increase in the proportion of strikes connected with Board action. The increase was accelerated after the issuance of Executive Order No. 9250 in October, giving the Board responsibility for the control of all wage changes. During the last 7 months of 1942, about 20 percent of all strikes, including 36 percent of all workers involved and 27 percent of the total idleness, were of direct concern to the Board.

Although there was no such steady upward trend during 1943, it is significant that in every month of the year no less than one-fourth of all disputes involved the WLB, the proportion being more than one-half

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

in May. Comparing the workers involved and the resulting man-days of idleness, the proportions were even greater; 88 percent of the workers involved in May strikes and more than 90 percent of the idleness in May and November were in strikes of Board concern.

TABLE 13.—*Strikes of Board Concern Compared with All Strikes in the United States,*[1] *January 1942 through December 1943*

Year and month	Strikes		Workers involved		Man-days idle	
	Number	Percent of all strikes [1]	Number	Percent of all strikes [1]	Number	Percent of all strikes [1]
1942						
All months	420	14.2	238,485	28.3	818,244	19.5
January	5	3.2	3,527	13.1	33,645	10.2
February	9	4.9	4,199	7.2	32,926	9.2
March	6	2.6	4,903	7.3	38,886	9.7
April	10	3.6	6,702	10.2	23,601	6.4
May	15	5.3	18,496	26.9	46,240	14.4
June	40	11.3	18,714	17.1	83,769	14.3
July	51	13.1	27.462	27.6	76,393	18.3
August	56	16.9	35,479	38.5	111,077	24.8
September	64	22.9	35,751	40.7	150,235	38.8
October	57	27.0	21,058	34.2	72,273	29.6
November	59	40.9	34,596	65.9	71,594	55.9
December	48	32.6	27,598	46.6	77,605	40.3
1943						
All months	1,439	38.9	1,288,359	[2]65.0	11,302,181	[2]83.7
January	63	32.1	54,129	59.3	343,185	75.9
February	78	39.0	18,293	47.1	50,771	43.3
March	90	36.3	35,530	47.9	77,490	43.2
April	158	41.1	147,615	67.3	465,605	70.4
May	226	54.9	493,039	88.4	1,291,400	82.5
June	195	45.0	83,883	44.8	4,399,137	92.8
July	137	37.1	87,814	72.4	488,416	70.2
August	101	32.5	37,756	35.7	107,012	30.0
September	78	28.7	23,726	35.6	65,105	31.1
October	113	39.3	53,095	43.8	831,500	82.1
November	106	32.6	65,427	48.2	2,660,580	92.9
December	94	26.5	188,052	71.1	521,980	66.4

[1] See table 2, p. 930, for monthly totals on all strikes.
[2] Excluding coal stoppages, this figure would be 55 percent.

There were but two strikes of Board concern, which involved as many as 10,000 workers in 1942. Aside from the general coal strikes, only 5 such strikes in 1943 involved 10,000 or more workers. There were also 11 strikes in 1942 and 26 in 1943 that caused more than 10,000 man-days of idleness but involved fewer than 10,000 workers.

STATUS OF DISPUTES WHEN REFERRED TO BOARD

In 1942 about 83 percent of all strikes in which the Board was concerned, involving 75 percent of the workers and 84 percent of the man-days of idleness, occurred before the issues were referred to the Board, while 14 percent occurred while the issues were pending before the Board, and less than 4 percent after Board decisions.

In 1943, the proportion of strikes that occurred before the issues were referred to the Board dropped to about 47 percent, workers involved to 25 percent, and man-days of idleness to less than 12 percent. In contrast, about 40 percent of the strikes, involving 65 percent of the workers and 85 percent of the man-days lost, took place after the issues in dispute were referred to the Board but before the

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Board had rendered decisions. The coal stoppages, which took place while the miners' request for a wage increase was under consideration by the Board, account for a large proportion of these workers and man-days of idleness. However, even after eliminating the major coal strikes from the calculation, at least 49 percent of the workers involved in strikes connected with the Board and 37 percent of the man-days of idleness were due to strikes which took place while the issues were under Board consideration.

In approximately 300 out of the 565 strikes in 1943 that occurred while the cases were pending before the Board, delay in decisions was specifically stated to be one factor in causing the stoppages. This was not an important consideration in 1942, although it was indicated in 23 strikes, or about 6 percent of the total strikes of concern to the Board during that year. The major issue in all of these 1942 cases was wages.

As the backlog of pending cases increased in the early months of 1943, owing to the Board's expanding responsibilities incident to the stabilization program, delay became of increasing importance. In many cases, the workers struck for higher wages. Through efforts of the Conciliation Service or a representative of the War Labor Board they were induced to go back to work on the understanding that an increase, in many cases a specific amount agreed upon by the employer and union, would be submitted to the Board for approval. If the Board acted on the request promptly, usually there were no further strikes; if not, the workers sometimes struck again, stating that their object was to hasten Board action. In a considerable number of cases two or three such strikes occurred before the Board's award was received.

The number of strikes occurring after Board decisions were rendered increased from 14 in 1942 to 200 in 1943, with a resultant increase in workers involved and in man-days of idleness. These may be considered protest strikes, in which one party or the other demonstrated its reluctance to comply with a Board decision. They include strikes in which the workers were dissatisfied with Board decisions, as well as those called to force noncomplying employers to put into effect decisions which the workers were willing to accept.

MAJOR ISSUES INVOLVED

In both 1942 and 1943 more than three-fourths (76 percent in 1942 and 80 percent in 1943) of the strikes of Board concern were over wages alone or in connection with other issues. These included strikes principally over general wage increases, overtime pay (including interpretation of Executive Order No. 9240), changes in hours worked resulting in greater or less take-home pay, equal pay for equal work, a few protests against reductions in wage rates, and other questions concerning wages. In many of these strikes other issues were important also, including requests for the union shop, maintenance of membership, and other efforts to strengthen union organization.

In 1942 wage issues accounted for more than 65 percent of all workers and 70 percent of the idleness involved in the strikes connected with Board action; in 1943, for 83 percent of the workers involved and 90 percent of the idleness. Even after eliminating the coal strikes, wage cases involved 74 percent of the workers and 60 percent of the

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

idleness in such strikes in 1943. The largest number of strikes in which Board delay was given as one factor involved wage issues, the workers becoming impatient when wage requests were not granted and striking one, two, or even three times to expedite Board action.

Although there was a considerable increase in the number of strikes of concern to the Board which involved other than wage issues, the proportions of strikes, workers involved, and man-days of idleness involved in such strikes decreased in 1943. Disputes over matters other than wages accounted for about 20 percent of the strikes of Board concern during 1943. In many of these the union shop or maintenance of membership was the major issue. Others involved discharges, physical and administrative shop conditions, and interunion or intraunion matters.

TABLE 14.—*Strikes of Board Concern Classified According to Major Issues Involved and Time Strikes Occurred*

Major issues[1] involved and time strikes occurred	1942			1943		
	Strikes	Workers involved	Man-days idle	Strikes	Workers involved	Man-days idle
	Number					
Total	420	238,485	818,244	1,439	1,288,359	11,302,181
Wages	319	156,900	580,269	1,157	1,072,813	10,256,816
All others	101	81,585	237,975	282	215,546	1,045,365
Strikes before cases went to Board	349	179,872	687,195	674	315,290	1,273,893
Wages	266	119,154	490,944	515	208,294	646,492
All others	83	60,718	196,251	159	106,996	627,401
Strikes while cases were pending	57	47,788	103,139	565	853,434	9,595,829
Wages	41	27,265	62,827	459	756,515	9,253,789
All others	16	20,523	40,312	106	96,919	342,040
Strikes after Board decisions	14	10,825	27,910	200	119,635	432,459
Wages	12	10,481	26,498	183	108,004	356,535
All others	2	344	1,412	17	11,631	75,924
	Percentage distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Wages	76.0	65.8	70.9	80.5	83.3	90.7
All others	24.0	34.2	29.1	19.5	16.7	9.3
Strikes before cases went to Board	83.1	75.4	84.0	46.8	24.5	11.3
Wages	63.3	49.9	60.0	35.8	16.2	5.7
All others	19.8	25.5	24.0	11.0	8.3	5.6
Strikes while cases were pending	13.6	20.1	12.6	39.3	66.2	84.9
Wages	9.8	11.4	7.7	31.9	58.7	81.9
All others	3.8	8.7	4.9	7.4	7.5	3.0
Strikes after Board decisions	3.3	4.5	3.4	13.9	9.3	3.8
Wages	2.9	4.3	3.2	12.7	8.4	3.2
All others	.4	.2	.2	1.2	.9	.6

[1] In many of the wage strikes there were other important issues also.

Strikes in Coal Mining

There were 430 strikes in 1943 in the coal-mining industry—400 strikes involving 487,474 workers and causing 7,510,397 man-days of idleness in bituminous-coal mines, and 30 strikes involving 117,623 workers and causing 1,836,486 man-days of idleness in anthracite mines. The majority of these strikes were small local disputes at individual mines. The prolonged industry-wide disputes between mine operators and the United Mine Workers of America have been counted as two strikes, one in bituminous-coal and one in anthracite mines.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

These two disputes, however, resulted in four industry-wide stoppages. Since practically all of the coal miners were idle during the general stoppages, and many of them were counted a second or third time when they were involved in local strikes, the above figures show the number of workers involved to be greater than the number employed in coal mines.

The general stoppages occurred in both the anthracite and bituminous-coal mines on May 1, June 1, June 21, and November 1. The May and November shut-downs were preceded by scattered stoppages of several thousand miners in late April and October.

The 2-year employer-union contracts covering bituminous-coal mines expired March 31, 1943, and those covering anthracite mines expired April 30, 1943. Bituminous-coal mines were operated after March 31 and anthracite mines after April 30, with the understanding that any adjustments in wages and other matters in dispute, would be retroactive to April 1 and May 1, respectively. Negotiations during March and April failed to bring about any settlement of the union's demands for a basic wage increase of $2 per day for day men, with comparable increases for tonnage men, portal-to-portal or travel-time pay in the mines, an annual 6-day workweek guaranty, contract coverage for foremen, double time for Sunday work, an increase in vacation payment, and the transfer of the cost of equipment and tools to the employer. Consequently, both the anthracite and bituminous-coal cases were certified to the National War Labor Board during April. Union representatives refused to appear before a tripartite panel created to hear the bituminous-coal case and failed to terminate widespread stoppages late in April as requested by the President.

Coal mining, except in the Western States, came to a virtual halt May 1, whereupon the mines, by Presidential order, were taken over and operated by the Secretary of the Interior, who was also Solid Fuels Administrator for War. The mine managers were appointed operating managers for the Government, and the United States flag was raised at each mine.

Work was resumed May 4 under a 15-day "truce" which was later extended through May 31. On May 25 the War Labor Board issued an order providing for an increase in vacation pay from $20 to $50 and shifting the cost of safety equipment and tools to the employers. It denied the wage increase and the work guaranty, and asked the union and employers to attempt a direct settlement of the portal-to-portal issue. This order was unacceptable to the miners, and work stopped again June 1 but was resumed June 7 to continue under union authorization until June 20.

No progress was made in settling the portal-to-portal issue, and the union consistently refused to attend hearings of the War Labor Board. Work stopped again June 21 after the Board reaffirmed its earlier order and declined to order portal-to-portal pay. Two days later the union issued a back-to-work order, effective until October 31, provided that mines continued to be operated by the United States Government. Many workers did not return immediately and a few thousand remained out until well into July.

From about August 20 until the middle of October the Government gradually turned the mines back to private operation. In the meantime, the union and the Illinois Coal Operators Association submitted two successive contracts to the War Labor Board for approval, the union expecting that the terms of these agreements, if approved

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

by the Board, could later be incorporated in contracts for other areas. These proposed agreements were disapproved, however, because they called for increased wages beyond what the Board felt could be allowed under the wage-stabilization policy.

Widespread stoppages developed during the latter part of October after the mines had been turned back to private operation and after the Board had refused to approve the proposed Illinois agreement. November 1 brought another industry-wide stoppage, and the next day the President ordered the mines seized again by the Secretary of the Interior. On November 3 the Secretary signed an agreement with the union to govern working conditions in both bituminous-coal and anthracite mines during Government operation of the mines.

This agreement provided, for the bituminous-coal mines, a basic 8¾-hour working day with a 15-minute lunch period, making an over-all 9-hour day underground. The 15-minute lunch period was not to be paid for. Eight productive hours were to be paid for at the basic rate of $1 per hour, and an assumed 45 minutes of travel time each day was to be paid for at two-thirds the regular rate, or 66⅔ cents per hour. These rates were to apply until 40 hours were worked in any week, after which the assumed 45 minutes of travel time each day was to be paid for at the rate of $1 per hour and production time at $1.50 per hour. At these rates, which applied to day men receiving the basic straight-time dollar-an-hour rate, the weekly earnings amounted to $57.06 for a full 6-day week of 52½ hours in the mine.

The proposed total wage was approved by the National War Labor Board on the ground that the total compensation for the first 40 hours, including travel time, did not exceed the compensation for the first 40 hours of work under the prior contract. The Board observed that "the extra pay was for extra work at the old rate or for overtime pay required by the Fair Labor Standards Act."

Just prior to the November stoppage (on October 28) the War Labor Board had issued an order in the anthracite case granting the miners a wage increase of 32.2 cents per day and, as in the bituminous-coal case, increasing the amount of the vacation pay from $20 to $50 and shifting the cost of blacksmithing, safety equipment, and tools to the operators. In addition, the November 3 agreement provided that the customary 30-minute lunch period should be cut to 15 minutes, thus providing a further increase in pay of 37.8 cents per day for the extra 15 minutes of work. The aggregate increase in earnings per day was thus 70 cents.

Both the bituminous-coal and anthracite mines were still under Government operation at the end of the year, and the agreement of November 3 still governed.

The agreements were subject to further interpretation, particularly as regards application of the overtime provisions of the Fair Labor Standards Act to the peculiar problems of travel time in the mines as compensable overtime. The President, late in 1943, appointed a committee to obtain further information relating to travel time. Another unsettled issue was the union's demand for retroactive wage payments. The Attorney General's ruling on January 14, 1944, stated that the continuance of Government operation of the mines was permissible under the War Labor Disputes Act because restoration of the mines to the owners when contract negotiations were not completed might lead to further interference with productive efficiency.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Employment in the Shipbuilding Industry, 1935-43[1]

Summary

DURING the 9-year period from January 1935 to December 1943, shipbuilding and ship repair in the United States changed from a relatively minor industry with an employment of only 63,000 to one of this country's most important war enterprises with 1,722,000 workers. December 1943 employment represented an increase of 1,659,000 over January 1935, or an average monthly addition of 15,500 workers. About 82 percent of the increase in employment went to private shipyards, the total labor force of which rose from 44,000 to 1,396,000 as against the increase from 19,000 to 326,000 in United States navy yards.

Throughout the 9-year span, shipyards in the North Atlantic region employed the greatest number of workers, but the rate of increase in the other areas was greater. By late 1942 yards in all States along the entire coast line and in nearly all States on the larger rivers were taking part in the shipbuilding program.

In order to increase the working force so rapidly, large numbers of women workers had to be recruited and trained. In March 1942, approximately one-half of 1 percent of private shipyard employees were women. By January 1944, 12.7 percent of the workers in private shipyards were women, as compared with 15.9 percent in United States navy yards.

The high rate of employment increase was accompanied by a corresponding increase in labor turnover. The accession rate per 100 employees rose from 6.0 in January 1940 to a high of 20.8 in January 1942, but then declined to 6.6 in December 1943. Over the same period, separations increased from 4.0 in January 1940 to a peak of 11.4 in September 1942. The average rate for 1943 was 9.9, and in August separations exceeded accessions for the first time. Absenteeism further increased the problem of maintaining the required labor force in shipyards.

By the first part of 1942, shipyard workers were averaging approximately 48 hours' work per week. Most major yards were working three shifts and, by December 1943, there were 64.3 percent as many workers employed on the second and third shifts combined as on the first shift.

The shipyards developed mass-production methods in the construction of various types of vessels, thereby sharply cutting man-hour requirements per ship. Mass-production techniques, ship standardization (especially of merchant vessels), and the increased use of welding greatly changed the composition of the working force in shipyards.

[1] Prepared in the Bureau's Division of Construction and Public Employment by Edward M. Gordon.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Fluctuations in Employment

After the attack on Pearl Harbor, American shipbuilders were faced with the tremendous task of expanding a fleet consisting mostly of carry-overs from the first World War into a seven-ocean Navy and a merchant marine capable of supplying our Allies and transporting the largest American military force in history, and its equipment, to battle fronts all over the world. How well this task has been done is shown by the fact that in 1943 American shipyards produced 19,288,000 deadweight tons of merchant shipping—2½ times the tonnage built in 1942 and 16 times the 1941 output. Deliveries of naval vessels more than trebled from 1941 to 1943, with deliveries of 773,000 displacement tons in 1941 as against 2,622,000 displacement tons in 1943; 1944 deliveries are scheduled to exceed the 1943 total by more than 40 percent. This vast wartime construction program brings with it also a greatly increased volume of service and repair work required by an expanding fleet subject to the damage of battle.

Employment figures accurately reflect the history of this country's shipbuilding and ship-repair program. There was virtually no shipbuilding in the 1920's and early 1930's when the only new construction under way was on pleasure craft and some vessels for private operators. In 1933, employment in the industry was at low ebb, with only 56,100 employees in July, but after passage of the National Industrial Recovery Act in that year, which provided for naval construction on a small scale, employment increased and reached 63,000 in 1935. The famous aircraft carriers, the Wasp and the Hornet, as well as some smaller craft, were built under this program.

With the passage of the Merchant Marine Act of 1936 a long-range program was begun, calling for 500 merchant ships in 10 years; by 1939 there were twice as many employees as in 1935 and four times the number by the first of 1941. The war in Europe, beginning in the fall of 1939, and the appropriation for a "two-ocean" Navy in May 1940, was affecting the shipbuilding industry here, with the result that within 1941 alone employment more than doubled, rising from a total of about 255,000 workers in January to 556,000 in December when the United States declared war upon the Axis. Employment skyrocketed thereafter, reaching the million mark in July 1942 and the million and a half mark just 7 months later (table 1). An employment peak of 1,723,000 occurred in November 1943. December 1943 and January and February 1944 showed declines, but the decline in February was much less than that for the two previous months.

Private Shipyards and United States Navy Yards

The primary function of the eight continental United States navy yards [2] is the service and repair of the fleet. The greatest expansion in the shipbuilding industry in order to meet the increased demand for new ships occurred in private yards. This means not that the navy yards did not expand, but their expansion was much less precipitous. It was accomplished through enlargement and fullest utilization of existing facilities and construction of two new repair yards on the West Coast. Rise in private shipbuilding had to be accomplished not only through enlargement of existing facilities, but also by building many new yards.

[2] This excludes the Washington, D. C., navy yard, the Pearl Harbor navy yard, and the Newport, R. I., torpedo station.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 1.—*Total Employment on Construction and Repair of Naval and Cargo Vessels January 1935–January 1944*

Month	Number of employees (in thousands)		
	Total	United States navy yards	Private shipyards
1935			
January	62.9	18.8	44.1
February	66.2	19.2	47.0
March	66.7	18.5	48.2
April	67.0	18.6	48.4
May	67.2	17.7	49.5
June	62.6	19.1	43.5
July	68.4	21.7	46.7
August	67.3	20.0	47.3
September	69.5	20.0	49.5
October	72.9	20.8	52.1
November	74.8	21.0	53.8
December	76.2	22.0	54.2
1936			
January	79.8	24.7	55.1
February	80.2	26.3	53.9
March	87.1	27.3	59.8
April	95.3	29.4	65.9
May	97.9	32.3	65.6
June	88.6	25.1	63.5
July	96.0	31.9	64.1
August	97.2	32.6	64.6
September	99.4	32.8	66.6
October	99.2	32.4	66.8
November	96.7	33.1	63.6
December	91.8	32.9	58.9
1937			
January	95.3	33.3	62.0
February	98.0	33.2	64.8
March	104.2	34.0	70.2
April	105.0	33.3	71.7
May	106.7	36.2	70.5
June	102.8	34.2	68.6
July	98.7	34.0	64.7
August	99.8	33.8	66.0
September	103.3	34.8	68.5
October	103.4	34.4	69.0
November	102.3	34.0	68.3
December	101.5	33.9	67.6
1938			
January	97.9	33.8	64.1
February	94.4	32.9	61.5
March	93.7	32.6	61.1
April	91.4	32.9	58.5
May	93.8	33.6	60.2
June	94.3	34.2	60.1
July	93.6	35.0	58.6
August	91.5	37.0	54.5
September	91.4	36.5	54.9
October	93.8	37.6	56.2
November	98.1	39.1	59.0
December	100.8	39.4	61.4
1939			
January	101.6	39.9	61.7
February	105.7	40.5	65.2
March	108.8	42.4	66.4
April	113.7	45.1	68.6
May	117.3	45.2	72.1
June	121.4	47.1	74.3
1939—Continued			
July	119.6	46.0	73.6
August	120.1	48.3	71.8
September	127.6	51.4	76.2
October	131.8	52.8	79.0
November	132.7	54.2	78.5
December	138.5	56.2	82.3
1940			
January	137.2	57.8	79.4
February	141.6	59.2	82.4
March	148.7	61.5	87.2
April	151.7	62.8	88.9
May	158.5	65.3	93.2
June	168.0	70.8	97.2
July	177.3	74.8	102.5
August	190.3	81.1	109.2
September	201.5	87.2	114.3
October	215.5	96.3	119.2
November	230.4	106.2	124.2
December	242.3	107.4	134.9
1941			
January	255.5	107.8	147.7
February	270.3	112.0	158.3
March	288.9	120.1	168.8
April	304.3	121.1	183.2
May	317.1	125.0	192.1
June	342.1	132.8	209.3
July	380.0	146.1	233.9
August	410.1	151.2	258.9
September	425.5	151.2	274.3
October	468.7	161.0	307.7
November	505.8	174.0	331.8
December	556.1	189.7	366.4
1942			
January	588.7	192.7	396.0
February	660.1	201.2	458.9
March	726.4	207.9	518.5
April	803.3	216.7	586.6
May	882.9	228.9	654.0
June	949.6	239.2	710.4
July	1,038.6	246.0	792.6
August	1,143.8	258.8	885.0
September	1,224.3	268.4	955.9
October	1,277.1	274.8	1,002.3
November	1,346.9	281.6	1,065.3
December	1,406.4	286.8	1,119.6
1943			
January	1,477.7	294.6	1,183.1
February	1,530.0	302.4	1,227.6
March	1,587.7	307.4	1,280.3
April	1,627.8	310.9	1,316.9
May	1,640.5	313.9	1,326.6
June	1,688.8	323.8	1,365.0
July	1,721.5	333.1	1,388.4
August	1,716.5	333.0	1,383.5
September	1,717.7	329.2	1,388.5
October	1,714.6	325.7	1,388.9
November	1,723.3	324.0	1,399.3
December	1,722.5	326.1	1,396.4
1944			
January	1,684.9	326.0	1,358.9

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

The rate of employment increase in private shipyards from December 1941 to November 1943, was four times that of the navy yards, though the trend and fluctuations of employment in both types of yard have been almost perfectly coincident. Between January 1940 and January 1944, navy-yard employment increased nearly sixfold, while at the same time employment in the private shipyards increased seventeenfold. Whereas in January 1940 navy yards claimed well over two-fifths of the employment in the industry, by January 1942 they had less than a third. They reached a peak employment of 333,000 in July of last year, but this was only one-fifth of the total employment in the industry for that month. Consequently, private-shipyard employment, amounting to 1,388,000 in July, was well over four times the employment in the navy yards. This ratio of 4 to 1 had been reached by January 1943 and has continued.

Geographic Distribution of Employment

By late 1942 and early 1943, shipyards in every State along the entire coastline, along the Great Lakes, and in nearly all States on the largest rivers, were taking part in the shipbuilding program. Yards along the Atlantic seaboard led in the number of employees, with greatest concentration around the Boston-Quincy, New York City, Philadelphia-Camden, and Hampton Roads areas. Yards on the Pacific Coast were second, and the Gulf Coast yards followed. One of the striking features of the expansion of the industry has been the increased part played by Great Lakes and Inland yards. This is due primarily to the large number of small craft, especially landing craft, included in the program, that could be built with the facilities available in these yards.

TABLE 2.—*Total Employment on Construction and Repair of Naval and Cargo Vessels, by Major Shipbuilding Regions, January 1940–January 1944*

Month	Number of employees (in thousands)						
	Total, all regions	North Atlantic	South Atlantic	Gulf	Pacific	Great Lakes	Inland
1940							
January	137.2	85.0	21.7	7.2	18.4	3.5	1.4
February	141.6	86.8	22.5	7.7	19.3	3.9	1.4
March	148.7	91.1	23.8	8.0	19.9	4.3	1.6
April	151.7	93.8	23.1	8.0	21.1	4.1	1.6
May	158.5	97.2	24.2	8.1	23.4	3.8	1.8
June	168.0	102.9	25.0	8.7	25.5	3.7	2.2
July	177.3	107.7	26.8	9.6	27.5	3.4	2.3
August	190.3	115.1	28.7	10.1	30.6	3.4	2.4
September	201.5	121.5	30.0	11.4	32.6	3.7	2.3
October	215.5	128.7	32.6	11.1	37.1	3.8	2.2
November	230.4	137.0	33.4	11.9	41.3	4.7	2.1
December	242.3	140.4	34.3	14.1	45.3	6.0	2.2
1941							
January	255.5	144.1	35.6	15.3	51.1	7.0	2.4
February	270.3	153.0	36.6	16.6	54.1	7.6	2.4
March	288.9	164.0	40.0	17.4	56.8	8.3	2.4
April	304.3	173.3	42.3	18.0	60.4	7.9	2.4
May	317.1	184.3	44.1	18.2	60.4	7.6	2.5
June	342.1	192.9	48.5	19.7	70.4	8.0	2.6
July	380.0	211.1	51.1	22.2	83.9	8.9	2.8
August	410.1	222.9	53.3	23.5	98.1	9.4	2.9
September	425.5	229.4	54.2	25.2	104.0	9.8	2.9
October	468.7	242.6	58.9	30.6	123.4	0.1	3.1
November	505.8	261.7	63.7	34.8	131.4	10.9	3.3
December	556.1	276.5	66.8	40.4	155.9	12.8	3.7

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 2.—*Total Employment on Construction and Repair of Naval and Cargo Vessels, by Major Shipbuilding Regions, January 1940–January 1944*—Continued

Month	Number of employees (in thousands)						
	Total, all regions	North Atlantic	South Atlantic	Gulf	Pacific	Great Lakes	Inland
1942							
January	588.7	280.4	72.2	48.4	167.0	16.3	4.4
February	660.1	307.4	78.6	59.4	190.5	19.5	4.7
March	726.4	326.1	84.6	69.1	220.3	21.5	4.8
April	803.3	346.3	92.0	79.9	256.3	23.6	5.2
May	882.9	374.9	97.2	89.6	287.8	27.7	5.7
June	949.6	382.7	104.1	104.7	319.0	31.5	7.6
July	1,038.6	411.3	110.4	117.8	352.4	35.9	10.8
August	1,143.8	447.5	117.5	131.4	391.7	39.6	16.1
September	1,224.3	473.9	123.5	135.6	426.4	43.0	21.9
October	1,277.1	489.2	128.8	144.9	443.6	46.0	24.6
November	1,346.9	509.5	135.2	157.0	472.5	46.7	26.0
December	1,406.4	522.8	139.0	168.0	497.7	46.9	32.0
1943							
January	1,477.7	545.0	141.7	180.2	523.1	49.4	38.3
February	1,530.0	566.4	145.2	190.1	535.7	52.5	40.1
March	1,587.7	584.8	148.9	198.4	556.9	57.1	41.6
April	1,627.8	599.4	152.4	207.9	566.5	58.3	43.3
May	1,640.5	605.5	155.5	216.8	559.0	60.3	43.4
June	1,688.8	615.2	158.3	221.3	585.1	62.5	46.4
July	1,721.5	623.7	158.2	231.0	594.0	64.9	49.7
August	1,716.5	631.2	153.4	229.8	589.1	65.2	47.8
September	1,717.7	635.1	152.2	230.6	583.4	65.5	50.9
October	1,714.6	635.0	152.7	231.1	577.4	65.9	52.5
November	1,723.3	635.2	153.7	234.5	580.7	65.7	53.5
December	1,722.5	629.6	154.2	238.8	580.7	65.6	53.6
1944							
January	1,684.9	617.5	151.0	230.4	567.2	66.9	51.9

Employment in the Inland shipyards increased in greater proportion than in any of the other regions, having by November 1943 duplicated its January 1940 shipyard employment of 1,400 almost 39 times. Over the same period, Gulf Coast employment increased from 7,000 to 235,000, or nearly 34 times. By the November 1943 date, employment in the Pacific Coast yards had risen to 32 times the January 1940 total of 18,000. The Great Lakes and Atlantic regions showed a much less steep employment rise. The Atlantic Coast, always far ahead of the other areas in shipyard employment, retained the lead throughout this period of tremendous expansion, but by a progressively smaller margin. By the peak in November 1943, employment in Atlantic Coast yards had increased to 789,000, only 7½ times the total of 107,000 for January 1940.

The percentage distribution of workers, by major regions, for the period January 1940 to January 1944, is shown in table 3.

TABLE 3.—*Percentage Distribution of Employment by Shipbuilding Regions, in Specified Months, January 1940–January 1944*

Region	January 1940	July 1940	January 1941	July 1941	January 1942	July 1942	January 1943	July 1943	January 1944
North Atlantic	62.0	60.8	56.4	55.6	47.6	39.6	36.9	36.2	36.6
South Atlantic	15.8	15.1	14.0	13.5	12.3	10.6	9.6	9.2	9.0
Gulf	5.2	5.4	6.0	5.8	8.2	11.4	12.2	13.4	13.7
Pacific	13.4	15.5	20.0	22.1	28.4	33.9	35.4	34.5	33.6
Great Lakes	2.6	1.9	2.7	2.3	2.8	3.5	3.3	3.8	4.0
Inland	1.0	1.3	.9	.7	.7	1.0	2.6	2.9	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Employment of Women

One of the circumstances making it possible to increase employment in shipyards so rapidly, in spite of the demands of Selective Service and other war industries, has been the employment of women. Though shipbuilding has always been thought of as a "man's job," it became evident early in the expansion of the industry that it would be necessary to recruit and train many women if the required employment levels were to be reached. By January 1944, 13.3 percent of all workers in the industry and 10.0 percent [3] of the wage earners were women.

No data are available as to the number of women workers prior to March 1942. At that time women comprised only one-half of 1 percent of the wage earners in private shipyards. By December of that year this ratio had increased to 3.3 percent and rose steeply to 10.3 percent by the end of 1943. In January 1944, however, there was a significant decline in the proportion of women, from 10.3 to 9.8. Though no women were employed in 147 yards covered in the study, these yards had only 58,509 wage earners, or but 5 percent of the total (table 4). In contrast, 10 yards with 16 percent of the wage earners, or 183,284, had an average of over 20 percent women. One yard with 21,571 wage earners was building ships with a work force composed of about one-fourth women.

TABLE 4.—*Distribution of Private Shipyards by Percent of Female Wage Earners Employed,*[1] *January 1944*

Percent of female wage earners	Number of yards reporting	Wage earners		Average number of wage earners per yard
		Number	Percent of total	
Total	341	1,178,461	100.0	3,456
No women wage earners	147	58,509	5.0	398
0.1 and under 5 percent	96	215,486	18.3	2,245
5.0 and under 10 percent	53	429,047	36.4	8,095
10.0 and under 15 percent	27	236,386	20.1	8,755
15.0 and under 20 percent	8	55,749	4.7	6,969
20.0 and under 25 percent	9	161,713	13.7	17,968
25.0 and under 30 percent	1	21,571	1.8	21,571

[1] Includes private shipyards engaged in new construction and in service and repair work.

Shipyards on the Pacific Coast have led in the employment of women, probably as a result of the acute labor shortages that developed early in most Pacific Coast shipbuilding areas. In January 1944, 15.4 percent of the wage earners in private shipyards on the Pacific Coast were women, as against 9.9 percent in Inland yards, 7.7 percent in the South Atlantic, and 7.5 percent on the Gulf (table 5). Yards in the Great Lakes and North Atlantic areas had the smallest ratio of women workers, 5.9 and 5.8 percent respectively.

In January 1944, 11.1 percent of the wage earners in the United States navy yards were women, as compared with 9.8 percent in private shipyards. The percentage of women wage earners in individual navy yards ranged from 5.1 percent in one North Atlantic yard to 23.8 percent in a Pacific Coast repair yard.

[3] Covers both private yards and United States navy yards.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 5.—*Distribution of Female Wage Earners in Private Shipyards,*[1] *January 1944, by Regions*

Region	Number of yards reporting	Number of wage earners		Female wage earners as percent of total force
		Female	Total	
All regions	341	116,000	1,178,461	[2] 9.8
North Atlantic	121	22,517	388,717	5.8
South Atlantic [3]	15	5,550	72,195	7.7
Gulf	51	15,223	203,326	7.5
Pacific	93	65,559	425,053	15.4
Great Lakes	39	2,449	41,841	5.9
Inland	22	4,702	47,329	9.9

[1] Includes private shipyards engaged in new construction and in service and repair work.
[2] The percentage of female wage earners in new construction yards was 10.7 whereas in repair yards it was only 2.2.
[3] Hampton Roads (Va.) through Georgia.

Labor Turnover and Absenteeism in Private Shipyards

Labor-turnover rates in private shipyards for the period January 1940 to January 1944 are presented in table 6. In January 1940, the accession rate was 6.0 per 100 employees. With the beginning of the "Defense" program in June, the accession rate increased to 12.3 by December, making an average rate for the year of 8.6. The January rate of 18.2 was the highest rate for any month of 1941; the average for the year was 13.9. January 1942 saw the highest accession rate recorded during the 4-year period—20.8. During the rest of 1942, the accession rate fluctuated somewhat, but in general showed a marked decline, falling to 11.8 in December. In 1943, with the exception of March and June, the rate declined every month and in the course of the year it declined from 14.3 in January to 6.6 in December.

During 1940 and 1941 the total separation rate remained fairly stable, the average for 1940 being 5.7, and that for 1941 being 6.3. The January 1942 rate of 6.5 started an upward trend which reached a peak of 11.4 in September 1942. The lowest rate for the next 11 months was 9.3 in June 1943, after which the rate again increased to 11.3 in August 1943, but declined to 8.9 in December.

TABLE 6.—*Labor-Turnover Rates (per 100 Employees) in Private Shipyards, January 1940–January 1944*

Month	Accessions	Separations					
		Total	Quits	Discharges	Lay-offs	Military	Miscellaneous
1940							
January	6.0	4.0	0.7	0.1	3.1	(1)	0.1
February	6.6	4.4	.7	.1	3.5	(1)	.1
March	7.0	5.0	1.0	.3	3.6	(1)	.1
April	6.2	8.1	1.2	.3	6.5	(1)	.1
May	6.8	6.0	.9	.3	4.7	(1)	.1
June	10.8	5.3	1.0	.3	3.9	(1)	.1
July	13.0	5.4	1.1	.5	3.7	(1)	.1
August	9.1	7.2	1.3	.4	5.4	(1)	.1
September	10.0	6.1	1.5	.3	4.1	(1)	.2
October	7.9	4.4	1.4	.4	2.4	(1)	.2
November	7.8	5.3	1.3	.3	3.4	(1)	.3
December	12.3	7.5	1.9	.3	4.6	(1)	.7

[1] Included with miscellaneous separations.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 6.—*Labor-Turnover Rates (per 100 Employees) in Private Shipyards, January 1940–January 1944*—Continued

Month	Accessions	Separations					
		Total	Quits	Discharges	Lay-offs	Military	Miscellaneous
1941							
January	18.2	7.9	1.9	0.4	4.8	0.3	0.5
February	11.0	6.1	1.8	.4	3.2	.4	.3
March	13.9	6.5	2.0	.4	3.5	.3	.3
April	14.3	7.8	2.5	.5	4.3	.3	.2
May	13.2	7.0	2.4	.5	3.6	.3	.2
June	12.1	6.0	2.3	.5	2.7	.2	.3
July	15.5	5.6	2.6	.6	2.1	.1	.2
August	12.1	5.1	2.3	.5	2.0	.1	.2
September	13.9	6.2	3.0	.6	2.2	.1	.3
October	14.6	6.0	2.7	.5	2.4	.2	.2
November	12.4	5.0	2.4	.4	1.9	.1	.2
December	15.3	6.3	2.9	.6	2.1	.5	.2
1942							
January	20.8	6.5	3.3	.7	1.4	.7	.4
February	16.7	6.3	3.3	.7	1.3	.6	.4
March	18.2	7.1	4.3	.7	1.2	.6	.3
April	16.4	7.3	4.3	.8	1.3	.7	.2
May	16.6	9.2	5.2	.9	1.4	.9	.8
June	17.4	9.4	5.7	.9	1.4	.9	.5
July	15.7	8.4	4.7	.8	1.2	1.1	.6
August	14.6	9.9	5.8	1.1	.9	1.6	.5
September	13.4	11.4	6.7	1.0	.8	2.4	.5
October	12.6	10.8	5.4	1.1	1.1	2.6	.6
November	14.5	10.6	5.4	1.2	.9	2.4	.7
December	11.8	9.5	4.8	1.1	.7	2.0	.9
1943							
January	14.3	10.9	7.0	1.5	.5	1.8	.1
February	13.0	9.7	5.9	1.3	.5	1.8	.2
March	13.7	10.9	7.1	1.5	.5	1.7	.1
April	12.2	9.9	6.3	1.4	.7	1.4	.1
May	11.2	9.4	6.3	1.4	.5	1.1	.1
June	11.9	9.3	6.2	1.5	.5	1.0	.1
July	10.8	10.5	6.9	1.8	.7	1.0	.1
August	10.7	11.3	7.7	1.9	.6	1.0	.1
September	10.6	10.5	7.3	1.7	.4	1.0	.1
October	9.0	9.7	6.2	1.7	.7	1.0	.1
November	8.7	8.3	5.3	1.5	.6	.8	.1
December	6.6	8.9	5.9	1.5	.6	.8	.1
1944							
January	7.8	9.5	6.2	1.7	.7	.8	.1

During 1940 and the first half of 1941, lay-offs were the greatest factor in separations, reaching a 4-year peak of 6.5 in April 1940. After that they declined almost steadily and by January 1944 the rate was only 0.7. On the other hand, quits increased from 0.7 in January 1940 to a high of 7.7 in August 1943 and then declined to 6.2 in January 1944. Starting with a rate of 0.3 in January 1941, military separations increased to a peak of 2.6 in October 1942 and then declined to 0.8 in January 1944.

Absenteeism rates for private shipyards for the period April 1942 to January 1944 are shown in table 7. During this period the rates ranged from 6.2 in May 1942 to 9.7 in December 1943.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 7.—*Absenteeism Rates in Private Shipyards,*[1] *April 1942–January 1944*

Month	Absenteeism rate [2]	Month	Absenteeism rate [2]
1942		1943—Continued	
April	7.2	March	8.7
May	6.2	April	7.7
June	7.3	May	8.1
July	7.0	June	8.1
August	7.7	July	8.7
September	7.3	August	8.9
October	7.7	September	7.9
November	8.1	October	8.5
December	8.3	November	7.8
1943		December	9.7
January	8.9	*1944*	
February	9.2	January	[3] 8.9

[1] Private shipyards engaged in new ship construction.
[2] Man-hours lost as percent of scheduled hours (hours worked plus hours lost).
[3] Adjusted to avoid distortion of rates caused by the storm of January 10–15, affecting yards on the Gulf and South Atlantic Coasts.

Hours Worked Per Week and Plant Utilization

Wage earners in shipyards were working approximately 48 hour per week by early 1942 and since that date there has been very little change. This is an increase of approximately 15 hours from the average for 1935.

During 1943 the average hours worked per week in private shipyards ranged from 46.2 hours in February to 47.9 in November. The January 1944 average of 45.9 hours was a decrease of 1.3 from the December 1943 average of 47.2. This was caused partly by a serious storm that affected operations in both Gulf and South Atlantic yards. During 1943 wage earners in private yards doing repair work worked from 5 to 7 hours more per week than those in yards engaged in new construction. In January 1943 the average for new-construction yards was 46.0 and for repair yards 52.7 as compared with 45.0 and 53.4, respectively, in the same month a year later.

Available figures on hours in United States navy yards are not comparable with those for private shipyards, since they include time charged to annual and sick leave as well as time actually worked. The average computed on this basis for United States navy yards was 52.9 hours per week in January 1944.

In order to meet production schedules, nearly all major shipyards worked three shifts during 1942 and 1943. The ratio of workers on the second and third shifts to those on the first, in private shipyards engaged in new construction, increased from 50.1 in June 1942 to 63.2 in January 1944. The highest ratio reached in the 2-year period, 65.2, occurred in January 1943. It declined slightly in December 1943 to 64.3 and then again to 63.2 the following month.

The ratio of Saturday to Monday–Friday employment in private shipyards was 92.8 in January 1944; this was the lowest recorded since June 1942. The November 1943 ratio of 95.5 was the highest reported. The ratio of Sunday to Monday–Friday employment, always much lower, increased from 37.3 in June 1942 to 51.3 in December 1942 and then declined to 42.0 in December a year later. In January 1944 the ratio dropped precipitously to only 9.4, owing to the fact that at the beginning of the year Sunday work was cut to a minimum in all private yards engaged in new construction.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 8.—*Plant Utilization in Private Shipyards,*[1] *June 1942–January 1944*

[Data relate to midweek of month]

Month	Second shift as percent of first-shift employment	Third shift as percent of first-shift employment	Saturday as percent of Monday–Friday employment	Sunday as percent of Monday–Friday employment	Percent of plant utilization [2]	Average weekly hours of production workers
June 1942	37.7	12.4	93.7	37.3	44.7	47.7
September 1942	39.0	18.1	94.4	48.4	46.2	47.4
December 1942	43.1	20.0	95.4	51.3	48.4	46.8
March 1943	41.7	19.6	94.1	46.0	47.6	46.5
June 1943	41.7	20.7	93.7	39.2	48.0	46.7
September 1943	42.6	20.9	95.0	41.6	48.9	47.1
December 1943	44.0	20.3	93.4	42.0	48.0	46.6
January 1944	44.0	19.2	92.8	[3] 9.4	45.0	44.9

[1] Does not include repair yards.
[2] Ratio, expressed in percent, of the actual production man-hours worked per week to the theoretical maximum weekly production man-hours (168 times the production employment on the principal shift).
[3] As of January 1, 1944, Sunday work was reduced to a minimum in yards with both naval and Maritime Commission contracts.

Maximum utilization of shipyard facilities is defined as having a labor force as large as the principal workday shift at work 24 hours a day for 7 days a week. Such utilization of plant facilities is of course only a theoretical maximum, since it is actually impossible for a number of reasons. Plant utilization is computed as the ratio, expressed in percent, of the actual man-hours worked per week to the theoretical maximum (168 times the employment on the principal shift). Plant utilization in private shipyards engaged in new construction rose from 44.7 in June 1942 to 49.1 in January 1943 and then declined to 48.0 in December and further to 45.0 in January 1944.

Merchant-Vessel Program, 1942–44

Shipyards constructing cargo vessels delivered 27,000,000 deadweight tons during the 2-year period, January 1942 through December 1943—an amazing record. In 1943 alone, deliveries of 19,288,000 tons were made. This exceeded by over 5,500,000 tons the total shipping delivered by the Emergency Fleet Corporation of World War I throughout its entire existence. In fact, deliveries in the last 8 months of 1943 alone surpassed the 13,637,000 tons of shipping delivered in the lifetime of the Emergency Fleet Corporation. December 1943 was the peak month, when shipyards delivered cargo vessels totaling 2,057,000 deadweight tons, making theoretically possible an annual rate of nearly 25,000,000 tons.

The scheduled program for 1944, of 18,372,000 tons, is practically the same as that which had been scheduled for 1943. This means that if deliveries are continued at the rate at which they were made in the latter part of 1943, the 1944 goal can easily be met. Deliveries in some of the larger yards may fall off in 1944, however, as these yards shift from Liberty vessels to the faster, more elaborate Victory ships.

MAN-HOURS REQUIRED IN CONSTRUCTION OF LIBERTY SHIPS (EC–2 CARGO VESSELS)

The only reason that shipyards were able to deliver 27,000,000 tons of merchant shipping during 1942 and 1943 was the extraordinary record made in the construction of Liberty ships. Though the Liberty

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

ship is slow and of a type that does not fit into the plans of post-war shipping, it was the answer to the problem confronting the country early in 1942 when the greatest amount of shipping was needed in the shortest possible time.

Up to December 1943, shipyards had delivered 1,824 Liberty vessels totaling more than 19,000,000 deadweight tons. These vessels alone represented over 5,000,000 tons more merchant shipping than was delivered during World War I. Even though some yards have already changed to Victory ships, there is still need for more Liberty ships, and as of December 31, 1943, 867 more were scheduled for delivery.

Because Liberty vessels were built from a standard design, mass-production methods could be readily adopted. Consequently, as the keels laid increased in number, each yard was able to achieve substantial reductions in the number of man-hours and days required per vessel.

Data showing the number of man-hours required to build all but 2 of the 1,477 Liberty ships delivered by September 30, 1943, are presented in table 9 by groups of 10 ships, and by yard.[4] Nine shipyards each had constructed at least 50 vessels by that date; together they had delivered 1,374 vessels or well over 90 percent of the total. An average of 584,000 man-hours per vessel was required for this task. One of the yards, designated in the table as Yard G, was able to deliver 272 ships at an average of 457,000 man-hours per ship, the lowest average achieved by any of the shipyards building Liberty vessels within the cited period. This yard also required the least man-hours of any of the yards for the first vessel constructed, 978,600; Yard E required the most, 1,596,200. All 9 yards needed more than 1,000,000 man-hours for at least one vessel, though the first delivered in each yard did not necessarily require the most hours. The average per vessel for the first 10 ships delivered in all 9 yards was 1,067,200 man-hours, over twice the average for all 1,374 ships constructed.

The man-hour record for the 7 yards that had produced fewer than 50 Liberty ships each by the end of September of last year was not nearly so good as that of the 9 yards that had built 50 or more. The 7 yards required an average of 1,394,700 man-hours for 101 vessels. Three of these yards, Yard J, Yard M, and Yard P, delivered respectively 20, 15, and 6 Liberty ships and then changed to the construction of other types of vessel. The maximum requirement for any of the 101 vessels was 3,158,900 hours for a vessel produced by Yard P, and the minimum was 798,300 for a ship built by Yard J. Four of the 7 shipyards were still producing Liberty ships at the time the present report was prepared, and it is likely that they will be able to decrease their man-hour requirements as they deliver more vessels.

The minimum of hours required to produce a Liberty vessel cannot be estimated. Thus far, the best record has been made by Yard I. During November 1943 this yard produced a vessel in 247,300 man-hours and delivered 18 vessels, each of which required less than 300,000 man-hours.

[4] Data for 2 vessels delivered by a yard on the Pacific Coast were not included in this study.

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

TABLE 9.—*Average Man-Hours Required for Construction of EC–2 Cargo Vessels (Liberty Ships) Delivered Through September 30, 1943* [1]

Vessels in order of delivery dates	Total			Yards having delivered more than 50 vessels		
	Average man-hours, all yards [2]	Average man-hours, yards having delivered—		Average man-hours per vessel		
		50 or more vessels	Less than 50 vessels	Yard A	Yard B	Yard C
All vessels, average	639,500	584,000	1,394,700	628,500	582,600	773,800
Vessels Nos.—						
1 to 10	1,228,900	1,067,200	1,471,500	1,024,400	1,241,400	1,163,700
11 to 20	873,600	854,200	960,900	817,700	1,208,800	897,600
21 to 30	748,900	748,900	----	731,500	914,800	726,800
31 to 40	687,400	687,400	----	691,800	749,000	658,100
41 to 50	663,500	663,500	----	673,300	819,600	640,200
51 to 60	627,300	627,300	----	655,400	693,900	592,900
61 to 70	594,400	594,400	----	641,900	552,300	[3] 651,700
71 to 80	539,600	539,600	----	625,400	550,100	----
81 to 90	512,400	512,400	----	622,100	570,600	----
91 to 100	500,800	500,800	----	616,200	515,100	----
101 to 110	484,800	484,800	----	608,100	509,500	----
111 to 120	468,400	468,400	----	592,900	494,200	----
121 to 130	458,300	458,300	----	580,900	495,700	----
131 to 140	444,000	444,000	----	566,700	487,000	----
141 to 150	445,700	445,700	----	558,800	501,400	----
151 to 160	435,800	435,800	----	549,000	491,600	----
161 to 170	419,100	419,100	----	537,000	457,700	----
171 to 180	404,600	404,600	----	526,500	420,400	----
181 to 190	397,900	397,900	----	517,000	413,400	----
191 to 200	427,800	427,800	----	515,000	420,600	----
201 to 210	389,900	389,900	----	[4] 511,900	425,000	----
211 to 220	387,100	387,100	----	----	417,000	----
221 to 230	390,400	390,400	----	----	417,400	----
231 to 240	395,100	395,100	----	----	429,600	----
241 to 250	390,500	390,500	----	----	438,300	----
251 to 260	(5)	(5)	----	----	[6] 443,200	----
261 to 270	(5)	(5)	----	----	----	----
271 to 280	(5)	(5)	----	----	----	----
Man-hours per vessel:						
Maximum	3,158,900	1,596,200	3,158,900	1,198,700	1,294,200	1,424,300
Minimum	300,200	300,200	798,300	511,200	400,000	531,500
Fewest days—keel laying to delivery	21	21	60	33	32	87
Number of vessels delivered	1,475	1,374	101	207	255	63

[1] Excludes vessels delivered by 1 shipyard that delivered only 2 EC–2 vessels.
[2] Average for all yards by groups based only on complete groups of 10 vessels.
[3] Average for 3 vessels.
[4] Average for 7 vessels.
[5] Only 1 yard.
[6] Average for 5 vessels.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 9.—*Average Man-Hours Required for Construction of EC–2 Cargo Vessels (Liberty Ships) Delivered Through September 30, 1943*—Continued

Vessels in order of delivery dates	Yards having delivered more than 50 vessels—Con.					
	Average man-hours per vessel					
	Yard D	Yard E	Yard F	Yard G	Yard H	Yard I
All vessels, average	852,100	818,000	477,600	457,000	572,300	515,800
Vessels Nos.—						
1 to 10	1,217,400	1,394,500	739,800	899,400	914,800	1,009,100
11 to 20	973,100	1,021,900	565,900	749,100	644,100	809,400
21 to 30	924,300	935,200	600,800	656,400	564,200	686,600
31 to 40	949,100	846,500	517,400	612,600	557,500	634,900
41 to 50	750,400	772,300	473,100	660,500	592,100	589,600
51 to 60	717,900	772,000	452,200	605,600	558,100	598,100
61 to 70	699,900	776,500	422,400	552,900	536,000	573,400
71 to 80	661,000	[7] 720,400	418,200	502,200	449,500	570,800
81 to 90	[6] 700,000		403,100	479,000	430,500	569,300
91 to 100			391,700	437,100	[8] 411,600	543,800
101 to 110			395,000	418,000		493,300
111 to 120			398,200	400,700		456,100
121 to 130			[8] 400,800	377,200		379,400
131 to 140				391,700		330,600
141 to 150				402,000		320,400
151 to 160				385,000		317,600
161 to 170				367,700		313,800
171 to 180				360,600		310,700
181 to 190				347,900		313,400
191 to 200				347,900		[9] 308,900
201 to 210				354,800		
211 to 220				357,200		
221 to 230				363,400		
231 to 240				360,600		
241 to 250				342,700		
251 to 260				323,200		
261 to 270				312,600		
271 to 280				[10] 310,400		
Man-hours per vessel:						
Maximum	1,528,600	1,596,200	1,072,700	1,094,500	1,199,600	1,164,800
Minimum	640,000	682,300	367,500	303,600	402,200	300,200
Fewest days—keel laying to delivery	49	50	30	21	35	28
Number of vessels delivered	85	79	126	272	96	191

Vessels in order of delivery dates	Yards having delivered less than 50 vessels.						
	Average man-hours per vessel						
	Yard J	Yard K	Yard L	Yard M	Yard N	Yard O	Yard P
All vessels, average	972,600	1,619,500	1,506,500	1,383,900	1,610,700	1,150,000	2,645,000
Vessels Nos.—							
1 to 10	1,056,800	1,666,600	1,570,500	1,528,200	1,665,000	1,341,900	[8] 2,645,000
11 to 20	888,500	[9] 1,148,000	[3] 1,293,300	[6] 1,095,100	[3] 1,430,000	1,033,200	
21 to 30						[3] 900,000	
Man-hours per vessel:							
Maximum	1,147,800	2,488,200	1,877,600	1,713,900	2,278,900	1,701,300	3,158,900
Minimum	798,300	1,148,000	1,280,000	950,000	[11] 1,430,000	[11] 900,000	1,637,000
Fewest days—keel laying to delivery	71	101	65	60	104	69	125
Number of vessels delivered	20	11	13	15	13	23	6

[3] Average for 3 vessels
[6] Average for 5 vessels.
[7] Average for 9 vessels.
[8] Average for 6 vessels.
[9] Man-hours for 1 vessel.
[10] Average for 2 vessels.
[11] Average for last 3 vessels.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

In general, the number of days required in each yard from keel laying to delivery decreased along with man-hour requirements, as more Liberty ships were built. The record time (21 days) from keel laying to delivery, before September 30, 1943, was made by the yard that built the most Liberty ships in that period, Yard G (table 10). It is significant, furthermore, that though the yards that had delivered 50 or more vessels and those that had delivered less than 50 required about the same average number of days for the first 10 vessels, 205 against 200, when all the ships constructed are taken into account, the first group, with its extensive experience, required an average of only 63 days per ship as compared with 163 days required by the second group.

TABLE 10.—*Average Number of Days, From Keel Laying to Delivery, for EC–2 Cargo Vessels (Liberty Ships) Delivered Through September 30, 1943* [1]

Vessels in order of delivery dates	Total			Average number of days					
		Average days, yards having delivered—		Yards having delivered more than 50 vessels					
	Average days, all yards [2]	50 or more vessels	Less than 50 vessels	Yard A	Yard B	Yard C	Yard D	Yard E	Yard F
All vessels, average	69	63	163	62	64	87	93	95	65
First vessel	-------	-------	-------	245	274	243	314	280	272
Vessels Nos.—									
1 to 10	203	205	200	217	266	172	262	209	243
11 to 20	115	120	91	173	191	103	99	106	101
21 to 30	85	85	-------	121	120	71	83	101	77
31 to 40	67	67	-------	93	77	60	71	82	64
41 to 50	59	59	-------	66	65	61	67	68	50
51 to 60	54	54	-------	61	61	53	62	63	44
61 to 70	51	51	-------	55	56	[3] 52	56	66	35
71 to 80	48	48	-------	47	56	-------	59	[4] 60	39
81 to 90	46	46	-------	61	52	-------	[5] 64	-------	37
91 to 100	45	45	-------	59	51	-------	-------	-------	32
101 to 110	41	41	-------	46	50	-------	-------	-------	33
111 to 120	41	41	-------	46	46	-------	-------	-------	38
121 to 130	41	41	-------	42	44	-------	-------	-------	[6] 38
131 to 140	43	43	-------	42	46	-------	-------	-------	-------
141 to 150	42	42	-------	41	46	-------	-------	-------	-------
151 to 160	38	38	-------	42	43	-------	-------	-------	-------
161 to 170	38	38	-------	46	41	-------	-------	-------	-------
171 to 180	34	34	-------	40	36	-------	-------	-------	-------
181 to 190	33	33	-------	37	36	-------	-------	-------	-------
191 to 200	34	34	-------	36	37	-------	-------	-------	-------
201 to 210	32	32	-------	[7] 34	35	-------	-------	-------	-------
211 to 220	34	34	-------	-------	38	-------	-------	-------	-------
221 to 230	34	34	-------	-------	39	-------	-------	-------	-------
231 to 240	33	33	-------	-------	38	-------	-------	-------	-------
241 to 250	35	35	-------	-------	41	-------	-------	-------	-------
251 to 260	([8])	([8])	-------	-------	[8] 36	-------	-------	-------	-------
261 to 270	([8])	([8])	-------	-------	-------	-------	-------	-------	-------
271 to 280	([8])	([8])	-------	-------	-------	-------	-------	-------	-------
Days per vessel:									
Maximum	333	333	332	250	288	253	333	306	304
Minimum	21	21	60	33	32	44	49	50	30
Number of vessels delivered	1,475	1,374	101	207	255	63	85	79	126

See footnotes at end of table.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 10.—*Average Number of Days, From Keel Laying to Delivery, for EC–2 Cargo Vessels (Libery Ships) Delivered Through September 30, 1943*—Continued

Vessels in order of delivery dates	Average number of days									
	Yards having delivered more than 50 vessels—Con.			Yards having delivered less than 50 vessels						
	Yard G	Yard H	Yard I	Yard J	Yard K	Yard L	Yard M	Yard N	Yard O	Yard P
All vessels, average	49	50	50	138	235	167	112	184	150	232
First vessel	293	98	160	292	306	238	127	259	268	232
Vessels Nos.—										
1 to 10	224	-91	163	189	248	194	133	207	229	[6] 232
11 to 20	143	59	103	87	[9] 101	[3] 93	[5] 72	[3] 107	95	
21 to 30	86	44	66						[3] 74	
31 to 40	60	43	56							
41 to 50	56	48	47							
51 to 60	54	44	43							
61 to 70	47	47	46							
71 to 80	44	43	48							
81 to 90	40	38	46							
91 to 100	38	[6] 36	45							
101 to 110	35		42							
111 to 120	35		39							
121 to 130	41		36							
131 to 140	50		35							
141 to 150	47		34							
151 to 160	32		36							
161 to 170	29		34							
171 to 180	28		32							
181 to 190	28		30							
191 to 200	28		[9] 29							
201 to 210	29									
211 to 220	29									
221 to 230	28									
231 to 240	28									
241 to 250	28									
251 to 260	26									
261 to 270	23									
271 to 280	[10] 22									
Days per vessel:										
Maximum	257	99	205	292	332	257	173	269	297	299
Minimum	21	35	28	71	101	65	60	104	69	125
Number of vessels delivered	272	96	191	20	11	13	15	13	23	6

[1] Excludes vessels delivered by shipyard which delivered only 2 EC-2 vessels.
[2] Average for all yards by groups based only on complete groups of 10 vessels.
[3] Average for 3 vessels.
[4] Average for 9 vessels.
[5] Average for 5 vessels.
[6] Average for 6 vessels.
[7] Average for 7 vessels.
[8] Only 1 yard.
[9] 1 vessel.
[10] Average for 2 vessels.

MAN-HOURS REQUIRED IN CONSTRUCTION OF DESTROYER ESCORT VESSELS

One of the most important phases of the naval construction program during 1943 was the construction of destroyer escort vessels. The speedy destroyer escort was required for convoy duty and for combating the submarine menace, and during 1943 much importance was placed on completion of outstanding contracts.

By October 31, 1943, five private shipyards had each delivered more than 5 of these vessels, and together had delivered 112, the man-hour requirements of which are presented in table 11. The average number

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

of man-hours per ship required for all 112 vessels was 973,200 as against 1,271,900, the average for the first vessel delivered in each of the five yards. All of the yards had delivered at least 7 vessels, the average for the seventh being 943,200. The average for the twentieth ship in the four yards that had delivered at least 20 was 909,800. The best record was made by Yard A, with an average of 553,900 hours for 7 vessels. The maximum requirement for any of the 112 vessels was 2,223,800, the minimum 498,100 hours.

TABLE 11.—*Number of Man-Hours and Number of Days, from Keel Laying to Delivery, for Destroyer Escort Vessels* [1]

Vessels in order of delivery	Average per vessel, all 5 yards		Average per vessel			
			Yard A		Yard B	
	Number of man-hours	Number of days	Number of man-hours	Number of days	Number of man-hours	Number of days
All vessels, average	973,200	210	553,900	102	747,700	194
Vessels Nos.—						
1 to 3	1,235,200	256	598,600	131	959,000	304
4 to 6	1,091,400	240	527,800	86	923,800	244
7 to 9	1,076,800	225	[2] 498,100	[2] 64	892,400	209
10 to 12	1,071,200	217			831,100	199
13 to 15	1,000,500	196			756,900	183
16 to 18	969,400	190			749,000	172
19 to 21	856,800	204			726,200	177
22 to 24	707,300	199			665,700	171
25 to 27	649,400	[4] 170			568,900	[4] 129
28 to 30	634,600	186			537,600	157
31 to 33	([5])	([5])				
First vessel			624,600	130	972,500	283
Last vessel included above			498,100	64	523,100	151

Vessels in order of delivery	Average per vessel					
	Yard C		Yard D		Yard E	
	Number of man-hours	Number of days	Number of man-hours	Number of days	Number of man-hours	Number of days
All vessels, average	1,473,100	251	828,900	245	1,100,600	170
Vessels Nos.—						
1 to 3	2,141,200	334	1,129,300	300	1,345,700	212
4 to 6	1,797,900	313	994,600	335	1,212,900	223
7 to 9	1,475,500	260	848,000	237	1,091,200	196
10 to 12	1,522,500	244	816,500	237	1,114,700	188
13 to 15	1,292,500	231	800,900	234	1,151,500	137
16 to 18	1,275,000	214	762,600	230	1,091,000	146
19 to 21	1,082,000	199	762,300	238	[3] 1,045,600	[3] 136
22 to 24	1,060,600	189	748,800	227		
25 to 27			729,800	210		
28 to 30			731,700	216		
31 to 33			[2] 721,500	[2] 208		
First vessel	2,223,800	320	1,186,600	282	1,352,000	205
Last vessel included above	1,095,500	194	721,500	208	1,031,200	140

[1] All vessels delivered by October 30, 1943 by private shipyards, that had delivered 5 or more vessels.
[2] Data for 1 vessel.
[3] Data for 2 vessels.
[4] Low number of days was caused by fact that 1 vessel in group was delivered 54 days after keel laying.
[5] Only 1 yard delivered more than 30 vessels.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

The average number of days required from keel laying to delivery for the first vessel delivered in the five yards was 244 days, as against 210 days for all 112 vessels. The longest period required between keel laying and delivery for a destroyer escort was 348 days in Yard C, as compared with the minimum of 54 days in Yard B.

Occupations of Workers in Private Shipyards

In order to obtain information on the occupational composition of the labor force in shipyards, the Bureau of Labor Statistics tabulated data contained on wage schedules for the midweek of June 1943, which the Navy and War Departments and the Maritime Commission collected and transmitted to the Bureau. The results of this tabulation, covering 386 private shipyards with over 1,250,000 employees, are summarized in table 12.

Of the 4 main classes of employees shown [5]—supervisory, skilled, semiskilled and unskilled—skilled workers were the largest group, comprising nearly half of all the employees on production. The semiskilled group ranked second in size and together with the skilled totaled 84 percent of all the production workers. Supervisory employees exceeded the unskilled in number.

Skilled welders led all other occupations in number of workers, illustrating the importance of this trade in modern American shipbuilding. Whereas in August 1936 only about 9 percent of all skilled workers were welders, by June 1943 the proportion had risen to 19 percent. In June 1943, about 9 percent of all the employees, regardless of class, were skilled welders. Next in numerical rank were the leadermen among the supervisory workers with 6 percent; thereafter, in descending order, the most important were laborers and shipfitters (5.2 percent), carpenters (4.7 percent), machinists (4.6 percent), pipefitters (3.7 percent), and electricians (3.3 percent).

In general the occupational patterns for yards building different types of vessel were similar, except for a few striking variations. It must be kept in mind, in comparing occupational distribution according to type of vessel under construction, that the classifications shown in table 13 were made on a yard rather than on an employee basis. Thus, a yard building more than one type of vessel was classified according to the type on which the major portion of the work in the yard was being done.

Yards building Liberty cargo vessels, tankers, and landing craft had an unusually high proportion of skilled welders. In yards building tankers the proportion was 15.1 percent higher than in any other group. Machinists were exceptionally numerous in yards building submarines; they comprised 12.0 percent of all workers in such yards but only 4.6 percent of the total in all yards combined. Yards building mine and patrol craft, involving the construction of a number of wooden vessels, employed a high percentage of carpenters—12.4 percent as compared with the all-yard ratio of 4.7 percent. Because of the large number of small yards among those building landing craft, 11.7 percent of the workers in this type of construction were supervisory employees, as contrasted with 8.6 percent in all the yards together. In the smaller yards, many of the supervisors may be working foremen.

[5] Administrative, clerical, and technical employees are not included.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Perhaps the most striking point brought out in table 12 is the fact that in June 1943 repair yards reported a lower proportion of skilled workers (first-, second-, and third-class journeymen and premium men) than any of the other types of yard, but a much higher proportion of helpers. Even shipyards building Liberty cargo vessels claimed proportionately more workers in skilled classifications than did the repair yards.

TABLE 12.—*Percentage Distribution of Workers in Private Shipyards, by Occupation and Type of Yard,*[1] *June 1943*

Occupation	Percentage distribution of workers in—								
	All types of yards	Yards constructing—							Repair yards
		Liberty cargo vessels	Tankers	Other types of cargo vessels	Naval combatant vessels	Submarines	Mine and patrol craft	Landing craft	
Supervisory workers	8.6	9.9	8.3	10.3	6.4	6.7	8.6	11.7	7.3
Superintendents [2]	.2	.1	.4	.1	.1	.2	.3	1.0	-------
Foremen [3]	1.6	1.8	2.0	1.6	1.0	1.3	1.4	6.7	.4
Quartermen [4]	.5	.3	.1	.9	.7	1.0	.7	-------	.2
Leadermen	5.6	7.3	5.6	6.8	3.9	3.9	5.8	3.5	6.4
Others	.7	.4	.2	.9	.7	.3	.4	.5	.3
Skilled workers [5]	48.2	50.4	51.3	44.4	46.4	49.0	55.8	54.1	42.7
Anglesmiths	.4	.8	.1	.8	.1	-------	.1	-------	.1
Blacksmiths	.2	.1	.3	.1	.1	.3	.2	.2	.3
Boilermakers	.7	.8	.8	.4	.2	.1	.5	1.6	2.0
Bolters	.2	.3	-------	.3	-------	.3	.5	-------	.6
Burners	2.5	3.1	4.2	2.5	1.9	1.1	1.6	2.5	2.3
Carpenters	4.7	3.8	2.7	3.8	2.6	2.0	12.4	2.9	6.2
Calkers and chippers	2.0	2.2	1.4	2.0	2.3	2.9	1.5	2.1	1.3
Coppersmiths	.2	.1	.1	.1	.3	.2	.1	-------	.1
Crane operators, under 20 tons	.6	.6	1.1	.5	.6	1.1	.5	.3	.2
Crane operators, 20 tons and over	.5	.9	.6	.6	.3	-------	.1	.5	.2
Drillers	.7	.9	.2	.6	.9	.4	.4	.2	.7
Electricians	3.3	2.3	3.0	3.8	3.8	3.1	4.3	3.7	2.6
Erectors	.5	.6	.6	.6	.5	.8	.2	.2	.2
Joiners	.6	-------	.4	.6	.5	.9	2.9	-------	1.1
Layer-out men	.3	.3	.4	.2	.3	-------	.1	.2	-------
Loftsmen	.2	.4	.2	.1	.2	.2	.5	.4	.1
Machine operators, plate shop	.3	.3	.2	.2	.2	.1	.3	.4	.3
Machinists	4.6	3.2	4.4	3.9	5.5	12.0	5.8	5.2	5.1
Painters	2.3	2.2	1.8	2.0	3.0	3.3	2.5	3.8	1.9
Pipe coverers	.1	.1	.1	-------	.3	-------	-------	.4	-------
Pipe fitters	3.7	3.9	4.2	3.9	3.1	3.6	4.8	5.4	3.6
Regulators	.2	-------	.4	.2	.4	.1	.1	-------	.2
Riggers	2.0	2.4	2.0	1.4	1.7	1.5	2.1	1.5	4.3
Riggers, ship	.4	.8	-------	.8	.1	-------	-------	-------	-------
Riveters	.2	.3	.1	.1	.2	.1	.1	-------	.7
Sheet-metal workers	1.5	1.0	.7	1.3	2.8	1.7	2.0	1.1	1.3
Shifitters	5.2	6.8	5.4	4.0	5.1	4.0	4.2	7.9	2.1
Welders	9.3	11.3	15.1	8.7	8.8	7.1	7.0	12.0	4.7
All others	.8	.9	.8	.9	.6	2.1	1.0	1.6	.5
Semiskilled workers	35.8	33.9	33.1	37.5	40.5	38.7	28.2	25.0	37.6
Apprentices, trainees, and students	10.1	14.0	2.9	14.0	11.5	24.2	5.5	4.9	2.0
Handymen, all classes	5.2	3.3	6.3	2.0	11.0	.3	1.0	.1	4.9
Helpers, all classes	15.7	10.4	18.9	16.8	14.5	12.9	18.1	15.8	24.1
Improvers	1.2	2.3	.1	.1	.5	-------	.6	-------	5.0
Other semiskilled workers	3.6	3.9	4.9	4.6	3.0	1.3	3.0	4.2	1.6
Buffers	.1	.1	-------	.1	-------	-------	-------	.4	-------
Cleaners	.6	-------	-------	.7	1.0	.6	.4	.4	.3
Counters	.1	-------	.4	-------	-------	-------	-------	-------	-------
Expediters and tool checkers	.3	.4	.8	.7	.1	-------	-------	-------	-------
Firemen, powerhouse	.1	-------	.1	.1	.1	.2	.1	-------	.1
Holders-on	.1	.2	.1	.1	.1	.1	.1	-------	.2
Hook tenders	.3	.3	.4	.6	.3	.1	.2	-------	.1
Line-up men	.2	.2	1.1	-------	.1	-------	.1	-------	-------
Oilers	.1	.2	.1	.2	.1	-------	-------	1.0	.1

See footnotes at end of table.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 12.—*Percentage Distribution of Workers in Private Shipyards, by Occupation and Type of Yard,*[1] *June 1943*—Continued

Occupation	Percentage distribution of workers in—								
	All types of yards	Yards constructing—							Repair yards
		Liberty cargo vessels	Tankers	Other types of cargo vessels	Naval combatant vessels	Submarines	Mine and patrol craft	Landing craft	
Other Semiskilled workers—Continued									
Rivet catchers	0.1	0.3	0.1	0.1			0.1		
Rivet heaters	.1	.2		.1	0.1	0.1			0.1
Storekeepers	.8	.8	1.2	1.0	.7		.9	0.8	.4
Truck drivers, under 3 tons	.3	.3	.3	.5	.2	.2	.3	.7	.3
Truck drivers, 3 to 5 tons	.1	.2	.1	.1					
Truck drivers, over 5 tons	.1	.2	.1	.1					
Welder examiners	.1	.2						.2	
All others	.1	.3	.1	.2	.2		.8	.7	
Unskilled workers	7.4	5.8	7.3	7.8	6.7	5.6	7.4	9.2	12.4
Firemen, plant protection	.3			.1	.4		.1	.6	.5
Fire watchers	.3		.1	.2	.1		.4		2.8
Guards	1.4	.9	1.3	1.2	1.6	1.2	2.2	1.9	2.8
Janitors	.3	.3	.2	.3	.2		.4	1.3	
Laborers	5.1	4.6	5.7	6.0	4.4	4.4	4.3	5.4	6.3
All occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Based on pay-roll summaries submitted by 386 shipyards employing approximately 1,250,000 workers during the midweek of June 1943; absence of figures indicates that no workers were reported for that particular occupation or that those reported represented less than a tenth of 1 percent. Data collected by War and Navy Departments and Maritime Commission.
[2] Includes superintendents, assistant superintendents, and general foremen.
[3] Includes foremen and assistant foremen.
[4] Includes quartermen and assistant quartermen.
[5] Includes first-, second-, and third-class journeymen and premium men.

Table 13 compares the distribution of the more important skilled occupations for the periods August 1936 and June 1943 in private shipyards engaged in new construction. These data show very clearly the growing importance of welding in shipyards and the decreasing importance of riveting. Because of the large number of wooden mine and patrol craft included in the present program, carpenters comprised 4.6 percent of the working force in June 1943 as compared with 1.7 percent in August 1936.

TABLE 13.—*Percentage Distribution of Workers in Private Shipyards August 1936 and June 1943* [1]

Occupation	August 1936	June 1943	Occupation	August 1936	June 1943
Supervisory workers	5.2	8.7	Skilled workers—Continued.		
Skilled workers	46.1	48.6	Pipefitters	2.4	3.7
Anglesmith and blacksmiths	.5	.6	Riveters	.8	.2
Boilermakers	.5	.6	Sheet-metal workers	3.6	1.5
Chippers and caulkers	2.7	2.1	Shipfitters	3.9	5.4
Carpenter and shipwrights	1.7	4.6	Welders	4.3	9.7
Coppersmiths	.7	.2	All others	7.1	9.1
Electricians	3.4	3.4	Semiskilled workers	41.5	35.7
Joiners	1.1	.6	Unskilled workers	7.2	7.0
Machinists	10.9	4.6			
Painters	2.5	2.3	All workers	100.0	100.0

[1] Does not include repair yards.

Digitized for FRASER
https://fraser.stlouisfed.org
Federal Reserve Bank of St. Louis

Employment and Labor Conditions

Effect of the Draft of Men Under 26 on the Petroleum Industry[1]

Summary

TO ASCERTAIN the effect of the withdrawal of men under 26 years of age into the armed forces, the Bureau of Labor Statistics at the request of the Petroleum Administration for War made an analysis of the occupational and age characteristics of the work force of the petroleum industry from available Selective Service Replacement Schedules. This industry produces fuel and lubricants for aircraft, mechanized military equipment, and naval vessels, as well as for essential industrial and civilian consumers. It also supplies large quantities of materials for the manufacture of synthetic rubber and explosives, and produces many other war-important materials. This study is based on an unusually large number of Replacement Schedules, which give detailed age and occupational information. Since such detailed figures are not generally available, the results should prove of interest in connection not only with the petroleum industry but also with other industries which face the loss of their younger men.

Analysis of the Replacement Schedules indicates that less than 40 percent of the employees in the petroleum industry are subject to Selective Service; that is, they are men between the ages of 18 and 37 and have not been classified as 4–F. Less than 5 percent of all employees are men between the ages of 18 and 26 and, consequently, subject to immediate call under the recently changed Selective Service regulations. It might be assumed that withdrawal of this small proportion of workers from the industry would create no serious problems, but the effect is far greater than this figure would indicate.

Nearly 60 percent of the vital group of technically trained men in the industry are subject to Selective Service, and 11 percent of the total are between the ages of 18 and 26. Many of these young technical employees carry great responsibility for the engineering and development of new refining processes, the supervision and control of the manufacture of petroleum products, and the development of new sources for petroleum. Under present conditions the industry considers it most unlikely that they can be satisfactorily replaced.

[1] Prepared in the Bureau's Division of Productivity and Technological Development by George E. Sadler under the supervision of James M. Silberman.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Firms engaged in exploration and development and petroleum laboratories will lose the highest proportions of their employees as men under 26 are drafted. The losses would approximate 12 percent of the total force in exploration and development establishments, and 10 percent in the laboratories, on the assumption that all are physically fit and are called up. Laboratories and refineries have the highest proportions of technically trained employees affected by the new regulations, about 17 percent and 10 percent, respectively. Some of these younger men will be deferred as essential to the high-octane program through the Interagency Committee on Occupational Deferments. In other branches of the industry, where younger technical men are less important, it is likely that few will receive special consideration.

Scope of the Inquiry

For the purposes of this study, the Bureau of Labor Statistics examined available Selective Service Replacement Schedules for establishments in all branches of the petroleum industry, including refining, laboratories, drilling and production, exploration and development, and other activities (transportation, distribution, marketing, and general office). All schedules were analyzed to determine the status of the working force of the major industry divisions by age, Selective Service status, occupation, parental status, and sex. Refineries, with 69,073 employees reported, account for about two-thirds of the total of 106,364 employees covered by the Replacement Schedules examined. This refinery employment represents somewhat more than two-thirds of the total for all refineries in the United States. The 10,454 employees reported by the establishments engaged in drilling and production constitute a coverage of about 10 percent. At least 25 percent of all employees in petroleum laboratories in the country are included, while those reported on schedules for the remaining branches of the industry represent a significant proportion of the national total.

Age Composition of the Work Force

Men in the Selective Service age group 18 to 37, excluding those physically disqualified for military service, represent almost two-fifths of all employees covered, while men over 37 constitute almost half of all employees. Women represent only one-tenth of total employment in the sample firms.

Men affected by the new Selective Service regulations—those between 18 and 26—represent 5 percent of total employment, or about 14 percent of the total for men of Selective Service age. The proportion of men under 26 years of age is greatest in the laboratories and in the firms engaged in exploration and development, and lowest in drilling and production establishments (table 1).

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Distribution of Employees in Petroleum Industry Covered by Replacement Schedules, by Age and Branch of Industry*

Branch of industry	All employees	Number of male employees				Number of female employees	Number of men subject to draft [1]			
		Under 18	18 to 37	38 and over	4-F		Not on replacement list [2]	18 to 21	22 to 25	26 to 37
Entire industry	106,364	736	39,890	50,904	4,351	10,483	12,616	978	2,780	23,516
Engineering, development, and research laboratories	[3] 3,756	4	1,765	1,080	135	772	208	53	324	1,180
Refineries	69,073	313	26,468	34,904	2,560	4,828	10,825	486	1,670	13,487
Exploration and development	3,158	210	1,589	559	517	283	42	191	200	1,156
Drilling and production	10,454	111	3,439	5,733	384	787	18	67	154	3,200
Other	19,923	98	6,629	8,628	755	3,813	1,523	181	432	4,943
	Percentage distribution									
Entire industry	100.0	0.7	37.5	47.9	4.1	9.8	11.9	0.9	2.6	22.1
Engineering, development, and research laboratories	100.0	.1	47.0	28.8	3.6	20.5	5.5	1.4	8.6	31.4
Refineries	100.0	.5	38.3	50.5	3.7	7.0	15.7	.7	2.4	19.5
Exploration and development	100.0	6.6	50.3	17.7	16.4	9.0	1.3	6.0	6.3	36.6
Drilling and production	100.0	1.1	32.9	54.8	3.7	7.5	.2	.6	1.5	30.6
Other	100.0	.5	33.3	43.3	3.8	19.1	7.6	.9	2.2	22.6

[1] Men aged 18 to 37, excluding those disqualified for military service.
[2] Pre-Pearl Harbor fathers, 18–37, now subject to Selective Service, for whom detailed age data are not available since they were not scheduled on replacement lists prepared prior to July 1943.
[3] Does not include two laboratories, with a total employment of 1,140, for which age data for employees are not available.

Characteristics of the Technical Personnel

Because of the critical importance of the highly trained technical employees to the industry, the Bureau analyzed this force in more detail than the other occupational categories. This analysis was made by obtaining a distribution of technical personnel by age, parental status, and type of job.

Table 2 indicates that almost 11 percent of the 8,668 technically trained employees in the Bureau's sample are less than 26 years of age, and almost none of these young men have minor children. In fact, slightly less than half of the 4,983 technical men aged 18 to 37 are pre-Pearl Harbor fathers. Men aged 18 to 25 represent about one-sixth of all technical employees in the laboratories, and somewhat less than one-tenth of all refinery technical personnel. The percentages of men under 26 are lower in the other branches of the industry.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 2.—*Distribution of Technical Employees in Petroleum Industry Covered by Replacement Schedules, by Age, Branch of Industry, and Parental Status*

Branch of industry	Technical employees					Technical men subject to draft[1]	
	Total	Male			Female	Total	
		18 to 37	Over 37	Physically disqualified		Fathers[3]	Other
	Number of employees						
Entire industry	8,668	4,893	3,358	162	165	2,330	2,653
Laboratories	2,227	1,508	612	28	79	489	1,019
Refineries	4,021	2,089	1,832	47	53	1,032	1,057
Exploration and development	944	698	148	74	24	386	312
Drilling and production	894	412	470	7	5	256	156
Other	582	276	296	6	4	167	109
	Percentage distribution						
All industry	100.0	57.5	38.7	1.9	1.9	26.9	30.6
Laboratories	100.0	67.7	27.5	1.2	3.5	22.0	45.7
Refineries	100.0	52.0	45.5	1.2	1.3	25.7	26.3
Exploration and developemnt	100.0	73.9	15.7	7.8	2.6	40.9	33.0
Drilling and production	100.0	46.1	52.6	.8	.5	28.6	17.5
Other	100.0	47.4	50.9	1.0	.7	28.7	18.7

Branch of industry	Technical men subject to draft[1]—Continued						
	18 to 21 years		22 to 25 years		26 to 37 years		Age not available[2]
	Fathers	Other	Fathers	Other	Fathers	Other	Fathers
	Number of employees						
Entire industry	1	97	56	754	1,390	1,802	883
Laboratories		48	13	318	323	653	153
Refineries		30	14	342	508	685	510
Exploration and development	1	17	18	52	298	243	69
Drilling and production		1	6	13	168	142	82
Other		1	5	29	93	79	69
	Percentage distribution						
All industry	(4)	1.1	0.7	8.7	16.0	20.8	10.2
Laboratories		2.1	.6	14.3	14.5	29.3	6.9
Refineries		.8	.4	8.5	12.6	17.0	12.7
Exploration and development	0.1	1.8	1.9	5.5	31.6	25.7	7.3
Drilling and production		.1	.6	1.5	18.8	15.9	9.2
Other		.2	.9	5.0	16.0	13.5	11.8

[1] Technical men aged 18 to 37, excluding those disqualified for military service.
[2] Pre-Pearl Harbor fathers, 18 to 37, now vulnerable to Selective Service, for whom detailed age data are not available since they were not scheduled on Selective Service replacement lists prepared prior to July 1943.
[3] "Fathers" are men aged 18 to 37 with children under 18 born on or before September 14, 1942.
[4] Less than 0.05 percent.

Adequate occupational data were available for firms employing a total of 8,078 technical employees. About 28 percent of these men are engaged in supervision; 17 percent are chemists; 10 percent are

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

chemical engineers; and 29 percent are engineers in other fields, including mechanical, civil, petroleum, and process work. The other categories combined represent 24 percent of the total (table 3).

TABLE 3.—*Distribution of Technical Employees in Petroleum Industry Covered by Replacement Schedules, by Occupation and Vulnerability to Draft*

Occupation	Entire industry			Refineries and laboratories			Exploration, drilling, and production			Other
	Number	Percent in occupation		Number	Percent in occupation		Number	Percent in occupation		Number
		Subject to draft [1]	Under 26 [2]		Subject to draft [1]	Under 26 [2]		Subject to draft [1]	Under 26 [2]	
All technical employees	[3] 8,078	57.5	10.5	[3] 5,658	57.5	12.5	1,838	60.4	5.9	582
Chemists:										
Research	484	76.2	16.9	484	76.2	16.9				
Analytical, other	914	72.4	16.5	877	71.9	16.6	7	100.0	14.3	30
Engineers:										
Chemical	776	80.8	24.2	618	82.5	27.5	32	59.4	9.4	126
Civil, field	331	49.2	4.8	92	46.7	6.5	190	56.8	5.3	49
Mechanical	718	57.1	9.6	630	56.5	8.6	7	57.1		81
Process	530	71.7	10.0	355	69.9	12.1	150	76.0	6.7	25
Other	742	62.0	21.7	538	68.4	29.0	52	86.5	7.7	152
Geologists, geophysicists	263	52.9	1.5				253	53.4	1.6	10
Observers, computers	285	77.9	12.6				285	77.9	12.6	
Party chiefs, surveyors	354	78.2	9.0				354	78.2	9.0	
Supervisors:										
Laboratory	625	46.2	1.4	625	46.2	1.4				
Process, production	1,631	23.4	.2	1,187	24.0	.2	352	24.1	.3	92
Other	425	61.6	10.6	252	62.3	15.1	156	60.3	2.0	17

[1] Men aged 18–37 not classified as 4–F at time Replacement Schedules were prepared.
[2] A small number of "fathers" are not included, since replacement lists prepared prior to July 1943 did not include them. It is known that very few employees under 26 years of age are Pre-Pearl Harbor fathers.
[3] Excluded 590 technical employees in two laboratories for whom occupational data are not available.

There are marked variations in the proportions of men at different ages in each of the occupational categories analyzed. Men in the age group 18 to 37 constitute the highest percentages of total employment in the following occupations: Chemical engineer, party chief and surveyor, observer and computer, and research chemist; these percentages are between 75 and 81. Men less than 26 years of age represent nearly one-quarter of all chemical engineers, and about 17 percent of all chemists.

The proportion of younger men is highest in the refineries and laboratories, where many of them are charged with responsibility for developing and starting in production the new processes which are turning out aviation fuel and synthetic rubber for the armed forces. However, it is in these occupations that the limited number of deferments to be granted by State Selective Service Directors will necessarily be concentrated.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Labor Conditions in the Netherlands Indies[1]

Summary

VARIED natural resources in the Netherlands Indies have given the Islands an important position in world trade. As exports have increased, larger proportions of the Indonesian people have obtained wage-paid employment; growing numbers of small landholders have also secured a money income through the sale of export products, such as cinchona and rubber. Of the 60,727,233 inhabitants in 1930, 97.4 percent were of native stock; 2.0 percent were Chinese; 0.4 percent, European; and 0.2 percent, other non-indigenous Orientals.

During 1938, unskilled factory labor in various parts of the Islands earned about Fl. 0.35 to Fl. 0.40 daily. In terms of the par value of the florin in United States money, before either currency was devalued, the daily pay was 14 to 16 cents. Money wages were higher at that time than in the middle 1930's, when pay was reduced as a part of the program of adjustment made necessary by the international depression, which affected the Indies seriously. An 8-hour workday was common in industry. Agricultural workers were employed for either shorter or longer hours, depending on individual crop requirements and on whether or not the laborers worked part time and cultivated land of their own in addition.

An important phase of the effort to solve the serious overpopulation problem in Java was the introduction in the 1930's of a drive for industrialization. The growth of industry and the troubled international situation led to the introduction of various public controls. Owing to the difficulty of legislating for native workers, who were often employed in remote areas and small enterprises, wage and hour regulation was slow in being introduced. A system of workmen's compensation was maintained. Late in 1940 a labor-relations law was enacted. Failure of the Japanese to secure expected benefits from Indonesian labor and resources led the military government to introduce a labor draft early in 1944.

Natural Resources

The Netherlands Indies, situated on the equator between the Asiatic mainland and the Philippines on the north and Australia on the south, possess a great wealth of raw materials as well as the agricultural productivity of the tropics. Abundant rainfall and the largely volcanic soil make the islands of Java and Sumatra extraordinarily fertile. The varied natural resources supplied a high proportion of certain world exports: 90 percent of the cinchona bark (the source of quinine); 85 percent of the pepper; 82 percent of the kapok; nearly 40 percent of the rubber; 30 percent of the coconut; 25 percent of the hard-cordage fiber; 24 percent of the palm-oil products; and 17 percent of the tea. Other important products are tobacco, sugar, coffee, and teakwood. Twenty percent of the world's tin output and 3 percent of the petroleum originated in the Islands in peacetime, and in 1938–40 coal production aggregated 1½ to 2 million metric tons annually. The high-quality iron-ore deposits were not yet exploited.

Large estates, established with western capital, and independent native producers supplied different raw materials in varying volume.

[1] Prepared in the Bureau's Editorial and Research Division, by Margaret H. Schoenfeld and M. Mead Smith.

Digitized for FRASER
https://fraser.stlouisfed.org
Federal Reserve Bank of St. Louis

In 1939, the large estates numbered 2,401 and had a total land area of 6,165,145 acres. Individual estates averaged 2,249 acres each in Java and 2,879 acres in the Outer Islands. Of the total land area held by estates, on the average, about one-half was cultivated; their output constituted nearly two-thirds of the exports, by value. In Java less than 8 percent of the land was held for estate agriculture and the rest was worked by native Indonesians; in Sumatra the proportion of land cultivated by estates was lower than in Java; and on other islands it was even less important or was nonexistent. The western estates predominated in producing sugar, palm-oil, tea, cinchona, and hard fibers. Before the present war, the share of exports and domestic production supplied by native farmers on small holdings was on the increase. Java's output was the most important in volume and range of crops. However, native farmers in many districts in Sumatra, Celebes, South East Borneo, Bali, and Lombok also contributed. One-half of the rubber for export and a large part of the coffee, corn, and tapioca were produced by the natives; kapok was chiefly an Indonesian product; and pepper, copra, and coconut oil were raised almost entirely by the native planters.

The estates, the natives, and the Government tended to concentrate on certain types of production. Output also varied from island to island, depending on natural resources, natural conditions, and probably custom.

Cinchona was mainly an estate crop and came chiefly from the western part of Java and several districts of Sumatra. Rubber was produced in equal shares by natives on small plots of land and by estates in Sumatra, the western and southeastern parts of Borneo, and several districts of Java. The tin mines were largely owned or controlled by the Government and were located in Banka, Billiton, and Singkep. Rice was grown chiefly in Java. Java's position as the greatest producer of export crops from native holdings and foreign estates combined had been weakened in recent years by the rise in output from the Outer Islands. For example, between 1920 and 1940 Java's sugar exports declined from 48 percent to 6 percent of the Indies total. In the same period the combined value of rubber, tin, and petroleum exports, mainly from the Outer Islands, rose from 27 to 66 percent of the total exports.

Government of the Indies

Responsibility for developing the Islands was given to the United East India Co. by the Netherlands Government in 1602. The powers to govern and pave the way for colonization were broad but, in practice, the acquisition of territory was incidental to commercial objectives and the company did not aspire to rule the native peoples. After the company failed in 1800, the Netherlands Indies became a colony and had colonial status until 1922 when the Islands were declared to be an integral part of the Kingdom of the Netherlands. Between the last and present wars significant progress was made in the growth of Indies political autonomy. When the home country was invaded in May 1940, the political self-sufficiency of the Islands was enhanced still further. Increasing responsibility was placed on the Indies administration by the Netherlands Government-in-exile from May 1940 up to the Japanese invasion. Indies participation in the war was brief, lasting for only a month—from February 9, 1942,

583621—44——5

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

when Batavia was first bombed by the Japanese, until March 10, 1942, when Bandung (the temporary capital) fell.[2] In September 1943, announcement was made that the Netherlands Indies administration would be stationed in Australia, ready to move into the Islands on short notice at the end of hostilities.

The legislative body of the Islands, the Volksraad or People's Council, was established in 1918. The Speaker was appointed by the Queen of the Netherlands. Membership included 30 Indonesians, 25 Europeans, and 5 Chinese or Arabs; 38 members were elected, and 22 were appointed from sections of the community that did not have sufficient votes to obtain seats. Decisions of the Volksraad were subject to reversal by the Governor General of the Indies, and the States-General in the Netherlands had constitutional authority to legislate on matters affecting the entire realm. Such powers were seldom used.

Administration of Java and Madura was reorganized in the middle 1920's when the Islands were divided into three autonomous Provinces under governors and subdivided into residencies governed by official residents and their assistants. In Surakarta and Jokyakarta (native States of Java) and in Madura, where native princes still maintained their power, governors handled relations between the Indies Government and the rulers. The Outer Islands were divided into three areas under governors and were subdivided into 17 residencies. In recent years plans were placed in partial operation whereby greater local authority was to be granted over internal affairs. Native princes in certain parts of the Outer Islands also retained limited power within their realms, acting under the general supervision of Government officials. In 1930, inhabitants of the native States formed from 9.9 percent of the total population in Java and Madura to 63.7 percent in Celebes.

After the invasion in 1942 the Japanese followed their usual technique in conquered countries of appealing for support on racial grounds and of making elaborate promises of "co-prosperity." Public officials who had remained at their posts to carry on the administration were interned. A military government was established; a so-called "economic mission" was made responsible for the nonmilitary services. "Economic troops" were to reorganize local life and to run industrial plants, such as public utilities, but were subservient to Kempei, the police force. Under this arrangement important persons, including technicians, were interned in spite of having been designated by the economic troops as essential workers. Kempei eventually released some but not all of these persons. Later the Japanese began to prepare for establishment of a complete central administration, including departments for general affairs, finance, and industry, transport, police, and information, but omitting education which has come to be regarded by the Indonesians as essential to their development. Such advisory functions as the natives are permitted to exercise are for the benefit of the enemy's war effort. The reorganization of the country under a new industrial council headed by Japanese has the same purpose. Japanese who lived in the Indies before the invasion were drafted to help reorganize industry.

[2] As internal conditions were affected from the outbreak of the European war in September 1939, and not merely from the date when Japan invaded the Indies, the present article sometimes refers (in discussing the pre-war period) to the period ending with August 1939.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Employment and Unemployment

POPULATION AND POPULATION PROBLEMS

When the 1930 census was taken, 97.4 percent of the population was of Indonesian stock—59,138,067 persons in a total of 60,727,233. The significance of the non-native population was out of proportion to its numbers. Chinese inhabitants totaled 1,233,214 or 2 percent, other non-indigenous Orientals 115,535 or 0.2 percent, and Europeans 240,417 or 0.4 percent. [3] Of the 240,417 persons classed as European for census purposes, 87 percent were Dutch, 3 percent German, 3 percent Japanese, and 1 percent British; no other nationality had over 1,000 representatives. The distribution of the population is given in table 1, by nationality and geographic area. By 1941, the Indies had an estimated 72,000,000 inhabitants, of whom 49,000,000 were in Java.

TABLE 1.—*Population of Netherlands Indies, 1930, by Nationality and Geographic Area*

Population group	Number			Percentage distribution		
	Total	Java and Madura	Outer Islands	Total	Java and Madura	Outer Islands
All groups	60,727,233	41,718,364	19,008,869	100.0	100.0	100.0
Natives	59,138,067	40,891,093	18,246,974	97.4	98.0	96.0
Europeans	240,417	192,571	47,846	.4	.5	.3
Chinese	1,233,214	582,431	650,783	2.0	1.4	3.4
Other nonindigenous Orientals	115,535	52,269	63,266	.2	.1	.3

Western civilization was the third foreign civilization to be superimposed on the Indies, having been preceded by Hinduism and Islamism. Hindu culture and the Mohammedan religion were adopted by the population, and the influence of the Occident changed the economic life. Native Indonesians are largely of Malay stock; only New Guinea and adjacent islands are occupied by Papuans and allied groups. At the time of the 1930 census, the Javanese comprised the largest group of natives, totaling 27,808,623 or nearly half of the population; the Sundanese numbered 8,594,834; and the Madurese followed with 4,305,862. Four other native races—Menangkabauers, Buginese, Battak, and Balinese—numbered between 1 and 2 million each. The bonds of common interest are still mainly those of the tribe or the village. Dutch is the official language. Native tongues are chiefly Malay, Sundanese, and Javanese but, altogether, approximately 250 languages are in daily use, of which some are spoken by millions (Javanese, for example) and others by a few hundreds. In 1930, only 2.2 percent of the natives were literate, but the educational program, which was popular with the Indonesians, doubtless raised this proportion.

[3] The term "European" includes all European-born inhabitants and all persons subject to Dutch law, i.e., Occidentals, Eurasians, and Japanese, and some 9,000 natives who voluntarily acquired Dutch legal status.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

The land area of the Islands (which is five times that of Japan) and the distribution of the population in 1930 are shown in the accompanying tabulation.

	Area (square miles)	*Population*
Total	733, 681	60, 727, 233
Java and Madura	50, 752	41, 718, 364
Sumatra	163, 145	8, 254, 843
Dutch Borneo	206, 819	2, 168, 661
Other Islands of Archipelago	312, 965	8, 585, 365

With one-fifteenth of the land area, Java and Madura had over two-thirds of the population in 1941. Most of the large cities are on the island of Java. Batavia (Java), peacetime capital of the Indies, was also the largest city and had 533,000 inhabitants in 1930—410,000 Indonesians, 79,000 Chinese, 37,000 Europeans, and a small number of others. Next in order of size in Java were the cities of Surabaya (341,675), Semarang (217,796), Bandung (166,815), Surakarta (165,484), and Jokyakarta (136,649). Palembang (108,145) was the largest center on the Outer Islands. Over 90 percent of the natives lived in rural areas in Java and the Outer Islands. Europeans were concentrated in urban areas, and in 1940 almost half of them were residing in 7 cities. The Chinese were distributed fairly evenly between urban and rural areas in Java; elsewhere, nearly 70 percent were in rural areas. The rural-urban distribution of the other nonindigenous Orientals resembled that of the Chinese.

In Java, a density of 950 persons per square mile—the highest density outside the Nile delta—and an annual population growth of 750,000 created a serious problem. By 1941, Java had more inhabitants than the whole of the Netherlands Indies had in 1920. Between 1890 and 1940, this island with a predominantly agricultural economy grew at as fast a rate as industrialized England and Wales. Study showed that Java could not provide sufficient arable land to support the annual population increase and therefore the Indies Government encouraged migration to other islands, increased industrialization, and improved agricultural techniques. Although emigration was hampered by the disinclination of natives to leave their homes in Java, the rate of migration was increased from 20,000 in 1937 to 53,000 in 1940. The growth in industrialization is discussed in another section of the present article. Improved irrigation of the rice fields exemplified the measures for raising agricultural output.

TREATMENT OF SPECIAL EMPLOYMENT PROBLEMS

Contract labor.—Beginning in 1880, successive ordinances were promulgated governing employment contracts of workers recruited in overcrowded Java and Madura for work in the sparsely settled Outer Islands where labor shortage was a continuing problem. Severe penal sanctions were established under the terms of these "coolie ordinances," in an effort to insure that labor recruited from other districts would remain at work in the Outer Islands for the term of contract, thereby protecting the employers' interests and insuring a working force. Labor employed under the penal sanctions had offsetting advantages. Provisions of the ordinances established maximum hours, limited the duration of contract to 3 years, and required employers to furnish free lodging and medical care for the

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

period of the contract and free transportation home upon its termination. In practice, the terms of employment prescribed for penal-contract labor set the standard for so-called free-contract workers employed in the same areas, whose conditions of employment were not governed by law. Free labor's only advantage over contract labor subject to the coolie ordinances was freedom from penal sanctions for breach of contract. In many respects free workers were not as well off.

In 1931, the Government took the first step toward abolition of penal sanctions. By an ordinance adopted in that year and supplemented in 1936, employers in the Outer Islands were required to engage a gradually increasing proportion of free workers. By 1939, employees under penal sanctions in the Outer Islands numbered 6,531 as compared with 327,405 free workers. Late in 1941 penal sanctions were abandoned when the coolie ordinances were repealed.

Methods of recruiting native labor in Java for employment in the Outer Islands were changed by an order promulgated in 1936. The new measure, covering recruitment of penal-sanction and free labor, provided that the prospective employee must appear at the port of embarkation and sign a written contract of employment in the presence of the appropriate official, after the latter made sure that the recruit understood the terms of the contract. If the worker refused to sign, the recruiting body or the employer was liable for payment of the worker's return transportation to his home. All professional recruiting was forbidden and the function was entrusted to agencies especially established by employer associations and approved by the Department of Justice. Interested groups look forward to the time when sufficient permanent workers will have been added to the labor force of the Outer Islands to make recruitment from Java unnecessary.

Forced labor.—Forced labor, as differentiated from the above labor performed for wages under contract and subject to penal sanctions, originated in the Netherlands Indies because large numbers of natives lived by barter and their only means of fulfilling their tax obligations was to perform labor. Work could be required by the Government on the public domain and also by the owners of certain private lands. Theoretically, the native taxpayer has had the option, with exceptions, of substituting a fixed number of days of work annually for the payment of taxes. In practice, the Indonesians have been forced to perform compulsory labor either because they did not have sufficient money to pay the assessments or because paid voluntary labor was not available for Government works. Except in the case of an inadequate labor supply, officials have emphasized the right of the taxpayer to choose between payments in labor and in money.

Forced labor on directly administered Government lands was first abolished in Java and Madura, where the inhabitants were in better position to pay taxes in cash and where the labor shortage was less acute. In 1938, the wage and labor situation had improved sufficiently in the Outer Islands to enable the Government to grant residents the right to pay taxes in money instead of performing forced labor. Compulsory work could no longer be required even when the supply of labor was inadequate to carry out public projects. Voluntary substitution of work for taxes in the Outer Islands was reduced under the terms of the Road Tax Ordinance in 1941. Persons whose living standards exceeded a certain level (to be fixed by

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

public decree for the residency or area) were required to pay the tax in cash; others were given the option of paying their taxes in cash or of doing work for the improvement of public roadways.

On some private lands (*particuliere landerijen*), owners retained extraordinary powers up to the outbreak of the present war, including the right to require the performance of labor. Most of the private lands were located in West Java. Between 1910 and 1931, large sums of public money were expended to expropriate the private lands, thereby giving labor employed on such land the same status as workers on the public domain. After the depression started, a semi-official limited company was formed to purchase the remaining private lands. By 1937, some progress had been made in the purchase of the remaining estates but the program was incomplete.

OCCUPATIONS OF THE LABOR FORCE

The most recent Indies census shows that of a total population of 60,727,233 in 1930, 34.4 percent were gainfully employed. Of the total number of males, 48.5 percent were so occupied, and of the females, 20.6 percent. Distribution of the population by nationality and occupation is indicated in table 2.

TABLE 2.—*Number of Persons in Netherlands Indies Reporting a Pursuit, Classified by Nationality and Occupation, 1930*

Occupational classification	Total	Natives	Europeans	Chinese	Other non-indigenous Orientals
Total	20,871,050	20,279,642	85,321	469,935	36,152
Production of raw materials	14,363,846	14,193,158	18,800	144,888	7,000
Industry	2,208,851	2,105,129	4,676	93,988	5,058
Transportation	316,191	290,740	10,985	12,754	1,712
Trade	1,293,316	1,090,868	11,415	171,979	19,054
Professions	169,520	150,227	11,290	7,161	842
Government service	516,176	491,911	20,731	3,039	495
Other occupations	2,003,150	1,957,609	7,424	36,126	1,991

In general, the natives form the agrarian group, the Chinese and Arabs the commercial middle class, and the Westerners the small ruling class. Of the 20.3 million natives who reported an occupation in 1930, agriculture accounted for approximately 60 percent; as an occupation, agriculture had greater importance in the Outer Islands than in Java, where more of the natives worked in industry or the production of raw materials other than agricultural products. Europeans were less concentrated in one occupation; the largest single group—24 percent—were engaged in Government service and public administration (including the Army and Navy) and smaller groups were in the professions and business management. Gradually some Europeans filled positions as employees on estates and in business, and, as industrialization developed, increasing numbers were employed as technicians and skilled workers. The 470,000 Chinese having gainful occupations in 1930 were also distributed relatively evenly for the group as a whole, those in primary production and commerce forming the largest percentages. However, a preference for business characterized the Chinese in Java and Madura, where there was little room for them to engage in agriculture; in the Outer Islands a larger percent-

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

age were agricultural workers, producing raw materials on the estates and in mining enterprises. Very high proportions of the non-indigenous Orientals other than the Chinese were in commercial occupations, about 53 percent being engaged in trade, usually as middlemen; many of these were Arabs. In the Outer Islands their pursuits were more diversified than in Java.

The natural resources of the Islands and the native crafts developed during the centuries have determined the skills of the peoples to a large extent. Thus, from long experience, labor has learned how to gather and treat cinchona bark and rubber. Native handicrafts, particularly metal and woodworking, and textile spinning, weaving, and batik design, are old crafts which have been prevented from dying out because of their suitability to local use, the inability of Western industry to compete in price, and, in some instances, Government encouragement. New skills developed in recent years, incident to the spread of modern industry, are largely those utilized in factory production of textiles, foodstuffs, and the making of apparel. Trained labor was also employed in a variety of mining enterprises. At present, Indonesians are being trained in Australia as skilled craftsmen, such as carpenters, joiners, smiths, and masons. The skilled workers are to follow the troops into the Indies as they are reconquered and begin the work of rebuilding.

INDUSTRIALIZATION

Although the Netherlands did not follow a policy of opposition to colonial development, little industrialization occurred in the Indies during the first 3 decades of the present century. A few industries had been developed for the exploitation of mineral resources and the preliminary processing of certain agricultural products, but altogether the number of persons recorded as employed in 1930 in industries other than mining totaled only 10.6 percent of the entire working population. The ratio in Java and Madura was slightly higher than the average for all the islands. Java's predominance in the industrial employment of the Indies ranged from 70 percent of the total employed in the metals branch to 83 percent in apparel manufacture.

In the early 1930's, when the effects of the depression were being felt very severely in the Indies, the Government initiated a drive for industrial development. A far-reaching program of technical education was adopted; natives were trained for revival of weaving and dyeing; exhibitions, demonstrations, technical research, and finishing centers were instituted; and, after a long-established policy of free trade, a tariff system was inaugurated. The aim was to stabilize the islands' military and economic position—by relieving unemployment, lessening the Islands' dependence on imported manufactured goods, and shutting out the increasing volume of Japanese imports—without altering the agricultural character of the Indies, nor its fundamental role as an exporter of raw materials.

Indonesian activity developed very rapidly and European capital established a number of important factories. From 1930 to 1940 the number of factories and workshops, excluding small or home industries and those connected with agricultural industries, increased from 2,837 to 4,872—a 71.7 percent rise. Java remained the center of industrial activity although several important plants were established in the Outer Islands. The official estimate of workers engaged in industries

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

using mechanical power in 1939 was 300,000. No comparable information was available for workers in small-scale industries and estimates varied greatly, ranging from 600,000 to over 2,000,000, depending on whether or not cottage industries—a very numerous and important group—were included. At that time the largest numbers of workers were employed in the food, metal, and textile (weaving only) industries.

The assistance given by the Government to industrialization led to such a degree of activity that regulation was needed, and in 1934 the Government was given authority to regulate the growth of certain branches of industry. The development of established industries might be controlled and new ones might be created. A permit was required for a new plant and its location could be specified; certain minima as regards wages and other labor conditions might be imposed. The power was used to prevent destructive competition, safeguard native industry, and limit Japanese participation in the industrial life of the country. The measure has been applied principally in weaving, printing, ice and cigarette factories, dock and stevedore establishments, and rubber and rice mills. Advisory boards were established for each branch of industry to which the ordinance was applied; a general board advised the Government on policy-framing measures at the top. On these boards factory and small-scale industry, consumers, and the Government were represented.

The advent of the present war in 1939 lent impetus to industrialization. Both heavy and light industries were encouraged by the Government. The number of establishments did not increase greatly during 1940, but the output of existing factories rose substantially. Employment expanded 12 percent and industrial machinery 4 percent during the year. In 1941, new capital became available for investment in the Indies, both by Government allotment and as a result of the occupation of the Netherlands. Government allotment was provided for the implementation of a plan for greater industrial development and for extension of the establishment of basic industries. The new industries were to be used for training native labor, with reasonable wages assured to the workers and exorbitant profits prohibited. By the beginning of 1942 the plan was in operation and employment had been furnished to some 40,000 natives.

TREND OF UNEMPLOYMENT, 1928–41

The Netherlands Indies experienced marked prosperity during the early and middle 1920's; but the economy was to a high degree interrelated with and dependent on that of foreign nations, as production and export of raw materials were the Islands' chief activities. Accordingly, reduction in the purchasing power of the western manufacturing countries caused the depression to be felt very quickly in the Indies. By 1931 there was great unemployment among both Europeans and natives, although the latter suffered less since there was enough food among them to prevent hunger and they could always return to their villages. As the situation grew worse—especially in Java where many unemployed plantation laborers had returned from Sumatra—the depression spread from the basic agricultural industries to the industry and commerce of the country, and finally to the retail trades. In 1935, conditions began to improve. Various Government measures were taken, including devaluation of the currency in September 1936; this

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

was followed by a short period of prosperity. After a temporary setback in 1937, improvement continued and the number of unemployed decreased steadily through 1941. The first effect of the outbreak of the European war was an increased demand for labor, particularly for Sumatra rubber plantations. Registered unemployment dropped from 25,267 in 1936 to 18,603 in 1940 and to 15,636 in 1941.

UNEMPLOYMENT AFTER THE INVASION

Invasion and the accompanying loss of markets caused a disastrous break-down in the Indies economy, and large numbers of workers in the export industries lost their jobs. The Japanese were unable to return the disorganized country to full production for several reasons. Shipping shortages prevented the importation of necessary materials, such as cotton goods; previously available markets were closed; the Japanese were permitting extraction of only those raw materials useful to the war effort; the "scorched-earth" policy of the departing Dutch was apparently highly effective; and consumers lacked purchasing power to buy goods that might have been produced from domestic materials. Unemployment spread rapidly to workers engaged in producing for domestic use.

The military government has taken a number of steps to remedy the situation but, so far, efforts have been unsuccessful. According to all reports, economic disorganization, privation, and unemployment are prevalent in the Indies.

Control of Labor and Industry

Prior to the periods of depression and war during which State control increased to such a large extent, Government intervention in industry was confined almost entirely to the ownership or control of various enterprises such as public utilities and a number of mines and estates. To protect native interests, the prohibition of the sale of land by natives to non-Indonesians was an established Government policy which had been in practice for a number of decades. Extensive irrigation projects were of special importance in view of the natives' dependence on the rice crop.

DEPRESSION CONTROLS

The depression struck the Indies with great force, as already noted, and exports and imports as well as prices declined. When many thousands of workers were dismissed and wages were cut, the Government stepped in. Many of the Government measures dealt with the problem of unemployment among Europeans (using the term in the broad sense, as already defined). On public works, which formed an important phase of the Government's unemployment program besides being of permanent value, employment was limited to European unemployed, and to natives and Chinese assimilated into the European population. Similarly, relief, which was regarded as primarily a matter for private initiative with the Government undertaking only to supplement popular subscription, was limited to the same classes. Two crisis measures were passed in 1932, dealing with the treatment to be accorded to employees (chiefly Europeans) on their discharge. The first established the right of a discharged employee to repatria-

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

tion at the expense of the employer or a payment equivalent to 3 months' wages. The second provided periods of dismissal notice, according to length of service, for employees on indefinite contract. In 1935, restrictions were placed on the immigration of Europeans, and an employer was required to obtain a permit to employ any such alien before he was allowed to enter the Indies. The permit was refused if an unemployed Netherlander was available to fill the job. In 1937, the measure was made more permanent and coverage was broadened to include non-indigenous Oriental immigrants.

Action was taken to reduce the general unemployment. The official body for combating unemployment was Maatschappij voor Werkloosheidsbestrijding (known as M. W. B.), a legally incorporated organization controlled and financed by the Government. In addition to the industrialization and migration measures already discussed, the three main lines of attack were the operation of an employment service, the extension of unemployment relief, and the maintenance of trade schools.

Other measures, relieving unemployment only indirectly, were taken to achieve a more stable base for the Indies economy in future years. For example, new enterprises were assisted, imports were restricted by quota, and international agreements were entered into, controlling the production of export goods such as sugar, rubber, and tin.

WARTIME CONTROLS

The depression measures for direction of the economy were temporary, but the approach of war necessitated the strengthening of these controls. In September 1939, the prices of a number of commodities were fixed, although stringent control of domestic price levels was not considered necessary before the Japanese invasion. The Government also bought and stored some surpluses resulting from the cutting off of shipments of certain export products such as copra, coffee, and tobacco.

In the first month of the European war, a General Authorization Ordinance empowered the Governor General to promulgate any law or regulation for defense or economic mobilization—of individuals, groups, or industry—during the emergency. Martial law was declared when the Netherlands fell and in 1940 two ordinances were issued, one relating to the mobilization of industry and the other instituting a system of compulsory service for civilians. Under the Industrial Cooperation Ordinance voluntary cooperation of all industries in the defense effort was called for, but compulsion was authorized where investigation proved it necessary. The Government was given blanket authority to supervise or conduct private enterprise so as to increase, maintain, or curtail production according to the needs of the war effort. Among the activities in which the Government could compel cooperation were the registration, employment, dismissal, and transfer of labor; the regulation of conditions of employment, production, and distribution of goods; and the conversion, unification, and expropriation of plants. The Civilian Service Ordinance provided for enlisting labor and civil services in the defense program. Compulsory service was required of civilians of either sex, 16 to 25 years of age, excluding ministers, women with dependent children living with them, and persons exempted by the Governor General.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

On July 11, 1941, the Government took an unprecedented step by the introduction of compulsory military service for natives. The measure provided for limited conscription of native males between the ages of 18 and 45 years. They were to receive the same pay as Europeans during training periods of 1 year for the Army and 1½ years for the Navy. On the whole, the measure was welcomed by the natives, especially since it guaranteed them the same treatment as Europeans.

JAPANESE CONTROLS

One of the first measures taken by the Japanese was the registration of fishermen. Then, in April 1942, a decree was promulgated requiring the registration of all "foreign" residents (except Japanese) over 17 years of age. In spite of penalties for failure to register, the response was small. The Indonesians failed to cooperate in many other ways, and the Japanese resorted to a labor draft for the shipyards and other essential war industries and also for rebuilding roads and bridges. Finally, in October 1943, the vaunted "co-prosperity" policy was abandoned and plans for a large-scale recruitment of workers were announced by Tokyo, foreshadowing the use of compulsion and, later, the general extension of the labor draft.

Almost immediately after the invasion, rice was put under a price ceiling in an effort to curb rapidly growing price inflation. Other commodities have been brought under price control, but the measures taken have not been effective and prices are readjusted periodically. Rationing is extended from time to time. Black-market operations are continuous.

In trying to deal with the disorganization and unemployment in the Indies after the invasion, the military government has transferred workers from Java to Borneo and plans further transfers to Borneo and Sumatra on a pretentious scale. A movement for intensification of industrial production in Java has been launched; small industries and village industries such as papermaking, spinning, and gardening are to be encouraged.

Wages and Hours of Labor

GENERAL TREND OF WAGES AND COST OF LIVING

Any discussion of wage-paid labor in the Netherlands Indies necessarily deals with a relatively small part of the working population. Natives living by barter or through the sale of raw materials produced on their own small holdings are more important numerically. For many of these workers, who were profoundly affected by world conditions in the decade before the present war, it is not possible to trace the effects in statistical terms. Even for wage-paid employees data on earnings and buying power are fragmentary.

During 1938, unskilled factory labor in various parts of the Islands had daily wages of about Fl.0.35 to Fl.0.40. In terms of the par value of the florin, which equaled 40.20 cents in United States money, before either currency was devalued, the daily pay was 14 to 16 cents. Wages were higher in 1938 than they had been in the early and middle 1930's, when pay was reduced as a part of the program of adjustment to depressed economic conditions.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Lowered earnings in this depression period would have had more serious effects on the workers if living costs had not dropped at the same time. In Batavia, the only city for which cost-of-living indexes were issued, the decline in living costs was as follows.

	Cost-of-living index		*Cost-of-living index*
1929	100	1938	53
1932	62	1939	53
1935	52	1940	55
1936	49	1941	61
1937	52	1942 (January)	66

The reduction of more than a third in the composite index for Batavia between 1929 and 1932 was smaller than for food prices alone, which declined about one-half in the same 3 years. In 1936, before the currency was devalued in September, the cost-of-living index reached its lowest point (49).

Under the stimulus of devaluation, improved trade, and impending war, living costs rose slightly between 1937 and 1939. Pressure was brought on employers by labor and the Government for pay increases to offset rising prices and to pass on to workers some of the profit accruing from business. Scattered information shows that pay increases of 10 to 30 percent were authorized in 1936 and 1937. Living costs in Batavia rose sharply in 1941 (index 61) and 1942 (index 66). No data are available showing the degree to which the rise was offset by wage increases.

After the Japanese invasion, the pay of workers who had earned Fl.0.75 to Fl.0.80 per 8-hour day was reduced to Fl.0.35. Reports from the Indies indicate that other wages were cut in half. The effects of wage reductions were particularly serious, owing to the rapid rise in prices. Workers received no benefit in wages from the extension of hours, as no compensation was paid for overtime.

PRE-WAR WAGES AND HOURS

As the Indies had not introduced general systems of paid vacations, family allowances, or social insurance (except workmen's compensation) before the present war, workers lacked assured supplements to wages. Some grants were made by employers voluntarily.

Industry.—Pre-war wages and salaries in industry varied according to racial groups, the skills required, and the location of the enterprise. Printing establishments, electric-power stations, and various machinery plants had a high proportion of better-paid European workers, while textile plants used much Indonesian female labor—the lowest-paid group. In general, wages were higher in the Outer Islands than in Java. For example, before the invasion a common laborer in the food industry averaged Fl.8.75 monthly in the Outer Islands and Fl. 6.82 in Java; in the textile industry the averages were Fl.10.46 and Fl.5.86, respectively. Observers state that living standards seemed higher in Sumatra than in Java. Sumatra had better private transportation facilities and housing, and the people were better clothed. The wage statistics here given are for 1938 chiefly.

An 8-hour standard workday and a half day on Saturdays were observed fairly generally in industrial enterprises. Overtime rates were not uniform. In some cases no extra payment was made, in

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

others the regular hourly rate was paid, and in certain instances the overtime rate was as high as 1½ times the regular hourly rate.

Daily wages in manufacturing industries are given in table 3, by geographic area and occupation. The data show that the schedule of pay was lowest in the Djocja District of Java.

TABLE 3.—*Daily Wages in Manufacturing Industries in Netherlands Indies, by Geographic Area and Occupation, 1938*

Locality and occupation	Daily wages
	Florins
Padang, Sumatra:	
Unskilled day labor	0.40
Skilled day labor	0.55–.60
Batavia, Java:	
Unskilled day labor	[1].06
Ordinary day labor	[1].08
Skilled piece work:	
Light	[1].12½
Heavy	[1].15
Djocja District, Java:[2] Spinners of coconut-fiber belting	.10
Madura:	
Temporary workers:	
Unskilled adult males	.15–.25
Unskilled women and children	.05–.15
Temporary foremen	.30–.60
Artisans	.30–.60
Engineers—small locomotives	.40–.60
Enginemen at pump stations	.30–.60
Oilers	.20–.45
Watchmen	.20–.35
Sluice watchers	.25–.35
Processors	.20–.35
Permanent workers:	
Apprentices	.15–.35
Coolies	.25–.35
Switch watchers	.30–.40
Sluice watchers	.30–.40
Laboratory janitors	.30–.40
Office messengers	.30–.40
Polishers	.30–.40
Bridge watchers	.35–.45
Painters	.35–.45
Press operators	.35–.45
Telephone operators	.35–.50
Handymen—power station, workshop, scales, storeroom	.35–.50
Laborers—drying apparatus	.35–.50
Second-class watchmen	.40–.55
Mail carriers	.40–.55
Storeroom clerks	.40–.55
Oilers	.40–.55
Madura—Continued.	
Permanent workers—Continued.	*Florins*
Enginemen	0.45–0.60
Night stokers	.45–.60
Riveters	.45–.60
Tinsmiths	.45–.60
Drillers	.45–.60
Miscellaneous foremen	.45–.60
Firemen—locomotives and hot-air ovens	.50–.65
Timberers	.50–.65
Masons	.50–.65
Foremen—processing stages and transportation	.60–.75
Scale foremen	.60–.75
Switchboard operators	.60–.75
Assistant engineers	.60–.75
First-class watchmen	.60–.75
Inspectors, processing	.70–.90
Locomotive drivers	.70–.90
Operators—machine tools, rough work	.70–.90
Head foremen	.80–1.10
Coppersmiths	.80–1.10
Engineers	.85–1.15
Second-class welders	.85–1.15
Electro-technicians	.85–1.15
Chief watchmen	.85–1.15
Chauffeurs	.85–1.15
Operators—machine tools precision work	1.00–1.30
Chief timberers	1.00–1.30
Chief masons	1.00–1.30
Blacksmiths	1.00–1.30
Supervisors—rolling material	1.50–2.00
First-class welders	1.50–2.00
Smiths	1.50–2.00
Supervisors—machine-tool operators	1.50–2.00
General supervisors of workmen	1.50–2.50

[1] Hourly wages.
[2] Data are for June 1937.

Oil-industry employees in North Sumatra had daily rates of pay in 1938 ranging from Fl.0.48 for unskilled labor to Fl.2.50 for Chinese artisans, such as carpenters and fitters. The hourly schedule for oil workers in South Sumatra was Fl.0.07 for unskilled native coolies and Fl.0.12 for Chinese helpers; workers of the highest skills—both Chinese and native—received Fl.0.42 hourly. On the basis of an 8-hour day (the prevailing workday except on Saturdays, when a half day was worked), Chinese helpers in South Sumatra were paid Fl.0.96 and unskilled native coolies Fl.0.56. Both these rates exceeded the pay, shown above, for unskilled labor in the oil industry of North Sumatra. Skilled labor also received higher pay in South Sumatra (Fl.3.36 for 8 hours) than in North Sumatra (Fl.2.50) in the period and workings for which statistics are cited.

On Government-owned railroads in Java average monthly salaries in 1938 ranged from Fl.40 for apprentice engineers on steam trains to

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Fl.490 for terminal chiefs. Employees had civil-service rating and were entitled to pensions, leave, medical attention at reduced rates, and cost-of-living and marriage allowances.

Street-railway workers in the city of Batavia were paid by the day, at rates of Fl.0.30 for unskilled laborers, Fl.0.80 to Fl.1.20 for motormen, and Fl.1.50 to Fl.2.00 for first-class artisans.

Agriculture.—In peacetime, agricultural workers and those engaged in gathering and preparing certain native products, such as cinchona, copra, and rubber, often received a part of their wages in kind. Payment included low-priced or free food, housing, and medical care. On large agricultural estates perquisites sometimes included a daily meal, a specified number of free banquets annually, and amusements, including motion pictures. Another characteristic of the employment relation was the prevalence of part-time work in areas where the native employees operated small holdings of their own in addition to the work they performed for wages. Owing to this practice and to the requirements of certain processes, working time was not uniform in a given type of production or in a particular locality, but ranged from 4–6 to 10–12 hours a day. Much of the work was highly seasonal, as, for example, on the cinchona estates where employment was furnished for only 4 months a year.

One-tenth of a florin seems to have been the lowest daily wage. Bantam was the only area where male workers received this rate (for the preparation of copra). In the Buitenzorg Residency, the same payment was made to native women and children employed in tea gardens for a part of the day. A slightly higher daily rate, Fl.0.12, was paid to female workers engaged in the preparation of cinchona in West Java (1937) and to women employed in tapping rubber in the Buitenzorg Residency. Women and children tea sorters in the Buitenzorg Residency received Fl.0.12 to Fl.0.15.

Minimum as well as other rates of pay for males tended to be higher than for females. For example, in preparing cinchona bark in West Java, males received Fl.0.23 a day as compared with Fl.0.12 for females; in harvesting, the daily rates were Fl.0.35 and Fl.0.23, respectively. Male workers in the palm-oil and other products industry on Sumatra's east coast were paid rates ranging from Fl.0.30 to Fl.0.32 daily and female employees Fl.0.25 to Fl.0.27.

In factories processing agricultural products, wages tended to be higher than in direct agricultural employment. Tea-factory male labor in the Buitenzorg Residency was paid Fl.0.30 to Fl.0.45 a day, depending on skill. Male clerks and foreman received Fl.0.50 to Fl.0.80, and carpenters, masons, enginemen, and truck drivers earned Fl.0.60 to Fl.1.00, according to skill.

Regulation of Working Conditions

PRE-WAR REGULATION

Except as the Netherlands Indies Government legislated for the control of native contract labor under the coolie ordinances and had the responsibility for labor standards in varied Government-owned utilities and in industrial enterprises, the authorities were slow in regulating working conditions. The influence that the standards in Government enterprises might have had on private industry was min-

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

imized by the policy of regarding the wage scales as confidential, as, for example, in Government mines.

Provisions of the coolie ordinance of 1931 required employers to pay "sufficient" wages for the normal necessaries of life, and limited the workday to 9 hours in surface employment and 8½ hours when work was carried on partly or wholly underground. When the ordinance was amended in 1936, overtime pay at 1½ times the regular rate was prescribed. Compulsion to observe these standards was removed in 1941, with the repeal of the ordinance.

Comprehensive legislation (*Assistentenregeling*) affecting a particular group of European employees was passed in 1921. Conditions of employment for assistants (European managerial staffs) on agricultural estates on the east coast of Sumatra were made subject to regulation effective in March 1922. Employers were required to enter into individual contracts with assistants working directly under management, with certain exceptions (such as foremen and contractors). Each contract was to state the monthly salary of the assistant, perquisites, the part of the profit to which he was entitled, the number of free days, and the vacation period in the Indies and abroad. Employer obligations respecting health and safety were extensive. The terms under which a contract might be terminated were specified and the employer was required to make a written statement giving pertinent information regarding the assistant when the latter left his employ.

No general minimum-wage standards were fixed by law. Ordinances covering operations in specified industries dealt with pay scales, as for example in the sugar industry, for which the Government was empowered to fix minimum-wage rates for the lower-paid classes of employees. As late as 1936–37 this power had not been used. At that time employer organizations in Java were obliged to make regular reports on wages, which were checked by the Labor Inspectorate.

Restrictions were placed on the employment of women and children in 1926. The law was designed primarily for the protection of native labor, but for the first time no distinction was made between races. Children under 12 years of age were forbidden to work for any enterprise between 8 p. m. and 5 a. m. and might not be employed in specified pursuits, including work in factories. Women were not to be permitted to work between 10 p. m. and 5 a. m., except in pursuance of a decree issued by the Governor General for certain industries, enterprises, etc., in consequence of special industrial needs.

In underground mines, the mining ordinance of 1930 fixed 16 years as the minimum age for employment.

WARTIME REGULATION, 1940 AND 1941

As an emergency measure, special powers were accorded to the Government for the mobilization of the human and material resources of the country in 1940 and 1941. The Industrial Cooperation Act of 1940 authorized the Government to make stipulations on pay scales. In 1941, new rules were established regarding conditions of employment of native or foreign Asiatic labor. The branches of industry to which the new regulations were to apply were to be specified by Government order. No stated wage standards were prescribed. Hours were limited to 9 in any consecutive 24.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Administrative Agencies

In 1921, the Labor Bureau was established in the Department of Justice for the purpose of drafting labor laws and compiling statistics. Two years later the labor-inspection service, which had been functioning since 1908, was placed under the Labor Bureau. In 1925 the safety-inspection service, which also had been in existence for a number of years, was likewise transferred to the Bureau. Subsequent legislation expanded the Bureau's functions to include every phase of the Government's interest in labor relations.

The Labor Inspectorate and other Labor Bureau officials were responsible for supervising the observance of a number of ordinances, such as the regulations for restricting employment of women and children at night, the ordinance regulating conditions of employment in certain industrial enterprises, and the coolie ordinances. In investigations of certain cases of industrial disputes which affected the public interest, the Labor Inspectorate was consulted. In addition, the Labor Bureau had (in certain enterprises) regulatory powers, including the granting of exemptions, as specified in particular ordinances.

Employment agencies were established in the Indies during the middle 1920's under Government subsidy. Both employers and unemployed persons made increasing use of the offices—especially during the depression in the early 1930's—but the number of persons registering never became very large in relation to the population. For example, registrations numbered 39,039 in 1934 and rose to 51,086 in 1940, whereas the total population numbered between 60 and 70 millions in those years. Registrations of administrative workers were much higher than for any other group, accounting for 6,270 out of 19,233 applicants at the end of 1939. Skilled manual laborers formed the next largest group, with a total of 3,676 registrants at that time.

Very small proportions of the applicants were placed, ranging from 14 percent in 1934 to 20 percent in 1940. The percentage of native applicants securing jobs was usually much smaller than that of Europeans. The rate of placement for the relatively small number of women applicants was far larger than that for men.

On December 16, 1940, the Commission for Labor Affairs was established. It was the first such agency to embody the tripartite-representation principle and had wide supervisory and advisory functions on labor matters.

Labor Organizations

Organization of labor started late in the Indies. Rail and streetcar employees formed the first union in 1908, in Semarang, Java. The Government did not encourage trade associations. Labor organizations were required to obtain approval of their articles of association, and other restrictions were imposed. In the early years of organization, most of the labor unions were closely connected with political movements, and the various political elements competed for their control. Communist factions were particularly influential, calling several strikes in the early 1920's; and twice the Government intervened to end their activities. Following the second Government intervention (in 1929), union activity was restricted and, although the

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

unions grew somewhat in the succeeding years, the movement was relatively inactive.

The real impetus for labor organization came from among Government employees, who had by far the largest group of unions and were the greatest force in the drive for improved working conditions and social legislation. Europeans, natives, and a small number of Chinese were organized in separate bodies, and these were in turn divided into groups of Government and other workers.

Membership figures for the unions were small, rising from 13,282 in 1924 to 111,344 in 1931 and then dropping and remaining below 100,000 until 1939, for which year the total was 109,547. In 1940, the trade-unionists numbered 109,708, and unofficial figures place the 1941 membership at 123,500. The figures overstate actual trade-union membership, however, for they include a number of associations not commonly classified as labor organizations.

Industrial Relations

Compared with the liberal Government policy for improving industrial relations in the Netherlands, the standards established in the Netherlands Indies before the present war were unfavorable. The Government did not encourage joint negotiation by employers and employees for establishing working conditions. No public machinery existed for the arbitration of management-labor differences. Severe curbs were placed on strikes, by law.

Different labor standards were applied to European and to native labor; and it was partly because of the differences in the position of these two groups that development in industrial relations lagged. Europeans, who had an importance out of all proportion to their numbers, had until the depression of the 1930's enjoyed a comparatively favorable economic position and did not throw their influence toward obtaining recognition of bargaining rights. Native labor was almost exclusively employed in agricultural pursuits, often working outside the wage system; and forced labor and contract labor under penal sanctions were traditional. In the 1930's, labor unrest was growing. Although the Government was urged by labor to take a positive stand toward recognition of workers' rights, no notable development occurred before the present war.

INDIVIDUAL AND COLLECTIVE AGREEMENTS

Before 1926, individual contracts were covered by law but no provision was made for collective agreements. The Civil Code of 1847 recognized individual contracts, and protected them by providing penalties for an employee or an employer who broke a contract. Originally these provisions were for Europeans only, but in 1879 they were extended to natives, Chinese, and other foreign Asiatics. Other native contracts were regulated by the coolie ordinances, as previously noted. Agreements entered into by native employers for the employment of native labor were regarded as outside the realm of the Netherlands Indies Government, as the relationships between such employers and employees were governed in large part by the "adat" (common law) of the Indonesian village communities.

In 1926, amendments to the Civil Code recognized the validity of collective agreements. The new measures applied only to Europeans.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Articles dealing with breach of contract by either party formed an important part of the provisions. In spite of this recognition, little progress was made in the spread of collective bargaining. The Government regarded collective agreements as matters for mutual arrangement between the parties concerned. This attitude was exemplified in 1938 when the Government refused to intervene in an important dispute involving the negotiation of a collective agreement.

STRIKES

Early Indies law, providing as it did for individual contracts and not dealing with collective disputes, made no reference to strikes. Legislation on strikes was enacted first in 1923 when, as a result of a railway dispute, provisions limiting the right to strike were written into the Penal Code. Any strike agitation that would disturb public order or contravene a labor contract was punishable. The action was taken to prevent so-called "political" strikes which had no economic causes, but the terms were so vague and wide in scope that they practically prohibited any attempt at organizing a strike. Efforts to modify the provisions in order to make legitimate work stoppages permissible had met with no success up to the time of the invasion. Strike activity between 1936 and 1940 was small, the largest number of workers on strike in Java during any one of those years being 2,115 in 1940.

CONCILIATION AND ARBITRATION

Until very recent years, no Government machinery was established for the settlement of industrial disputes. The only recourse of a worker who felt that alterations made in the terms of his employment were unjustified was to the regular courts, from which no appeal was permitted.

Conciliation machinery was provided for railways on November 24, 1937, and for other industries on July 20, 1939. The railway legislation prescribed that a board should be established, with employer, employee, and Government representation. In case of a dispute involving the public interest, a committee composed of representatives of each group was to attempt a voluntary settlement and to report on the findings. Under the 1939 regulations, when a dispute in private enterprises other than railroads threatened the public interest the Director of Justice might, if necessary, appoint officials to investigate, arrange a voluntary settlement where possible, and make a report.

On December 16, 1940, after the present war started, the Indies Government enacted a labor-relations law in which an arbitral system was basic. The measure was received with favor. Under its terms, the Government assumed power to settle disputes arising out of war circumstances, including questions of dismissal of workers, consideration of unfavorable changes in working conditions such as wage reductions, and the payment of pensions and allowances. A Commission for Labor Affairs, representing employers, employees, and the public, was to hear and decide the cases and to advise the Governor General on labor matters. Employers of more than 20 persons, if connected with the war effort, were required to inform the Commis-

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

sion before making any changes in the working conditions and to obtain its approval; in case of disagreement, the Director of Justice rendered a decision, which was binding. Persons working for an employer of fewer than 20 persons could appeal to the Commission for a final decision.

Cooperative Movement

The cooperative movement has not developed to any very great extent in the Indies. At the end of 1939, cooperatives numbered 560 (nearly 90 percent of which were in Java) and the membership was 52,555. Rural and urban credit associations of various kinds formed the largest group, with 422 credit cooperatives proper and 42,807 members. A number of farmers' credit cooperatives existed in the Indies and performed combination credit and marketing functions. Particularly well adapted to local custom was the "Loemboeng," which warehoused the crops and sold them at the most favorable price, and which also granted loans to its members. Consumers' cooperatives were not so important as they had been previously, numbering 17 associations. The 31 agricultural and industrial productive cooperatives included a variety of enterprises—12 for the production of rubber, 2 for the supply of raw materials used in cotton-textile weaving, 1 for the weaving of fabrics, and 1 for the operation of a tea plantation. The only Government measures were an act in 1915 giving them legal status and the establishment in 1925 of a Board which evolved in 1939 into the Cooperative Service, with functions of education, assistance, and supervision.

Social Insurance

With the exception of workmen's compensation for accidents, workers in the Indies had no public social-insurance protection prior to the present war. The question of establishing old-age pensions and unemployment insurance for wage earners had been under consideration—and the problems were great, especially with respect to extending coverage to native labor—but no action was taken. Such protective systems as were maintained were for governmental workers and employees of private companies which had voluntarily established insurance plans.

WORKMEN'S COMPENSATION

General system.—On May 23, 1939, employers were made liable for compensation for injury to workers in establishments using one or more power tools; handling poisonous gases or chemicals, explosives, etc.; or engaged in generating and distributing electricity, loading and unloading, mining, transportation (except at sea), construction, forestry, radio broadcasting, and mechanized farming. Under the terms of the ordinance, coverage may be extended (by public regulation) to other enterprises considered to be dangerous. Government employees, home workers with certain exceptions, and members of the employer's family are excluded. Benefits provided include transportation to either the worker's home or a hospital, and medical care for at least 1 year. Cash payments for temporary disability amount to 80 percent of the worker's daily wage for each day of disability for 1

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

month, excluding Sundays, after which the worker receives half the daily wage. Compensation for permanent total disability consists of half pay for life, while for permanent partial disability benefits vary from 1.5 to 37.5 percent of the daily wage according to the extent of injury. If death results from injury, funeral and survivors' benefits are paid. In calculating cash benefits, wages in kind are converted into money at prevailing local prices and included with cash wages.

Seamen's system.—Compensation of injured seamen at the employers' expense was provided for on September 10, 1940. Any seaman having an accident on board or on account of a covered vessel, whether or not in connection with the employee's occupation, is covered. Benefits include medical attendance for not over 1 year, board and lodging if away from home, transportation to the place where nursed, transportation to and board and lodging in the place where the employment agreement was entered into if the agreement lapses during the illness, and compensation for loss of effects. In addition, the seaman receives cash benefits fixed at the same percentage of wages as those under the general system; the only differences are that under the seamen's system payments for Sundays are included and the period of full wage payment for temporary invalidity lasts for 26 weeks instead of being limited to 1 month as under the general system. Funeral expenses and survivors' benefits are provided. Calculation of wages takes into account every money payment except special bonuses prescribed by Government order and includes the money value of board, lodging, and clothing provided to the seaman.

Labor-Market Information for War Veterans

AREA statements containing labor-market information for veterans were sent to regional manpower directors by the War Manpower Commission recently.[1] These statements were designed to serve as a broad guide to the employment opportunities in areas in which nonresident veterans might display an interest. The statements contained summaries for 114 of the major areas, containing over half the Nation's total population and nearly 90 percent of the urban population. They included all cities with populations of 100,000 or more, and the largest city of each State regardless of size.

Area statements indicate, in the space of one page, the nature of the local industries, the number of jobs expected to develop, the occupations in which openings are immediately available, entry wages and scheduled hours of work, the names of major firms in the expanding industry groups, and information regarding the general housing situation and cost of living.

"Scheduled Hours and Beginners' Wages" shown in the statements reveal wide variations among the different localities. The Waterbury, Conn., area was reported as having the longest workweek (73 hours), and Scranton, Pa., the lowest (35 hours). Beginners' wages ranged from 30 cents per hour in Nashville, Tenn., to $1.14 per hour in San Diego, Calif.

[1] War Manpower Commission, Field Instruction No. 303, March 24, 1944.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Employment of Residents of Relocation Centers[1]

MOST of the 70,000 persons of Japanese ancestry who have been evacuated from the military zones on the Pacific Coast to the nine Relocation Centers maintained by the War Relocation Authority can be released, under present regulations, to accept employment outside of the centers. The War Relocation Authority has canvassed a large number of areas to learn whether community sentiment would be hostile to the employment of persons from the Relocation Centers. If such persons receive offers in other communities, these communities also will be canvassed.

No person of Japanese ancestry, whether a citizen or an alien, may be employed in an enterprise important to the war until approval has been given by either the Japanese-American Joint Board or the Provost Marshal General. When a local employment office refers a Relocation Center resident to an employer important in the war, the latter must obtain permission to employ the individual. In order to obtain such permission, the employer must complete a standard personnel security questionnaire (for an American citizen of Japanese ancestry) or an alien questionnaire (for a Japanese alien or national) and forward the questionnaire to the nearest appropriate Army or Navy representative responsible for plant protection. The Civil Service Commission makes an independent investigation in the case of Relocation Center residents who are hired for Federal employment.

Two types of leave are granted to Relocation Center residents for employment—indefinite leave for permanent employment, and seasonal leave for seasonal work.

Recruitment for Permanent Employment

Local offices of the U. S. Employment Service have been advised to regard Relocation Centers as a reserve source of labor to be brought to the attention of employers under the following conditions:

1. When importation of these workers would not cause displacement of local labor or create competition with locally available workers who are qualified to meet employers' specifications.
2. When the orders for which residents of Relocation Centers will be considered are for jobs of 3 or more months' duration.
3. When such orders offer wages and working conditions not less favorable than those prevailing for similar jobs in the community.
4. When such orders were placed by responsible employers (insofar as the local office can determine) in accordance with established policies for clearance of labor.

If an office of the Employment Service in any State (except the West Coast States, and Wyoming, Idaho, Montana, Nevada, Utah, Arizona, New Mexico, and Colorado) receives from an employer an order which meets the four conditions above, the local office sends a copy of the order to the nearest District Relocation Office. The order is then transmitted to the Relocation Center which is the best source of workers with the occupational qualifications specified on the order, and the Relocation Program Officer there directs qualified residents to submit their qualifications to the local office which placed the order.

[1] War Manpower Commission, Field Instruction No. 261, March 10, 1944.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Before indefinite leave for permanent employment may be granted to a resident of a Relocation Center, the following conditions must be met:

1. The War Relocation Authority must be convinced of the individual's loyalty to the United States and that his release from a Relocation Center would in no way endanger the national security.
2. A check must be made by the War Relocation Authority on the community to which the applicant will go in order to determine that there is no likelihood that employment of the individual would arouse such hostile community sentiment that it would lead to a disturbance of the peace.
3. The individual must agree to inform the War Relocation Authority of changes of address and employer.

An individual who has been granted indefinite leave for permanent employment has the same status as that of any other person or employee, except that he may not go back into the evacuated area without authorization and that he must carry out condition 3 above. He may resign one position and take another, subject to the provisions of the applicable employment-stabilization program. His employer has no special responsibility and may discharge him like any other employee. The employer, however, must provide transportation from the point of recruitment to the location of the job, if this is necessary for recruitment.

Recruitment for Seasonal Work

The War Relocation Authority and the Department of Agriculture have arranged for the Extension Service and the War Food Administration to carry on recruitment for the utilization of residents of Relocation Centers in seasonal agricultural work in States west of, but not including, Minnesota, Iowa, Missouri, Arkansas, and Louisiana. Requests from employers in other States for seasonal agricultural workers are to be referred to the county agricultural agent and for seasonal nonagricultural workers to the nearest District Relocation Office of the War Relocation Authority.

Placement of Persons Excluded From Military Areas

The War Relocation Authority carries out a program for the relocation, maintenance, and supervision of persons, alien or citizen, who are excluded from certain areas by military commanders because their continued presence is considered to be prejudicial to the conduct of the war or the safety of the Nation. Representatives of the War Relocation Authority interview an individual who has been so excluded in order to learn what assistance he will need in becoming relocated. If he desires, he is furnished with information concerning three communities in which his chances of employment are good and also with an introduction to the local U. S. Employment Service office in the community he selects. Local offices are required to choose a person so excluded on the basis of qualifications and ability for local openings. They must also explain that he is to report to the Federal Bureau of Investigation upon arrival in the community and that he will be under continued surveillance. In no case is information regarding excluded persons to be revealed, except for purposes of referral to a specific job.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Wartime Policies

Wage Policy of National War Labor Board[1]

A GENERAL statement outlining the wage policy of the National War Labor Board was made public April 2, 1944. The statement collects the controlling provisions of the Salary Stabilization Act and Executive orders into a "Stabilization Code" and includes also a condensed statement of how these rules are applied in practice. The following paragraphs contain the main points of this code.

Under the wage-stabilization policy, general wage increases are prohibited except when required to bring the average straight-time hourly earnings of a substantial group of employees up to a level 15 percent above the level that prevailed on January 1, 1941. At the same time the War Labor Board, under Executive Order No. 9250, has authorized employers to increase minimum hourly wage rates up to 40 cents without further approval of the Board. That agency has similarly authorized employers to increase minimum hourly wage rates up to 50 cents an hour when required by State minimum-wage laws.

Seven types of wage increases, however, may be made without the Board's approval: (1) Increases to equalize rates paid to women for work of the same quality and quantity as work done by men in the same plant, but such adjustments must not furnish the basis for price increases; (2) increases made by employers of 8 or fewer employees, with certain exceptions; (3) increases up to 40 cents an hour; (4) increases up to 50 cents an hour where required by State minimum-wage laws; (5) individual increases for length of service, merit, reclassification, promotion, and the like, but these increases may not be a basis for asking price relief nor for applying to WLB to eliminate intraplant inequities (if the employees involved are represented by a collective-bargaining agent the wage adjustments must be concurred in by that agent); (6) customary bonuses or commissions, if the amount is not greater than last year (1943) or—where figured on a percentage or incentive basis—if the method of computing is not changed; (7) and bonuses to employees going into the United States armed forces.

When wage-rate increases are asked for on the ground that higher wages are paid for similar work in other plants, they are tested by the bracket system. The existing rate cannot be increased if it lies within the bracket of sound and tested rates established for that occupational group in the labor-market area. If it is below the minimum of the bracket of sound and tested rates it may be brought

[1] National War Labor Board, Press release, April 2, 1944.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

up to but not above the minimum, except in rare and unusual cases in which the critical needs of war production require the setting of a wage at some point above the minimum of the going wage bracket. The Board has approved only a very few wage adjustments under this exception, and even in those few cases it has not gone above the maximum of the applicable wage bracket.

Intraplant wage-rate adjustments may be approved by the National War Labor Board for four purposes: Reclassifications, promotion and merit increases, incentive-wage plans, and vacation pay and shift differentials. Such adjustments are subject always to the limitation that they must not increase the level of production costs appreciably or furnish the basis either to increase prices or to resist otherwise justifiable reductions in prices.

Certain categories of wage adjustments exempted from such wage-stabilization control by the Board are (1) wage adjustments resulting from the operation of the Fair Labor Standards Act, the National Labor Relations Act, the Walsh-Healy Act, or the Davis-Bacon Act; (2) salaries in excess of $5,000 a year, and wages or salaries less than that amount which are paid to supervisory or professional employees not represented by labor unions (these are placed under the jurisdiction of the Bureau of Internal Revenue); (3) wage and salary adjustments for employees subject to the Railway Labor Act (these are placed under the authority of the Chairman of the National Railway Panel); and (4) farm workers' wages (over which the War Food Administration is given jurisdiction.)

Interregional-Recruitment Program of War Manpower Commission

THE War Manpower Commission recently issued a statement describing its interregional recruitment program.[1] This statement was developed as an answer to requests from employer groups or Government agencies for information as to the manner in which the interregional-recruitment program operates.

In more than 1,500 cities and towns throughout the country, there are local offices of the U. S. Employment Service which are part of the operating field organization of the War Manpower Commission. The activities of these local employment offices are coordinated by area, the WMC Area Directors being responsible for a varying number of offices. These directors are responsible to State directors whose job is to coordinate and administer all activities of the Commission within the State. The States are grouped into 12 regions, each headed by a Regional Director who reports directly to the War Manpower Commission in Washington.

According to the statement of the Commission, employers who wish to avail themselves of the recruitment facilities of the War Manpower Commission should make their minimum manpower needs known to the nearest local office of the U. S. Employment Service. An actual order for workers, indicating complete job specifications and all conditions of employment, should be placed with the local office. If, after a reasonable length of time, the local office cannot recruit the required number of workers locally a campaign of labor

[1] War Manpower Commission, Press release, March 9, 1944.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

recruitment throughout the area will be undertaken with the employer's permission and with the approval of the Area War Manpower Commission Director. If such campaigns are unsuccessful on the area, State, and regional levels, and the employer agrees to recruitment outside the region, the recruitment order is referred to Washington.

Prior to the extension of that order outside the region, the Regional Director must certify—

(1) That the employer is making full utilization of his present labor force including operation on the minimum wartime workweek, regardless of whether the establishment is in an area or activity which has been subjected to the minimum workweek regulation;

(2) That all local sources of labor supply have been exhausted;

(3) That the need for workers is hindering, or in the near future will hinder, war production;

(4) That the number of persons requested by the employer represents his minimum needs;

(5) That the employer's specifications represent the minimum specifications for performance of the job and the range of wage rates he will pay;

(6) That the employer will follow a positive recruitment itinerary arranged by the U. S. Employment Service, and that the employer will subscribe to advertising at recruiting points, if necessary. In lieu of sending his representative to make hiring commitments, the employer may delegate hiring authority to the U. S. Employment Service;

(7) That, if medical examinations are required, they will be given at the point of recruitment at the employer's expense. However, if, because of special circumstances, examination at the location of the job by the employer's physician is considered essential, the employer must agree to provide return transportation, in the event of rejection, in accordance with point No. 9 below;

(8) That the employer will provide transportation for the worker, either through outright payment or by advance to be repaid from subsequent earnings, from the point of recruitment to the location of the job in all cases where this is considered necessary to successful recruitment by mutual agreement between the employer and the U. S. Employment Service;

(9) That, in the event of nonacceptance of the worker upon arrival, without just cause for such nonacceptance on the part of the employer, the latter will provide return transportation for the worker;

(10) That housing facilities will be available for the worker upon his arrival at the location of the job.

When the recruitment order is transmitted to Washington by the regional office it must be accompanied by a complete justification, indicating that the employer's products are vitally important to the war effort, that the lack of manpower is hindering essential production, and that the 10 standards described above have been fully met. Employers' orders received in Washington are further screened in order to verify the fact that lack of sufficient manpower is retarding essential war production. It must also be determined that the production cannot be obtained from other sources where labor supply is available and adequate. When these facts have been established, the order is transmitted by the Washington office to a region or regions where recruitment is most likely to prove productive.

Selective Service Instructions Regarding Men Under 26

THE National Headquarters of the Selective Service System announced, on March 24, 1944, that it had taken steps to assure the armed services a continuing supply of men under 26 years of age without disrupting war activities.[1]

[1] National Selective Service System, Press release, March 24, 1944.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

The Director of Selective Service telegraphed State directors of his organization authorization for the War Department, the Navy Department, the Maritime Commission, War Production Board, Office of Defense Transportation, War Food Administration, War Shipping Administration, Petroleum Administration for War, Solid Fuels Administration, and the Office of the Rubber Director to designate representatives in each State. These representatives are to endorse special requests for deferment of key registrants under the age of 26 who are engaged in war activities other than agriculture and employed in establishments coming within their jurisdiction.

These State directors were likewise instructed to issue orders to report for pre-induction physical examination by the armed forces to all registrants under the age of 26 who are occupationally deferred in Class II–A or Class II–B provided such registrants have not been physically examined within the last 90 days.

State directors are to review and reconsider classifications of all registrants under the age of 26 in Classes III–A, II–A, II–B, II–C, and III–C. This work is to be completed before the directors proceed to review and reconsider cases of registrants 26 through 37 years of age as ordered February 26 in conformance with the President's recommendation for a tightening up of deferments of all men occupationally deferred. In addition, the Director has ordered the review of the cases of registrants under 26 in Classes III–A, II–A, II–B, and III–C without regard to whether their existing deferments have expired and, if reclassification appears warranted, their reclassification without regard to existing deferment-termination dates. A fifth step consisted of directing that local boards (upon receipt of proper information) may reclassify into Class II–A or Class II–B registrants under 26 who have been found upon examination to be fit for limited military service only, or unfit for any military service, provided such registrants are contributing to war production or war-supporting activities.

During an interim period, duly authorized representatives of the specified Federal agencies may endorse requests of employers for deferment of key registrants under the age of 26 engaged in war activities other than agriculture. This will be in effect until such time as permanent procedures are established for the filing of requests and lists are compiled of specific war activities and establishments in which registrants under 26 may be deferred.

Canadian Wartime Wage-Control Amendment, 1944[1]

A CANADIAN order in council issued on March 13, 1944 (P. C. 1727) amended the Wartime Wages Control Order of 1943 (P. C. 9384),[2] to comply with suggestions made to the Government by members of the House of Commons, labor organizations, and others. Under the amendment the three-member National War Labor Board was retained instead of the larger body that was contemplated. Increased wage rates may be authorized to rectify gross inequality or injustice. The obligation of employers and employees, charged with offenses

[1] Data are from Canada, House of Commons Debates, February 10, 1944; Order in Council No. 9384 (1943); and War Orders and Regulations, March 20, 1944 (P. C. 1727).

[2] For summary of original order see Monthly Labor Review, January 1944 (pp. 69–70).

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

under the order, to prove compliance with the regulations was removed and penalties for participation in strikes and lockouts were reduced.

In announcing the changes to the House of Commons on March 13, 1944, the Prime Minister stated that it was intended to meet the criticisms of the original order, as far as was consistent with the maintenance of the Dominion's anti-inflation policy. He added that the Government recognized the risks involved in relation to the whole stabilization policy and that no group had more to lose than labor from failure to prevent inflation. It was therefore clear, in the Prime Minister's opinion, that employers and labor organizations must cooperate in limiting wage increases to a relatively small number of special cases. The Government is attempting to keep the cost of living from rising, but if the official cost-of-living index should rise by more than 3 percent over the October 1943 level and remain at such a higher level for 2 consecutive months, the Prime Minister renewed the pledge made in December 1943 that the Government would review the price and wage controls and take appropriate action.

Powers of Board

The National War Labor Board of three members was retained as the administrative body responsible for enforcing the order. It was empowered to make decisions by majority vote, but in case of a tie, the chairman of the Board was to have a deciding vote. To provide for uniformity in administration of the order throughout Canada and to avoid dissatisfaction that would otherwise result from issuance of inconsistent orders by regional boards, the National War Labor Board was made responsible for having every decision or direction of each regional board reviewed. If the Board is of the opinion that a decision or direction is not in accordance with the purposes or provisions of the wage order, it may vary or revoke the decision or direction. However, opportunity must be given to the parties concerned to be heard and the regional board affected must be advised of the change and the reasons for the action. The Board's decision becomes effective on the date made.

Changes in Wage Rates

Under the original Wartime Wages Control Order of 1943, the cost-of-living bonus was made part of wages; provision was dropped for further wage adjustments to compensate for changes in living costs; and for the duration of the war, wages were to be increased to remove gross inequality or gross injustice only if the employer was able to pay higher rates without raising prices.

By the terms of the amendment of March 13, 1944, if the National Board finds it necessary to raise a rate of pay to correct an inequity, the employer may increase a single wage rate or the rates within a range for an occupational classification of his employees. The latter provision is made subject to a limitation that the increase may not be more than the amount of the "appropriate maximum cost-of-living bonus." In cases where the employer was paying wages to employees in the classification in August 1939, the bonus is defined as $4.60 a week for adult males and others employed at $25 or more weekly and 18.4 percent of the weekly single rate or the highest weekly rate

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

for others. In cases where the employer commenced payment between August 1939 and October 1943, for each point of increase in the cost of living between the month in which the employer commenced payment and October 1943 the bonus equals 25 cents for adult males and others having weekly rates of $25 or over and 1 percent for others.

In authorizing increases in pay the Board is to direct an employer to do only what "is fair and reasonable and is consistent with and will give effect to the purposes of this order, having regard to all the circumstances deemed by it, in its discretion, to be material."

Special provisions deal with the pay of employees engaged in international railway train service. If, on November 15, 1941, the employees in Canada had their pay fixed on the same scale as similar employees outside Canada, the National Board is empowered to adjust the rates in Canada, provided that the employees outside of Canada have had such an adjustment made by a collective agreement, established practice, or competent authority. Rates established under the foregoing arrangement are not to be taken into account by the National Board in considering any other application for changes in wage rates. Regional boards are not permitted to make authorizations or directions in this connection.

Limitations on Strikes and Lockouts

As first promulgated, the order placed the burden of proof on the employer in any prosecution involving payment to his employee in accordance with the provisions of that order. Similarly the employee had to prove that he was not involved in a strike in contravention of the order. The sections of the 1943 order containing these provisions were revoked by the amendment. The substitute section on employer liability which forms part of the amendment retains the fines of not less than $100 and not over $5,000 for causing a lockout or failure to comply with the terms of the war order but omits the terms of imprisonment that were formerly provided for. An employee who strikes in contravention of the regulations (that is, to obtain an increase in rates of pay, an alteration in a term of employment that would directly or indirectly increase rates, or to obtain a direction or influence a Board decision) is liable, on conviction, to a $20 fine for each day or part of a day he is on strike. The fine was previously $25 to $100, inclusive, or imprisonment, or both.

For inciting, encouraging, or aiding an employer to do or omit to do any act in contravention of the order or any employee to strike or to continue on strike in contravention of the regulations, penalties are reduced to not over $300 by the amendment. Formerly such an act was punishable by a fine of not over $2,000, or imprisonment, or both.

New Japanese War Labor Policies

ON MARCH 19, 1944, Japanese industry was placed on what was termed a military-type basis, through the approval by Premier Tojo's Cabinet of a stringent "work-rank" and punishment program, to be applied first in "model factories" and later to all industry. This measure was taken as part of a "labor-strengthening plan to obtain

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

on-the-spot responsibility," according to a domestic broadcast from Tokyo, March 19, 1944, reported to the Office of War Information and recorded by the U. S. Foreign Broadcast Intelligence Service.

The radio announcement compared the "work ranks" to ranks for soldiers, and declared that commanders in the first rank had powers to punish their subordinates. All factory employees—from the lowest laborers to superintendents—were made liable to severe punishment if they failed to carry out the responsibility delegated to them. Furthermore, it was stated, methods had been provided for punishing an entire factory group for the shortcomings of one member, and for punishing more extensively a section or department, and even high commanders.

The Cabinet "labor strengthening" system includes nine items, it was stated, which would be centered in the following three provisions: (1) The establishment of a system of labor supervision; (2) the strengthening of education and training of laborers; and (3) the improvement of the living conditions of the workers.

Government organizations would lay down rules for supervision, to be transmitted through the managers of the factories. The enormous expansion in the size of factories had made old supervisory systems inadequate. The problem therefore was "to prepare a structure that will fulfill the responsibilities of production in harmony with the orders of the authorities, by extending to the factories today strict supervision from top to bottom and the characteristic heart-rending affection that exists in our Imperial Forces."

Work ranks for laborers were to be established similar to those for soldiers, and the status and pay of these ranks were to be clearly differentiated.

In order to improve the living conditions of the workers and to stimulate the will to work, the commanders of each organization, according to the broadcast, "must have a firm hold on their subordinate workers." Provision was to be made for consultation facilities in the factories, and various methods were to be devised to relieve the workers from worry regarding their livelihood.

Women's service corps.—The above cited broadcast was almost simultaneous with the announcement by the Japanese Domei agency that the Tojo government had decided to create a women's service corps for the purpose of speeding up the mobilization of Japanese women. Each corps would include from 20 to 50 women, and the various units would be sent to industrial establishments and workshops where labor conditions "are fit for women." The term of service would be 1 year.

Heavier taxes for the workers.—An increasing amount of the financial burden of the war is to be shifted onto the Japanese working classes through higher taxes and obligatory savings, the Tojo government intimated in a Tokyo broadcast on March 18, 1944, to Japanese areas.[1]

> It cannot be helped if distribution of the burden is not just. In order to counteract the rise in the income of the masses, particularly the laboring classes, heavier taxation is inevitable and that tendency will become more marked. * * * It is necessary to take a moderate course in assessing corporations. Various types of tax reductions should be made in order to encourage industries and increase war strength.

[1] United States. Office of War Information. Foreign News Bureau. Items from Wire File, Washington, March 18, 1944.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Following this declaration the Government broadcasts informed the people of Japan of new measures for withholding from them this year 36,000,000,000 yen in addition to their taxes. This represents an advance of one-third over last year's goal for compulsory savings.

Conscription Measures

Prolongation of conscription of students.—Because of the "critical war situation," Japanese high-school and college students who have previously been conscripted for labor service for only 4 months out of 12 are now to be "mobilized as long and as many times as they are needed," the Japanese Minister of Education disclosed in March over the Tokyo domestic radio.[2]

Girl students as well as boys are to be placed at work in war industries, this official announced, adding "the things most urgently demanded in our nation are the production of airplanes and other materials, expansion of transportation, and increased production of foodstuffs. There is no better time than today when students can offer their service directly to their nation."

The conscription scheme as described was to include the distribution of students taking physical and engineering courses "among factories that are most appropriate to them," the assignment of medical students to army and navy or factory hospitals, and the distribution of middle-school industrial students among essential war industries or factories connected with the Army or Navy.

School facilities were to be transformed as far as possible into working facilities, especially in connection with the mobilization of girl students, so that all these young persons could concentrate on their tasks without labor waste "even though they do not go out of the schools for labor service." It was added that already many girls' schools in Tokyo and other cities were making an excellent record through this method.

It was planned to consider the circumstances of students in middle schools, girls' high schools, and commercial schools, with a view to mobilizing such students for the production of foodstuffs, national defense, construction facilities, work in connection with the decentralization of cities, factories, and working places, and activities regarding communications and transportation.

The Ministry of Education called upon industrial employers not to be lenient with students just because they were students, stating that these recruits would much prefer "to be given hard work that is worth while although it may be hard." Rigorous work for the male students was particularly apropos, he declared, as the great majority of them would become nucleus officers after they were conscripted for military duty.

Conscription for merchant seamen.—New measures were adopted by the Japanese Government calling for the conscription of merchant seamen in all territories occupied by Japan and the acceleration of a seamen's training program in Japan. The new provisions were to become effective April 1, 1944. Their purpose was to improve the

[2] United States. Office of War Information. Foreign News Bureau. Items from Wire File. Washington, h 22, 1944.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

"morale" of Japanese seamen and to add to their number. This information was given in an overseas wireless dispatch by the Domei agency to the controlled Japanese press, which was reported on March 11, 1944, by the United States Foreign Broadcast Intelligence Service.

> The clothing of seamen will be quickly standardized and improved, and the distribution of food and the necessities of life will be preferentially guaranteed. Salaries, pensions and so forth, will be improved, and various other kinds of protective provisions will be expanded and reorganized.

The apparent pressing need for seamen was also indicated by Domei's statements that qualified seamen at present on shore duty would be mobilized; that the completion term of higher merchant-marine schools would be abridged; and that the number now accepted into the short-term higher seamen's training institutions would be raised to the maximum limit. Aid from the national treasury for different types of seamen's training schools was to be increased. It was planned to adopt "a joint system of reserve seamen."

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Health and Industrial Accidents

Shipyard Injuries During 1943[1]

INTENSIFIED safety activities resulted in a sharp decline in the volume of work injuries during the latter part of 1943 in private shipyards operating under U. S. Navy and U. S. Maritime Commission contracts. The 12-month average injury-frequency rate for the year 1943 was 31.2—6 percent lower than the industry's average of 33.1 for the preceding year. During the first 8 months of 1943 the average frequency rate for the reporting shipyards held fairly constant at about 33 disabling injuries for every million employee-hours worked. In September, however, the average fell to 30.3, and declined steadily thereafter to a low of 25.3 in December (table 1).

Although the 12-month average frequency rate of 31.2 represented a substantial improvement over the previous record of the shipbuilding industry, it was still nearly half again as high as the preliminary national average for all manufacturing industries. It was lower than the preliminary 1943 averages for a number of other heavy industries, such as fabricated structural steel (33.0), forgings, iron and steel (39.9), foundries (42.1), and plate-fabrication and boiler-shop products (44.0); but was considerably higher than the rates for plants manufacturing railroad equipment (20.5) or iron and steel (9.8).

TABLE 1.—*Monthly Industrial-Injury Frequency Rates for Shipyards, 1943, with Cumulative Rates for Year, by Type of Contract and Geographic Area*

Type of contract and geographic area	1943: Annual rate	1943: Monthly frequency rates											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
All U. S. Maritime Commission and Navy Department contract shipyards	[1] 31.2	34.2	33.4	33.8	33.6	32.4	33.8	32.4	33.0	30.3	27.0	26.5	25.3
U. S. Maritime Commission	32.6	36.7	36.0	35.7	33.9	34.0	35.2	33.2	34.2	31.3	28.6	27.6	26.1
Atlantic region	32.6	33.8	31.9	36.8	35.3	34.7	35.8	35.1	36.9	30.8	25.8	28.6	25.9
Gulf region	31.0	38.3	36.1	36.2	31.0	37.6	35.4	30.9	32.3	30.9	27.6	21.6	20.9
Pacific region	33.9	38.3	38.5	35.5	35.3	33.0	35.5	33.6	34.4	32.5	31.2	30.7	28.9
Great Lakes region	24.1	27.3	28.0	28.7	21.7	22.4	25.9	25.0	25.7	23.7	22.3	19.8	22.2
U. S. Navy Department	28.8	29.4	28.6	30.4	32.2	29.5	31.4	31.1	30.9	28.7	24.5	24.7	23.9
North Atlantic area	27.5	30.0	29.2	35.4	30.5	28.5	27.5	28.9	24.5	23.7	24.1	23.2	25.9
South Atlantic area	45.4	71.1	57.2	48.0	47.5	41.0	40.6	47.6	44.3	37.4	46.0	34.1	29.8
Gulf area	27.6	20.2	20.3	26.7	40.3	34.1	40.7	32.2	28.6	27.2	21.0	20.1	19.7
Pacific area	35.4	32.8	33.1	31.5	38.6	37.4	37.7	37.8	47.7	36.5	29.1	33.2	29.1
Great Lakes area	23.6	26.4	25.7	21.9	24.7	20.0	25.5	24.5	23.9	26.9	25.9	20.3	16.6
Mississippi Valley area	12.9	13.4	14.5	13.6	12.9	9.6	10.5	16.5	13.4	15.2	10.5	13.8	12.4
Government-owned navy yards[2]	15.2	16.4	18.3	15.4	14.2	15.4	16.6	15.5	16.6	14.4	13.4	13.5	12.8

[1] Reports from 267 shipyards are included in 1943 average rate; lowest number of yards reporting in January, 247; highest in September and October, 263 each.
[2] Not included in averages.

[1] Prepared in the Industrial Hazards Division by Frank S. McElroy and Arthur L. Svenson. A discussion of the causes of shipyard accidents during 1943 will appear in a forthcoming issue of the Review.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Significant differences are apparent between the average frequency rates for the group of shipyards operating under Navy contracts and those holding Maritime Commission contracts. For the Navy group the 12-month average rate was 28.8 while the average for the Maritime Commission yards was 32.6.[2] (See table 2.) This difference is probably due to the different type of construction undertaken by the two groups of yards. Most of the Maritime yards were building cargo vessels on a production-line basis. This type of construction procedure involves much intermingling of the various crafts, with the resultant exposure of all workers not only to the hazards of their own particular crafts, but also to those associated with the operations of the other crafts with which they must work. Much of the work in the Navy contract yards is on combat vessels and requires greater specialization and segregation of the crafts.

Frequency-rate comparisons based upon the type of construction carried on in the various yards indicated that yards engaged in building iron and steel vessels generally had lower injury-frequency rates than those building either concrete or wooden vessels. Contrary to the general impression, that repair work is more hazardous than new construction, the combination yards which carried on both repairs and new construction had an average of 30.2, or exactly the same as that of the group of yards engaged solely in the construction of new iron and steel vessels. Within both the new iron and steel construction and new wood construction groups, the average frequency rates varied inversely with the size of the vessels which the yards constructed. The latter relationship, however, is closely connected with the size of the yards, as measured in terms of employment, and should not be interpreted without reference to the difference in the injury experience of yards of different sizes.

TABLE 2.—*Cumulative Industrial-Injury Frequency Rates for Shipyards with Maritime Commission or Navy Department Contracts, 1943, by Type of Vessel Construction*

Type of vessel construction	Cumulative frequency rates, 1943, for—		
	Combined U. S. M. C. and U. S. Navy Department shipyards	Shipyards with—	
		Maritime Commission contracts	Navy Department contracts
Total, all construction	31.2	32.6	28.8
New iron and steel construction	30.2	33.2	24.0
150 feet and over, powered	29.8	33.1	21.7
26 feet under 150 feet, powered	37.6	33.1	37.8
Nonpowered, all lengths	56.3	76.0	49.5
New wood construction	46.2	58.8	44.5
150 feet and over, powered	39.6	53.8	38.6
26 feet under 150 feet, powered	48.0	51.0	47.7
Nonpowered, all lengths	73.1	67.9	92.1
Concrete construction	43.8	43.8	----
Combination repair and construction	30.2	27.6	33.5

As a general rule, the average injury-frequency rates for yards in different size groups varied inversely with the size of the yards included in the groups. The only exception was that the very large yards, which had over 20,000 employees each, had an average rate of 31.1, which was somewhat higher than the averages for yards in

[2] Maritime Commission figures indicate a rate of 37.9 for Maritime contract shipyards in 1942.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

either the 5,000–10,000 or 10,000–20,000 employees groups. The yards with fewer than 1,000 workers had an average frequency rate of 53.0, compared with averages of 32.5 for those employing from 1,000 to 5,000, 28.7 for those employing from 5,000 to 10,000, and 28.1 for those employing from 10,000 to 20,000.

The industrial-injury frequency rates for 1943,[3] by size of shipyard, are given in the following statement.

	Number of shipyards	*Frequency rate*
All shipyards	213	30.9
Shipyards employing—		
Under 1,000 employees	117	53.0
1,000 and under 5,000 employees	49	32.5
5,000 and under 10,000 employees	13	28.7
10,000 and under 20,000 employees	22	28.1
20,000 employees and over	12	31.1

Accident Types

More than a third of the 56,865 disabling shipyard injuries, for which full details were reported during 1943, resulted from the injured persons' being struck by moving, flying, or falling objects. About a third of these were cases of foreign bodies lodging in the eyes of workers. Poor housekeeping (particularly the failure to keep working surfaces clear of material, tools, and debris), insecure grip on materials carried by hand, and faulty rigging of chain and sling loads were the outstanding causes of "struck-by" accidents other than the eye cases.

Falls, which in the aggregate accounted for 21 percent of all the disabling injuries, resulted primarily from poor housekeeping on working surfaces, failure to provide or maintain substantial stagings, the lack of back rails on stagings, and failure to guard hatchways and temporary deck openings adequately. In one Atlantic yard a woman welder on the night shift fell through a temporary deck opening, which members of the previous shift had covered with brown wrapping paper. No barricade had been erected nor had warning lanterns been placed around the opening.

Slips and overexertion, usually resulting in strains or hernias, produced 16 percent of all the reported injuries. Poor housekeeping on working surfaces caused nearly half of these accidents; and most of the remainder were cases of overlifting or improper lifting.

Cases of eye flash, resulting from exposure to the ultraviolet rays of welding arcs, constituted about 5 percent of all the disabling injuries, and burns from contact with hot materials totaled 3 percent. Indicative of the progress achieved in the campaign to make the use of antiflash goggles universal was the fact that welder's flash cases amounted to 9 percent of all disabling injuries reported in the first quarter of 1943, 6 percent in the second quarter, 4 percent in the third quarter, and only 3 percent in the final quarter of the year.

Accidents in which workers struck against piled material, machinery, and other shipyard equipment, or struck themselves while using hand tools, accounted for 10 percent of the disabling injuries. An additional 6 percent of the injuries resulted from workers' being caught between moving machine parts or between moving crane loads and fixed objects.

[3] Only shipyards which reported for all months of 1943 are included in the figures.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Nature of Injuries

Injuries to the lower extremities far outnumbered the cases affecting any other particular part of the body. Foot and toe injuries, most of which could have been prevented or minimized by the wearing of safety shoes, alone accounted for 14 percent of the disabilities; injuries to ankles, knees, and legs accounted for another 19 percent. Fractures were particularly numerous among the foot and toe injuries. In the main, however, bruises, cuts, and sprains were the predominant types of injuries to the lower extremities.

Eye injuries, of which about 60 percent resulted from foreign bodies lodging in the eye and about 32 percent from welder's flash, constituted about 16 percent of all the disabilities. Skull and other head injuries, mainly cuts and bruises, but including 518 cases of brain concussion and 298 skull fractures, numbered 8 percent of the total volume of disabling injuries.

TABLE 3.—*Disabling Shipyard Injuries, 1943, Classified by Part of Body Injured and by Nature of Injury*

Body part	Total injuries		Number of injuries of specified nature				
	Number	Percent	Contusions, bruises, and hematoma	Strains and sprains	Fractures	Cuts, abrasions, and lacerations	Foreign bodies in eyes
Total number of injuries	56,865		13,017	11,506	8,764	6,803	6,118
Percent of total		100	24	20	15	12	11
Lower extremities	18,328	33	6,288	3,771	4,516	2,245	
Feet	4,624	8	1,719	376	1,396	563	
Legs	4,035	7	1,701	216	629	1,068	
Toes	3,248	6	1,060	21	1,929	124	
Ankles	3,215	6	431	2,083	385	131	
Knees	3,206	6	1,377	1,075	177	359	
Head	14,732	24	1,384	141	563	1,551	6,118
Eyes	10,487	16	219	3		436	6,118
Skull	2,816	5	921	1	298	782	
Other head	1,429	3	244	137	265	333	
Trunk	12,730	22	3,251	6,731	1,509	204	
Back	6,308	11	1,050	4,435	315	61	
Ribs, shoulders	3,806	7	1,430	972	1,065	51	
Abdominal organs and abdominal wall	1,673	3	316	[1] 1,142		56	
Hips, pelvis	745	1	389	153	123	19	
Other trunk	198	(2)	66	29	6	17	
Upper extremities	9,746	18	1,968	827	2,156	2,783	
Fingers	4,284	8	858	135	968	1,508	
Hands	2,069	4	390	76	266	792	
Arms	1,588	3	296	182	475	241	
Wrists	1,015	2	93	345	347	109	
Elbows	790	1	331	89	100	133	
Body, general	902	2	92	5	5	9	
Body, not elsewhere classified	24	(2)			1	1	
Unclassified, insufficient data	403	1	34	31	14	10	

[1] Of this number, 831 were hernia.
[2] Less than half of 1 percent.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 3.—*Disabling Shipyard Injuries, 1943, Classified by Part of Body Injured and by Nature of Injury*—Continued

Body part	Number of injuries of specified nature—Con.						
	Burns	Welder's flash	Amputations	Industrial diseases and chemical poisoning	Concussion	Other injuries, not elsewhere classified	Unclassified—Insufficient data
Total number of injuries	2,953	2,928	653	655	518	581	2,369
Percent of total	5	5	1	1	1	1	4
Lower extremities	819		56	11		20	602
Feet	359		2	3		1	205
Legs	253		7	5		12	144
Toes	10		47			3	54
Ankles	132			2			51
Knees	65			1		4	148
Head	848	2,928	11	44	518	224	402
Eyes	519	2,928	[3] 11	8		174	71
Skull	25				518	10	261
Other head	304			36		40	70
Trunk	118			66		45	806
Back	36					9	402
Ribs, shoulders	46			6		11	225
Abdominal organs and abdominal wall	14			5		17	123
Hips, pelvis	7					2	52
Other trunk	15			55		6	4
Upper extremities	1,089		586	77		22	238
Fingers	167		577	2		4	65
Hands	428		6	48		9	54
Arms	302		3	26		7	56
Wrists	91			1		2	27
Elbows	101						36
Body, general	63			450		244	34
Body, not elsewhere classified				1		14	7
Unclassified, insufficient data	16			6		12	280

[3] Enucleation.

Injuries to the trunk accounted for 22 percent of the disabilities. About half of these were back injuries and another third were injuries to ribs and shoulders. Strains and sprains from improper lifting (including 831 hernia cases) were particularly numerous. Nearly a third of the injuries to ribs and shoulders involved broken bones, and 315 of the 6,308 reported cases of back injury were fractures.

Injuries to fingers, hands, and arms totaled 18 percent of all reported disabilities, with finger and hand injuries predominating. Fractures were very common in this group, particularly among the finger injuries. Finger injuries also accounted for 577 of 653 amputations reported during the year.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Preventive Medicine in Chile, 1938-41[1]

SINCE 1938 all social-insurance funds operating in Chile have been required to provide preventive medical service for their members.[2] Altogether, 1,475,383 persons, members of 27 of these funds, were entitled to such service at the end of 1942. During the 4 years the service has been in effect, about 12 percent of the entire population of Chile have received physical examinations and over 50,000,000 pesos has been expended for preventive rest for tuberculosis and cardio-vascular diseases. The funds are also directed to carry on research on such chronic diseases as tuberculosis, syphilis, rheumatism, and disorders of the heart and kidneys, and certain occupational maladies.[3]

Studies have shown that in Chile 60 percent of the deaths of persons of the able-bodied ages are due to tuberculosis, and heart and veneral diseases, and that these same diseases are responsible for 56 percent of the cases given hospital care and 38 percent of the unattended cases. It has been found, furthermore, that tuberculosis causes an annual loss of 710 million man-hours of work—a loss equivalent to the efforts of one-fourth of the entire working population.

Among the 1,937 members of the Compulsory Insurance Fund, who received preventive rest for tuberculosis and whose benefits terminated during the first half of 1941, 50.2 percent recovered or improved, for 31.5 percent the results were unknown, and only 18.3 percent failed to show improvement. The period of preventive rest in these 1,937 cases averaged 250 days. The experience of the Fund indicated that tuberculosis at the incipient or slight stage could be cured at a cost of 9,000 pesos for benefit and with 8 months' rest, whereas a moderately advanced lesion required 14 months' rest and about 16,000 pesos in benefits; in advanced cases costs were doubled and even then the results were unsatisfactory.

Preventive-Medicine Activities of Compulsory Insurance Fund

The Compulsory Insurance Fund created by law No. 4054 of September 8, 1924, is the most important social-insurance fund through which the preventive medical service is carried on. For the granting of preventive rest, the Fund has 16 commissions throughout the country. These grant preventive rest primarily to persons suffering from tuberculosis and cardio-vascular ailments and only rarely to persons suffering from any other diseases. As table 1 indicates, up to December 31, 1941, such rest had been given in 19,687 cases.

[1] Data are from Estudio Estadístico de la Aplicación de la Ley 6174, en Diversas Instituciones de Previsión (in Previsión Social, Ministerio de Salubridad, Previsión y Asistencia Social, Santiago, Julio-Septiembre de 1942, pp. 11–25); Aims and Achievements of the Chilean Preventive Medicine Act, by Manuel de Viado (in International Labor Review, International Labor Office, Montreal, August 1942, pp. 123–135); La Ley de Medicina Preventiva y la Caja de Seguro Obligatorio, by Alfredo Rojas Carvajal and Humberto Abrahamson (in Boletín Médicio-Social de la Caja de Seguro Obligatorio, Santiago, Octubre de 1942, pp. 549–580); Seguridad Social en Chile, by Eduardo Grove (in Boletín de la Unión Panamericana, Washington, Junio de 1943, pp. 315–323); and Report of Sheldon T. Mills, second secretary of the United States Embassy at Santiago, July 2, 1943.

[2] Law No. 6174 of January 31, 1938, and subsequent amendments.

[3] For a detailed account of provisions for preventive medicine in Chile see "Preventive-Medicine Services in Chile" in Labor Conditions in Latin America, No. 8 (Bureau of Labor Statistics, Serial No. R. 1280, pp. 6–10).

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Preventive Rest Granted by Chilean Compulsory Insurance Fund Through December 31, 1941*

Year	Total cases	Preventive rest granted for—					
		Tuberculosis		Cardio-vascular diseases		Other ailments	
		Number	Percent	Number	Percent	Number	Percent
Total	19,687	16,811	85.4	2,863	14.5	13	0.1
1938	752	707	94.0	45	6.0	0	
1939	4,075	3,372	82.7	700	17.2	3	.1
1940	6,543	5,534	84.6	1,001	15.3	8	.1
1941	8,317	7,198	86.5	1,117	13.4	2	(1)

[1] Less than half of 1 percent.

Of the persons given physical examinations in 1941, 63.3 percent were found to be well, 7.8 percent had syphilis, 7.2 percent had tuberculosis, 4.5 percent had cardio-vascular ailments, 1.2 percent had more than one of the above diseases, and 16 percent had other ailments.

During the 4-year period the proportion of persons discovered to have tuberculosis has shown a steady increase, rising from 4.3 percent in 1938 to 7.2 percent in 1941. This increase may be due in part, however, to improvements in the system of examinations and records. Of 436,399 persons examined during the whole period, 5.3 percent showed the presence of tuberculosis.

Notwithstanding the increase in grants for preventive rest, the cost of this treatment has been far below the 1 percent of wages which the law designates for this purpose. During the experience of the fund the receipts based on pay roll increased from 11,687,316 pesos in 1938 to 30,620,781 pesos in 1941. In the same period the cost of rest benefit rose from 224,300 to 17,387,619 pesos. At the end of 1941 there was an unexpended sum, amounting to 54,945,153 pesos.

TABLE 2.—*Receipts and Expenditures for Rest Benefits, by Chilean Compulsory Insurance Fund, and Incidence of Cases and Deaths from Tuberculosis, 1938–41*

Year	Receipts—1 percent of pay roll	Expenditures for rest benefits	Physical examinations		Deaths of insured persons	
			Total number	Percent showing tuberculosis	Total number	Percent caused by tuberculosis
	Pesos	*Pesos*				
Total	88,815,990	33,870,837	436,399	5.3	[1] 10,147	[1] 32.0
1938	11,687,316	224,300	82,112	4.3	10,613	31.9
1939	20,895,741	5,076,113	128,109	4.0	10,650	29.6
1940	25,612,152	11,182,805	115,688	5.5	10,058	33.0
1941	30,620,781	17,387,619	110,490	7.2	9,269	34.0

[1] Annual average.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Industrial Disputes

Strikes in March 1944

PRELIMINARY estimates for March 1944 show 360 strikes involving 115,000 workers and 415,000 man-days of idleness. The number of strikes was somewhat greater than in February, although the number of workers involved was the same and the amount of strike idleness was only 88 percent of that for the preceding month. Idleness in March was 0.06 percent of the available working time.

No strike in March involved as many as 5,000 workers, the largest being a stoppage of 4,900 at the Allegheny Ludlum Steel Corporation, Brackenridge, Pa., over demand for a wage adjustment.

An 18-day strike over a union-shop issue at the American Tobacco Co., Durham (N. C.), caused the greatest amount of idleness in March—about 34,000 man-days. Another at the Combustion Engineering Co., Chattanooga (Tenn.), protesting denial of a wage increase, caused more than 22,000 man-days of idleness; and a stoppage of about 3,800 workers at the American Shipbuilding Co., Lorain (Ohio), over wage rates for electricians, caused 18,000 man-days of idleness. Wage questions were issues in the majority of the larger strikes in March.

Strikes in March 1944, With Comparative Figures for Earlier Periods [1]

Month	Strikes beginning in month		Man-days idle during month (all strikes)	
	Number	Workers involved	Number	Percent of available working time
March 1944 [2]	360	115,000	415,000	0.06
February 1944 [2]	330	115,000	470,000	.06
March 1943	248	73,943	179,093	.02
March 1942	234	67,292	401,739	.06
March 1941	348	118,271	1,558,457	.26
March 1940	178	22,433	386,981	.07
March 1939	210	43,337	618,147	.11

[1] All figures exclude strikes lasting less than 1 working day (or shift) and those involving fewer than 6 workers.

[2] Preliminary and subject to revision.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Activities of U. S. Conciliation Service, March 1944

THE U. S. Conciliation Service during March disposed of 2,043 situations involving 1,225,125 workers (table 1). The services of this agency were requested by the employers, employees, and other interested parties. Of these situations, 202 were strikes and lockouts involving 107,109 workers, 1,219 were threatened strikes and controversies involving 658,225 workers. During the month, 346 disputes were certified to the National War Labor Board, and in 29 cases other agencies assumed jurisdiction. The remaining 247 situations included investigations, arbitrations, requests for information, consultations, etc.

TABLE 1.—*Situations Disposed of by U. S. Conciliation Service, March 1944, by Type of Situation*

Type of situation	Number	Workers involved
Total	[1] 2,043	1,225,125
Labor disputes	1,421	765,334
Strikes	198	98,257
Threatened strikes	151	154,828
Lockouts	4	8,852
Controversies	1,068	503,397
Other situations	247	21,359
Arbitrations	102	7,188
Technical services	23	8,842
Investigations	35	2,451
Requests to conduct consent elections	1	256
Requests for verification of union membership	4	185
Requests for information	18	31
Consultations	27	65
Special services of commissioners	29	2,333
Complaints	8	8
Disputes referred to other agencies during negotiations	375	438,432
To National War Labor Board	346	415,344
To National Labor Relations Board	21	2,817
To other Federal agencies	4	19,960
To nongovernmental agencies	2	207
To State agencies	2	104

[1] During the month 154 cases involving 56,779 workers were adjusted subject to hearings officer or arbitration procedure with the hearings officer or arbiter to be selected by the National War Labor Board.

The facilities of the Service were used in 28 major industrial fields, such as building trades and transportation, and the manufacture of iron and steel, transportation equipment, textiles, food, etc. (table 2), and were utilized by the employees and employers in 48 States, the District of Columbia, and Puerto Rico (table 3).

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 2.—*Situations Disposed of by U. S. Conciliation Service, March 1944, by Industries*

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries	1,796	1,203,766	247	21,359	2,043	1,225,125
Agriculture	2	8,030			2	8,030
Building trades	50	7,170	6	53	56	7,223
Chemicals	73	19,781	9	365	82	20,146
Communications	11	18,117	2	106	13	18,223
Electrical equipment	29	22,114	7	196	36	22,310
Food	170	35,534	6	118	176	35,652
Furniture and finished lumber	55	5,531	3	515	58	6,046
Iron and steel	215	90,274	44	3,559	259	93,833
Leather	31	10,881	13	523	44	11,404
Lumber	46	9,036	4	5	50	9,041
Machinery	122	43,777	11	922	133	44,699
Maritime	7	22,855	3	164	10	23,019
Mining	22	5,548	3	4,583	25	10,131
Motion pictures	1	7			1	7
Nonferrous metals	73	98,606	13	947	86	99,553
Paper	14	2,681	3	7	17	2,688
Personal service	74	6,828	9	534	83	7,362
Petroleum	26	33,979	14	1,455	40	35,434
Printing	36	4,451	3	90	39	4,541
Professional	14	5,418	1	102	15	5,520
Rubber	21	11,672	3	710	24	12,382
Stone, clay, and glass	53	61,614	12	145	65	61,759
Textile	93	155,268	14	924	107	156,192
Tobacco	8	4,255	3	3	11	4,258
Trade	141	15,243	10	586	151	15,829
Transportation	125	17,390	7	52	132	17,442
Transportation equipment	174	469,500	20	2,683	194	472,183
Utilities	18	11,057	1	22	19	11,079
Miscellaneous	92	7,149	23	1,990	115	9,139

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Table 3.—*Situations Disposed of by U. S. Conciliation Service, March 1944, by States*

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States	1,796	1,203,766	247	21,359	2,043	1,225,125
Alabama	21	16,234	3	203	24	16,437
Arizona	12	4,793	1	1	13	4,794
Arkansas	9	1,367	1	290	10	1,657
California	139	225,913	10	1,131	149	227,044
Colorado	8	1,170			8	1,170
Connecticut	20	14,917	1	100	21	15,017
Delaware	1	1,650			1	1,650
District of Columbia	3	328	7	659	10	987
Florida	16	4,753	2	505	18	5,258
Georgia	10	1,514	3	18	13	1,532
Idaho	8	1,776	1	4,560	9	6,336
Illinois	206	38,718	22	848	228	39,566
Indiana	60	27,606	14	2,977	74	30,583
Iowa	26	8,291			26	8,291
Kansas	6	21,564	2	6	8	21,570
Kentucky	20	2,524	1	1	21	2,525
Louisiana	24	8,791	7	156	31	8,947
Maine	2	220	2	45	4	265
Maryland	11	4,158	2	101	13	4,259
Massachusetts	55	43,941	17	859	72	44,800
Michigan	147	182,125	30	1,183	177	183,308
Minnesota	52	9,199	2	23	54	9,222
Mississippi	2	400			2	400
Missouri	99	19,943	9	214	108	20,157
Montana	11	354			11	354
Nebraska	8	555	1	1	9	556
Nevada	3	42	1	1	4	43
New Hampshire	3	119	1	2	4	121
New Jersey	51	18,086	11	818	62	18,904
New Mexico	3	550	1	8	4	558
New York	160	195,336	14	1,213	174	196,549
North Carolina	28	4,035	4	18	32	4,053
Puerto Rico	5	8,725			5	8,725
North Dakota	1	9			1	9
Ohio	155	59,862	18	1,761	1	61,623
Oklahoma	17	1,621	1	2	18	1,623
Oregon	30	4,271	8	1,223	38	5,494
Pennsylvania	138	189,863	17	966	155	190,829
Rhode Island	6	10,359	1	9	7	10,368
South Carolina	5	7,555	1	35	6	7,590
South Dakota	3	327			3	327
Tennessee	26	9,463	8	482	34	9,945
Texas	32	8,109	3	45	35	8,154
Utah	4	136	1	420	5	556
Vermont	4	2,884			4	2,884
Virginia	21	10,938	8	277	29	11,215
Washington	45	6,072	3	73	48	6,145
West Virginia	17	5,009	3	4	20	5,013
Wisconsin	59	17,438	4	18	63	17,456
Wyoming	4	153	1	103	5	256

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Labor Laws and Decisions

Legal Provisions on Collection of Unpaid Wages[1]

LAWS on wage payment and wage collection have been enacted by most of the States in order to protect workers against employers who fail to pay wages regularly, or who do not pay in full, or who do not pay at all. Although these laws are not all equally effective, tens of thousands of wage claims are collected each year, adding up to several million dollars. In California, where wage-payment laws are well developed and where the labor department is active in carrying them out, the sum of about a half million dollars is collected in back wages for the workers of the State each year. New York collected about $100,000 in 1942. Even where there is no specific legislation authorizing the labor commissioner or other agency to assist workers in collecting claims for back wages, State labor departments are frequently able to bring about an informal settlement of wage claims, under laws requiring prompt, or periodic, payment of wages.

This subject has received considerable attention at the several national conferences on labor legislation and also at the conventions of the International Association of Governmental Labor Officials. In 1936 these groups recommended the adoption of certain language for a proposed State wage-payment and wage-collection law, and since that time nine States have enacted substantial portions of the measure as thus drafted. Under its terms, workers are assured of the payment of wages in full and in actual money, on regular pay days, with the pay period short enough to enable the worker to live on a cash rather than a credit basis.

Wage-Collection Provisions

In 14 States and the Territory of Hawaii, the labor commissioner or other administrative agency is authorized by law to take assignments of workers' claims for back wages. He may prosecute civil actions for their collection through the courts, without cost to the worker, if the claims are deemed valid and enforceable. These States are Arkansas, California, Illinois, Indiana, Michigan, Nevada, New Hampshire, New Mexico, New York, Oregon, Rhode Island, Utah, Washington, and Wisconsin. In four of these States (Arkansas, California, Oregon, and Wisconsin) the labor department is also authorized to hear and decide disputes concerning unpaid wages, and in New Jersey, a regular small-claims court has been established within the department of labor, for the purpose of settling such disputes.

[1] Prepared by Alfred Acee of the Division of Labor Standards, U. S. Department of Labor. For more detailed information on this subject, see Bulletin 58 of the Division of Labor Standards.

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

Wage-Payment Requirements

Forty-six States, as well as Alaska, Hawaii, and Puerto Rico, have some sort of law dealing with payment of wages. Only Delaware, Florida, and the District of Columbia have no such legislation. Most of these laws require employers to designate regular pay days in advance, and to pay weekly, biweekly or semimonthly, and, in a few cases, monthly. Another type of provision regulates the payment of employees who are separated from the pay roll either voluntarily or by discharge, and some laws specify when payment must be made in the case of industrial dispute. Other laws require the payment of wages in cash or readily negotiable check, to prevent the abuse brought about by the payment of wages in scrip.

The most usual provision relating to wage payment is that requiring employers to maintain regular pay days for their employees. Some of the laws, however, are extremely limited in coverage, applying only to certain groups of employees or to specified industries. A few of the laws are seriously weakened by permitting employers and employees to agree upon a different arrangement than that specified in the law. Other laws require the legal standards to be observed only on the demand of the workers. The employer most likely to violate the law will also make use of loopholes such as these, by forcing a "mutually" satisfactory agreement or by waiting for the workers to demand a regular pay day.

Some of the laws allow a long "hold-over" period, which is the time lapse between the end of the pay period and the pay day. Computing a pay roll, of course, may take some time where large numbers of workers are employed, or where wages must be figured on a piece-rate basis. A hold-over period of 3 days, as provided in the suggested draft, allows sufficient time for these computations. Most State laws, however, allow a hold-over period of about 2 weeks. Where the penalty for violation of the hold-over provision does not apply for another week or so, the time before the worker can collect his pay is, in effect, extended even further.

In 11 States [2] the law, or a summary of it, must be conspicuously posted in the place of employment. Such a provision is of great importance to the worker, as it enables him to be familiar with the provisions of his wage-payment law. Another important provision, which, however, is contained in only a few of the laws, requires that employees be informed by posted notice, or in writing, of their rate of pay, and place of payment. The wage-payment laws of only 4 States [3] require employers to keep accurate records of hours worked and wages paid. However, such records are required to be kept under the Federal Fair Labor Standards Act and other Federal laws.

Frequency of Payment

Employers are required to maintain regular pay days for their employees in 44 States, Alaska, Hawaii, and Puerto Rico. No provision of this sort is made by Delaware, Florida, Idaho, Washington, or the District of Columbia. Some of the laws are extremely limited in

[2] Arizona, California, Illinois, Montana, Nevada, New Hampshire, Oregon, South Carolina, Tennessee, Utah, and Wyoming.
[3] Maine, New Mexico, Rhode Island, and Utah.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

coverage, applying, for example, only to railroads, public service corporations, or to employers in a few specified industries. Generally agricultural and domestic workers, and public employees, are not covered.

In more than half the States, the pay-day law applies both to individual employers and to corporate employers. However, in many cases the laws apply only to employers in certain industries. In 10 States (Arizona, Arkansas, Colorado, Illinois, Kansas, Kentucky, Maryland, Missouri, South Carolina, and Texas) only employees of corporations are protected by the wage-payment law. In 21 States, however, the laws apply to workers employed in practically all industries. These States are California, Connecticut, Georgia, Indiana, Maine, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wisconsin. In a few States the laws apply only to establishments employing a certain number of employees and in others do not cover employees paid on an annual or monthly basis or receiving more than a specified salary or wage.

The semimonthly or biweekly pay period is that most commonly required by law. However, 9 States (Connecticut, Indiana, Maine, Massachusetts, New Hampshire, New York, Rhode Island, South Carolina, and Vermont) require weekly pay days, although some of these laws apply only to certain industries and frequently semimonthly pay days are required in these same States for other industries. The New York law has been interpreted by the State attorney general as permitting payment every 2 weeks, in full. In Massachusetts permission may be granted by the labor commissioner to railroads to pay semimonthly.

A number of States make some sort of provision for the prompt payment of wages to employees who are discharged or voluntarily quit. In 31 States [4] workers who are discharged are assured prompt payment of their wages, and similar protection is given in 22 States [5] to workers who quit. Ten States [6] require that employees who cannot work because of an industrial dispute shall be paid on the next regular pay day. Special provisions for the payment of wages to workers absent on pay day appear in 20 State laws.[7] However, in each of these cases the law frequently applies only to certain industries.

In addition to the value of these laws in assuring prompt payment of wages, they are often used as a means of bringing pressure on employers who fail or refuse to pay wages due to employees. In some States, where the labor commissioner is given no wage-collection authority, these laws are the only means of assisting workers in collecting their wages. This method is effectiv ly used in Massachusetts, where the labor department lacks authority to take assignments, and is utilized to some extent in Oklahoma, Tennessee, and Texas. In 12

[4] Arizona, Arkansas, California, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Oregon, Rhode Island, South Carolina, Texas, Utah, Washington, West Virginia, Wisconsin, and Wyoming.

[5] Arizona, California, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Nevada, New Hampshire, New Mexico, Oregon, South Carolina, Texas, Utah, Washington, and Wisconsin.

[6] California, Illinois, Indiana, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, South Carolina, and Utah.

[7] Idaho, Indiana, Iowa, Kentucky, Maine, Massachusetts, Michigan, Montana, Nebraska, Nevada, New Jersey, Ohio, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, West Virginia, Wisconsin, and Wyoming.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

other States (California, Illinois, Indiana, Michigan, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Utah, and Wisconsin) the commissioner may either use his wage-collection authority or prosecute under the wage-payment law.

Medium of Payment

Most State laws require payment of wages in lawful money or check' variously described by such phrases as "payable on demand," "negotiable," "payable without discount," or "redeemable on pay day." These provisions are designed to prevent the use of scrip, which usually can be converted only for purchases in company stores where prices are often higher than elsewhere. There is no provision requiring the payment of wages in lawful money in Alabama, Connecticut, Delaware, Florida, Maine, Massachusetts, Minnesota, Nebraska, North Dakota, Pennsylvania, South Dakota, or Wisconsin.

Penalties

Most of the laws impose a fine or imprisonment, or both, for violations, as well as payment of court costs and reasonable attorneys' fees. In addition, in 21 States,[8] the laws include different types of penalties designed to reimburse the worker for loss of time and money in collecting his wages. The most common type of penalty for this purpose provides that wages shall continue for a certain number of days, ranging in most cases from 30 to 60 days after separation from the job, or until legal action is commenced. Another type requires payment to the worker of a fixed sum, or a percentage of the wages due, for each day of violation, but usually sets a maximum amount payable as a penalty. There are also penalties, in some States, for the failure of the employer to redeem checks or other orders for the payment of wages on demand.

Administrative Agency

The department of labor, in about half of the States, has specific authority to enforce the wage-payment law. In 14 of these States it has the further authority to take wage assignments. In the other States the general authority of the department for enforcing labor laws has been interpreted to include at least advice and help to wage claimants.

The usefulness of wage-payment laws to workers is greatly diminished when they are not enforced by the State labor department. Sometimes criminal prosecution is left to the district or county attorney, or a penalty is provided which may be collected by the employee in a civil suit. Unless the employees can use the office of the labor commissioner to collect that penalty, it generally remains uncollected, or is consumed by attorneys' fees. However, an increasing number of States now authorize the State labor commissioners to enforce these laws and to assist wage earners in collecting their claims.

[8] Arkansas, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, Oregon, South Carolina, Utah, West Virginia, and Wisconsin.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

ADMINISTRATIVE PROCEDURE

The method of handling complaints concerning wage payment varies from State to State, depending on the type of law. In most States a rather simple procedure is followed, usually including these steps: (1) Filing the complaint, (2) giving both parties to the case a hearing, (3) checking on the facts in the complaint, (4) determining whether a violation of the wage-payment laws has occurred, (5) if prosecution is decided upon, preparing the case for prosecution, and (6) taking an assignment of the wage claim and instituting civil proceedings for recovery of a judgment.

The complaint is customarily filed on forms provided by the department. A member of the department is usually assigned the duty of assisting those who come to the office in person to file a complaint or corresponding with those who are at a distance. The employer is requested either to pay the claim or appear for a hearing at a stated time. The hearings are conducted informally, and disputants are discouraged from bringing legal counsel.

The hearing results in dismissal of the case as unfounded, a settlement to which both parties and the representatives of the department agree, or a decision that the department take further steps. In a large number of cases the employer acknowledges his indebtedness, and pays the claim. A settlement generally includes agreement upon the amount due and the manner of payment—whether it is to be paid in a lump sum, or in installments.

In case legal action is necessary in order to collect the unpaid wages, and the State law authorizes the labor commissioner to take assignments of wage claims, he enters suit on behalf of the worker. If the commissioner does not have this authority, and it appears that there is a violation of the wage-payment law, he exercises his authority to enforce this law.

Suggested Language for a State Wage-Payment and Wage-Collection Law

In 1936 a committee of State labor commissioners drafted suggested language for a State bill regulating wage payment. This draft bill was endorsed by the International Association of Governmental Labor Officials and the Third National Conference on Labor Legislation. The American Federation of Labor and the Congress of Industrial Organizations have recommended this bill to State legislatures.

The draft bill covers all private employers, whether they are corporations, partnerships, or individuals. Employer is defined to include "agents and officers" of employers. This provision is important, in order to hold responsible the individuals in a corporation or firm who have the authority relating to time and place of wage payment.

Employers are required to pay wages semimonthly on days designated in advance by the employer, with a hold-over of 3 days. Wages must be paid in full, in lawful money of the United States, or checks on banks, convertible into cash on demand at full face value thereof. The suggested language is designed to eliminate the undesirable practice of withholding wages for unreasonably long periods of time, and to prevent the payment of wages in non-negotiable scrip.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Under the proposed bill, discharged employees must be paid within 24 hours of the time of separation, and in case of quitting, the wages must be paid within 72 hours thereafter, unless the employee has given 72 hours' previous notice of his intention to quit in which case payment must be made at the time of quitting. In the case of industrial disputes, wages must be paid at the next regular pay day.

The labor commissioner is authorized to enforce the act and to institute actions for penalties under it. He may hold hearings to determine the justice of any claim and is directed to cooperate with any employee in the enforcement of a claim against his employer. The commissioner is also authorized to take assignments of wage claims, not exceeding $200, and to institute civil actions for the recovery of the claim.

The draft bill also contains provisions requiring the posting of notices, unconditional payment of wages conceded to be due, and forbidding a waiver of the provisions of the law. The provision regarding the unconditional payment of wages is very important to the workman as it requires the employer to give notice of the amount of wages which he concedes to be due and to pay that amount, without condition, within the time set by the act. Acceptance of this amount by the employee does not constitute a release as to the balance of his claim.

Occupational-Disease Legislation in Virginia[1]

VIRGINIA became the twenty-eighth State to protect workers from occupational-disease hazards when an amendment to the workmen's compensation law was approved on February 28, 1944. The law provides a schedule of diseases brought under coverage, and in addition permits an employer, if he desires to do so, to supply general occupational-disease coverage for his employees.

Schedule of Occupational Diseases

The schedule of occupational diseases for which compensation is payable is as follows: (1) Anthrax; (2) asbestosis; (3) cataract of the eyes caused by exposure to the heat and glare of molten glass or to radiant rays such as infrared; (4) compressed-air illness; (5) conjunctivitis or retinitis caused by exposure to radiant rays; (6) cellulitis; (7) dermatitis; (8) epitheliomatous cancer or ulceration of the skin or of the corneal surface of the eye resulting from pitch, tar, soot, bitumen, anthracene, paraffin, mineral oil, or their compounds, products or residues; (9) glanders; (10) infection or inflammation of the skin or eyes, or other external contact surfaces or oral or nasal cavities caused by irritating oil, cutting compounds, chemical dust, liquid fumes, gases, or vapors; (11) infections or contagious diseases contracted in the course of employment in or in immediate connection with a hospital or sanitarium in which persons suffering from such diseases are cared for and treated; (12) poisoning by any of the following: Ammonia; arsenic, benzol or derivatives of benzene; brass; cadmium; carbon bisulphide or any sulphide; carbon dioxide; carbon

[1] Prepared by the Division of Labor Standards of the Department of Labor.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

monoxide; carbon tetrachloride or other toxic chlorinated hydrocarbons or toxic halogenated hydrocarbons; chlorine; cyanide; dinitrophenol; formaldehyde and its preparations; hydrochloric acid; hydrofluoric acid; hydrogen sulphide; lead; manganese; mercury; methanol (wood alcohol); methyl chloride; nickel carbonyl; nitrous fumes; nitric acid; petroleum or petroleum products; phosphorus; sulphur dioxide; sulphuric acid; tetrachlor-methane or any substances used as or in conjunction with a solvent for acetate of cellulose or nitrocellulose; turpentine; zinc; (13) radium disability or disability resulting from exposure to radio-active substances and X-ray; (14) silicosis; (15) ulceration caused by chrome compound or caustic chemical acids or alkalies, and undulant fever caused by the industrial slaughtering and processing of livestock and the handling of hides.

The law covers only diseases which an employee contracted subsequent to July 1, 1944. All employers subject to the workmen's compensation act are liable for the occupational diseases listed in the schedule.

Election of Full Coverage

In lieu of the schedule of occupational diseases enumerated in the law, the employer may reject this and elect to be bound by the provisions relating to full coverage of all occupational diseases. In such case the employer is liable for all occupational diseases arising out of and in the course of employment. This election must be made within 60 days after July 1, 1944, and becomes effective from that date. An election made more than 60 days after July 1, 1944, becomes effective on the day it is received. An election once made is effective until withdrawn in writing, but such election may not be withdrawn within a period of 1 year. Thereafter an employer who has accepted the provisions of the workmen's compensation act is liable under the provisions relating to scheduled coverage.

Recent Decisions of Interest to Labor[1]

Wage and Hour Law

BY a 7-to-2 decision the United States Supreme Court in *Tennessee Coal, Iron & Railroad Co.* v. *Muscoda Local No. 123*[2] affirmed a judgment of the United States Court of Appeals for the Fifth Circuit[3] which granted underground iron-ore miners, covered by the Wage and Hour Law, "portal to portal" pay, that is, compensation for time spent in traveling from the mine portal to their place of work and back to the portal at the end of a shift.

The trial court had found the following facts: The miners employed by the companies involved are required to report at the mine at a specified hour, change into work clothes, "check in" at a tally house,

[1] Prepared in the Office of the Solicitor, Department of Labor. The cases covered in this article represent a selection of significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law nor to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

[2] Also *Sloss Sheffield Steel Iron Co.* v. *Sloss Red Ore Local No. 109; Republic Steel Corp.* v. *Raimund Local No. 121*, 64 Sup. Ct. 698 (Mar. 27, 1944). Separate concurring opinions were written by Mr. Justice Frankfurter and Mr. Justice Jackson.

[3] 135 Fed. (2d) 320; rehearing denied 137 Fed. (2d) 176.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

receive instructions, pick up their tools and equipment, report at a loading platform at the portal of the mine and ride down the shafts in a little car (either in a boxcar usually used to transport iron ore or in a small "man trip"). The length of the ride varies from 3,000 to 12,000 feet. At the end of the car trip, the rest of the journey—ranging up to 2 miles in length—is completed on foot. At the end of the shift the miners return on foot to the underground loading platform, ride back to the mine portal, return their equipment, "check out," bathe, change their clothes, and go home. The court noted the hazardous nature of the underground journey—the overcrowding of men in the cars, the low ceiling of the mine which compels the miners to bend down during the ride, the injuries which have occurred, the unsanitary and ill-ventilated surroundings, and the danger from exposed high-voltage wires and falling rock.

Section 7 (a) of the Fair Labor Standards Act provides that no one who is engaged in interstate commerce or in the production of goods for interstate commerce shall be employed for a workweek longer than 40 hours unless time and a half is paid for the excess hours. The word "employ" is defined to include "to suffer or permit to work." The question before the court was whether the underground travel from the portal to the face of the mine and the return trip was employment within the meaning of the act, and consequently, whether the miners were entitled to the statutory compensation for the time spent in such travel.

Mr. Justice Murphy, writing the majority opinion for the Court, stated that the statute did not provide a precise definition of work or employment, and therefore these terms should be interpreted as commonly understood, that is, "physical or mental exertion (whether burdensome or not) controlled or required by the employer, and pursued necessarily and primarily for the benefit of the employer, and his business." Looking at the underground travel in the light of this definition, the Court observed: "The exacting and dangerous conditions in the mine shafts stand as mute, unanswerable proof that the journey from and to the portal includes continuous physical and mental exertion as well as hazards to life and limb." Since the underground travel occurred on the mine owners' property, was controlled and supervised by them, and done for the benefit of their mining operations, it was held to be "necessary to production" and constituted working time.

In rejecting the employers' argument that existing custom in the mines established a "face to face" method of computing working time, the Supreme Court relied on the fact that the trial court had been unable to find the existence of such a custom. The Court further observed that, prior to the effective date of the Fair Labor Standards Act, the only collective-bargaining agents recognized by the owners were company-dominated unions and therefore any contracts which might indicate prevailing practices did not represent the result of true collective bargaining. In any event, stated the Court, prior custom and contract are immaterial and "cannot be utilized to deprive employees of their statutory rights."

Mr. Justice Roberts, writing a dissenting opinion in which Mr. Chief Justice Stone joined, stated that, in lieu of a more precise statutory definition, "what constitutes work for which payment is to be made under the statute varies with customs and practices in

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

different industries or businesses." He concluded that, on the basis of prior custom, previous agreements and past practices, payment in the iron-ore mines was made only for time spent at the actual working place ("face to face" method).

Labor Relations and Industrial Disputes

Wisconsin Employment Peace Act.—A provision of the Wisconsin Employment Peace Act (sec. 111.06) makes it an unfair labor practice for an employer "to encourage or discourage membership in any labor organization." However, an employer may enter into an "all-union agreement" [4] without violating the prohibition set out above, if three-fourths or more of his employees vote by secret ballot for such agreement in a referendum which is conducted by the State Employment Relations Board.

In order to enforce this provision, the State Board ordered an employer and a contracting union to cancel an all-union contract which they had made without the referendum required by the statute. It also ordered the reinstatement of an employee who had been discharged under the contract, and directed that the employer and the union each pay one-half of the employee's back pay. The union appealed from the Board's order to the Wisconsin Circuit Court (Oneida County) in *International Brotherhood of Paper Makers, Local No. 66* v. *Wisconsin Employment Relations Board.*[5]

The union argued that the company and its employees were engaged in interstate commerce, and that therefore the National Labor Relations Board or the War Labor Board were the only agencies which had jurisdiction over the dispute. The court rejected this argument by stating that the National Labor Relations Board had not taken jurisdiction of this particular issue, and, furthermore, that the National Labor Relations Act did not supersede State legislation in this field.[6] There is no need, said the court, to decide whether an order of the National War Labor Board would displace the State board's action, since the War Labor Board had not dealt with this case.[7]

The War Labor Board has considered similar cases presented by the same provision of the Wisconsin law. In the case of *In re J. Greenebaum Tanning Co.* (10 War Lab. Rep. 527)[8], the National War Labor Board granted a maintenance-of-membership clause to a union despite the company's objection that the award would violate the "all-union" provision of the Wisconsin Employment Peace Act because the required referendum had not been conducted. The War Labor Board held that the Wisconsin act was directed against voluntary, and not involuntary, union assistance or discrimination by an employer. It added that its ruling was an exercise of the Federal war power over private contracts, and that its power displaced the State's powers in time of war.

[4] The Wisconsin statute defines an "all-union agreement" as "an agreement between an employer and a labor organization or labor organizations whereby the employees eligible to membership therein are required to be members thereof."

[5] —— N. W. (2d) —— (Feb. 24, 1944).

[6] See *Christoffel* v. *Wisconsin Employment Relations Board*, 243 Wis. 332, 10 N. W. (2d) 197, in which the constitutionality of the State statute was questioned. Certiorari denied, 64 Sup. Ct. 90 (Oct. 25, 1943). Discussed in Monthly Labor Review, September 1943 (pp. 556, 557), and December 1943 (p. 1198). Note also *In re Ray-O-Vac Co.*, 10 War Lab. Rep. 578.

[7] The court modified the State board's order to the extent that that board's order required the union to reimburse the discharged employee for half of his back pay. It reasoned that back pay could be paid only by the employer, since he was the only one who could reinstate the employee.

[8] Discussed in Monthly Labor Review October 1943 (p. 783).

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

The Regional War Labor Board at Chicago refused to order the inclusion of a union-shop clause in a collective agreement (*In re Union Upholstering Co.*, 14 War Lab. Rep. 514). It stated that although the Board had the power to override State rulings which conflict with Federal rulings, that power should not be exercised unless the State's ruling interfered seriously with the effective prosecution of the war. Unlike the company involved in the Greenebaum case, the employer in the Union Upholstering case was not engaged in war work, and therefore the Regional Board refused to consider the union's request for the union-shop clause.

Civil rights.—Under section 43 of the New York Civil Rights Law labor organizations may not deny membership on account of race, color, or creed, and must give equal treatment to all of their members without racial discrimination. The term "labor organization" is defined as "any organization which exists and is constituted for the purpose, in whole or in part, of collective bargaining, or of dealing with employers concerning grievances, terms or conditions of employment, or of other mutual aid or protection."

An association of railway postal clerks, incorporated under the Membership Corporation Law of New York, had as its main object the furnishing of insurance benefits to its members. Its constitution limited membership to persons of the Caucasian race or native American Indians. The association itself sued for a declaratory judgment to determine if its restrictions on membership violated the Civil Rights Law. Reversing the lower court, the New York Supreme Court, Appellate Division (Third Department) held that the association was a "labor organization" for purposes of the State statute which forbade racial discrimination by such groups.[9]

The association argued that it chiefly conducted an insurance business and therefore was not a labor organization. It claimed also that section 715 of the New York Labor Law, containing a similar definition of the term, excluded employees of the State or any political subdivision thereof. It finally urged that section 43 of the Civil Rights Law constituted an infringement by the State upon Federal power to conduct the postal system.

The court observed that the association was chartered by an international labor body, and had among its purposes the betterment of working conditions for its members. Even though the association operated an insurance business, the court found that it also engaged in other activities which brought it within the statutory definition of a labor organization.

With reference to the argument based on the exclusion of government employees in section 715 of the State Labor Law, the court noted that that section only defined the coverage of the New York Labor Relations Act, and did not supplement the separate definition used in the Civil Rights Law. The argument of infringement of Federal power was rejected on the ground that the racial discrimination forbidden by the Civil Rights Law was so far removed from the Federal Government's conduct of the postal service that it did not infringe Federal power.

Labor costs.—Under a cost-plus-a-fixed-fee contract with the Government, a contractor will be reimbursed for his "labor costs." In

[9] *Railway Mail Association* v. *Corsi, Industrial Commissioner of the State of New York and Goldstein, Attorney General of the State of New York*, —— N. Y. Supp. —— (Mar. 14, 1944).

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

response to an inquiry of the Maritime Commission, the Comptroller General ruled on the question whether military severance pay is included within the meaning of the term "labor costs."[10]

The War Labor Board had approved a provision in a collective agreement entered into by a Government contractor with a union. The agreement provided military severance pay for employees leaving their positions because of induction into the armed forces. The amount to be paid each employee varied according to the period of his employment. The Maritime Commission expressed its opposition to reimbursment of the expenditure on these grounds: (1) That as Congress had given consideration to the economic situation of members of the armed forces and provided for their compensation, appropriations for the Maritime Commission should not be used for this purpose, and (2) that the cost of production would be increased.

The Comptroller General rejected these contentions. He stated that no statute prohibited reimbursement of the expenses, and he explained that the purpose of a cost-plus-a-fixed-fee contract is to reimburse a contractor for all labor costs necessary to perform the contract properly. In his view, the term "labor costs" usually includes not only compensation for time actually worked but also compensation for vacation pay, sick-leave pay, and pension and retirement benefits. The standard used to determine reimbursable expenses was "a showing that the services involved were necessary to performance of the contract and that the expenditures for which reimbursement is sought were reasonably required to secure such services."

Since the company involved had no choice, in the Comptroller General's view, but to pay employees according to the clause approved by the War Labor Board in order to secure the labor "necessary for performance of its contract," the payments to the inductees were held to be items of cost for which the company should be reimbursed.

Veterans' Benefits

Statutory reemployment rights.—According to the Selective Service and Training Act of 1940 (50 U. S. C., sec. 308 (b)), a person who is honorably discharged from the armed forces and who has left a position which was not merely a temporary one, must—if he is still qualified to perform his former duties and applies for reemployment within 40 days after discharge—be restored by his former employer "to a position of like seniority, status, and pay unless the employer's circumstances have so changed as to make it impossible or unreasonable to do so." This section of the act was attacked as unconstitutional in the United States District Court for the Eastern District of Kentucky in *Hall* v. *Union Light, Heat & Power Co.*[11]

A veteran had applied for his old job 3 days after he had been honorably discharged from the Army, but his employer did not reinstate him until 3½ months later. The veteran sued in the district court for $512 back pay. The employer argued (1) that the court had no authority to deal with a suit for back wages alone, as such recovery could only be claimed as incidental relief in a suit for reinstatement, and (2) that section 8 (b) of the Selective Training and

[10] Comptroller General's Opinion No. B-29636, Feb. 25, 1944.
[11] —— Fed. Supp. —— (Feb. 21, 1944).

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Service Act was unconstitutional because it was difficult to comply with a statute using such vague and uncertain terms as "impossible" and "unreasonable."

The employer supported his first argument by pointing to section 8 (e) of the act. That section permits a veteran to sue an employer for reinstatement and, "as an incident thereto," to compensate such person "for any loss of wages or benefits suffered by reason of such employer's unlawful action." The court refused to read into the words "as an incident thereto" a requirement that a veteran could sue his employer for back pay only if he sued him, at the same time, for reinstatement. Such a narrow interpretation, stated the court, would defeat the purpose of the act, which is to restore discharged veterans to their old status. The court also refused to declare the statute unconstitutional and stated that the standards as set forth in the act were definite enough to inform reasonable employers of the responsibility imposed on them.

Contract rights.—In the case, *In re Toledo Pipe Threading Machine Co.* (14 War Lab. Rep. 715), the Regional War Labor Board at Cleveland approved a provision of a union contract which would give veterans greater reemployment rights than that given by Federal statute. Although the Selective Service and Training Act requires that a veteran apply for reemployment within 40 days of the date of his discharge from the Army, the union contract extended the time limitation to 60 days. It also provided the additional protection that if the veteran employee is physically unable to perform work, he has the right to apply for rehabilitation leave up to 1 year, with the privilege of renewal if he is still unable to work. Loss of seniority rights occurs if the employee on leave of absence does not report for work at the expiration of such leave, or if he accepts other employment during this period.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Social Security

Amendment of Salaried Employees' Retirement Law of Bolivia

A BOLIVIAN law of November 23, 1943, amending article 66 of the Labor Code, sets the compulsory retirement age under the salaried employees' retirement system at 65 years.[1] At the option of the employer, retirement may be postponed beyond that time for a period not to exceed 3 years. The system covers, besides salaried employees of private enterprises, employees of the Bolivian Government, of municipalities, and of independent agencies.

Employees retired after promulgation of the amending law may not receive a benefit larger than 15,000 bolivianos per month.[2] For employees previously retired, or who may be retired in the future under special laws, benefits are limited to 12,000 bolivianos per month.

Employees of banks and credit institutions who were employed prior to the enactment of the bank employees' retirement law of December 7, 1926, and "who were not employed on June 30 of the same year, but who after that date returned or may return to active employment with such bank or credit institution," will have a right to a retirement benefit. The period of service of such employees is to be "computed as discontinuous" and their contributions are to be made to the benefit fund "plus additional monthly discounts in proportion to the salaries they received." In calculating the retirement benefits of employees of banking and credit institutions, services rendered in any such institution shall be counted, provided persons to be retired have paid their contributions and these contributions have been transferred to the insurance fund from which retirement benefits are to be received.

[1] Data are from report of William S. Rosenberg, third secretary, United States Embassy, La Paz, January 7, 1944.

[2] Average exchange rate of boliviano in 1943=2 cents.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Changes in British Supplementary Pensions and Unemployment Assistance

Supplementary Pensions

NEW regulations governing the assessment of supplementary pensions in Great Britain were approved by Parliament in December 1943.[1]

Under the former regulations the scale rates included in each case a certain proportion for rent which was subject to increase or reduction when the rent actually paid differed from the amount so included. The new scales are on an "ex-rent" basis; that is to say, they are sums intended for needs other than rent, to which a reasonable rent allowance will be added.

Winter allowances (the discretionary additions made to meet extra needs during the winter months) are discontinued and the power to grant them is withdrawn. In their place appropriate adjustments have been made in the rates which will be payable throughout the year to those applicants who have to provide their own fuel and light.

The provision in the former regulations which permitted a reduction in the allowance or supplementary pension for persons living in a rural area has been omitted from the new regulations. Changes in rural economy and wage rates, together with the introduction of rationing and price control, have tended to eliminate variations between standards and cost of living in rural and urban localities, and the principle of rural differentiation is therefore regarded as out of date.

Under the previous regulations there was partial differentiation between the sexes, but under the new regulations the rates for women are the same as for men throughout. The difference between the amount allowed in respect of a wife of pensionable age and that for a wife who has not reached that age has also been discontinued.

The rates previously paid for children were not sufficient to satisfy current standards. The present regulations simplify the provisions governing the payment of children's allowances and increase the rates and also place them on an ex-rent basis.

For supplementary pensions, the new scale rates are 35s. a week for a married couple, whether both are pensioners or not; 20s. for single pensioners, if householders or living alone; and 17s. 6d. in all other cases. A rent allowance is added to these rates in each case. If the applicant is living alone or as a householder and as such is responsible for rent and household necessaries, the rent allowance will be the net rent payable by the applicant, as far as it is reasonable in view of the general rents in the locality. If an applicant is living as a member of another household the weekly rent allowance will be a reasonable share of the rent the householder is paying, but not less than 2s. 6d. nor more than 7s.

[1] Data are from Great Britain, Ministry of Labor Gazette, January 1944; Explanatory Memorandum on the Draft Supplementary Pensions (Determination of Need and Assessment of Needs) Regulations, and the corresponding Draft Unemployment Assistance Regulations, December 1, 1943—Cmd. 6490; the Unemployment Assistance (Determination of Need and Assessment of Needs) (Amendment) Regulations, 1943; Memorandum on the Draft Supplementary Pensions (Determination of Need and Assessment of Needs) (Amendment) Regulations, July 29, 1943—Cmd. 6464.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Additional allowances are paid to dependents. The former five age groupings have been reduced to three, and the weekly rates now payable are 9s. for children aged 11 years or over but less than 16 years, 7s. 6d. for those aged 8 years or over but less than 11 years, and 6s. for those under 8 years of age.

The "money and investments treated as capital assets which are to be treated as equal to a specified weekly income" for the purpose of assessing a supplementary pension or for unemployment assistance are increased from £300 to £400. This sum is the amount of capital (apart from war savings) which a pensioner may possess without being disqualified from receiving a supplementary pension. The weekly income to which this amount is to be treated as equivalent is 6d., instead of 1s., for every complete £25.

The new regulations became effective in the week beginning January 17, 1944. Their introduction will involve the reassessment of approximately 1,250,000 cases. With the present register of about 1,270,000 cases covering the needs of about 1,475,000 old-age pensioners and widow pensioners, it is estimated that the additional cost of the pensions will be about £7,250,000.

Unemployment Assistance

The Unemployment Assistance Regulations have been consolidated and simplified on much the same lines as those for supplementary pensions, although the rates, exclusive of the rent allowance, for the single applicant and for the married couple differ from the corresponding rates for supplementary pensions. The new weekly rates for needs other than rent are 31s. for a married couple and 18s. for an applicant who is living alone or is a householder and, as such, is directly responsible for rent and household necessaries, and for any other applicant 15s. 6d. if over 21 years of age and 12s. 6d. if under 21 years of age. In the latter two cases the amount of the allowance is 7s. 6d. a week—no rent addition is made—if the applicant has no one dependent on him and is living in a household of which his father, mother, son, or daughter is the householder and the householder's income amounts to £6 a week or other appropriate amount.

These new regulations also came into force January 17, 1944. On the basis of the existing register of about 25,000, including 7,000 special wartime cases dealt with under the Scheme for the Prevention and Relief of Distress, the additional cost of the changes will be about £200,000 a year.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Women in Industry

Women's Post-War Job Plans

OVER 85 percent of the women employed in various war plants are planning to continue working outside of their homes after the war, if a job is available. Practically all of the single women, all of the widows, and 68.7 percent of the married women expressed this decision in reply to a questionnaire sent by the United Automobile, Aircraft and Agriculture Implement Workers of America (UAW–CIO) to a representative sample of women members in various parts of the country.[1]

Twenty-six percent of the women had been working in factories 2 years before, and the other 74 percent had been housewives, students in school, or in occupations other than factory jobs

In response to the inquiry "What occupation would you prefer after the war," almost 50 percent of the women who had never been employed in a factory previous to the war said that they wished to continue in shop work. Approximately 25 percent of them preferred to return to their former civilian jobs or to take up some other kind of work outside the factory. Almost 10 percent replied that "any type of job" would be satisfactory, provided they could work. The remainder had decided to give up their jobs at the close of the war.

Earnings of Women in Illinois Industries, January 1944

WEEKLY earnings of women in various industries in Illinois in January 1944 in all reporting establishments averaged $30.54, as compared with $52.00 for men. These earnings, for the sample group of reporting firms, were higher than in any month of the preceding 22 years. In the manufacturing industries in the same month, women's average weekly earnings were $31.83 and men's $52.71—the highest ever reached.

The accompanying table gives the average weekly earnings for women as compared with men, January 1944, and the average weekly hours of work in specified industries for that date.[2]

[1] Research Report (United Automobile, Aircraft and Agriculture Implement Workers of America, Detroit), March 1944.

[2] Illinois Labor Bulletin (Chicago), February 29, 1944.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Average Weekly Earnings and Weekly Hours of Women Wage Earners as Compared with Men, in Illinois Industrial Establishments, January 1944

Industry group	Number of firms reporting, by sex	Average weekly earnings [1]		Number of firms reporting man-hours	Average weekly hours [2]	
		Men	Women		Men	Women
All reporting industries	**4,353**	**$52.00**	**$30.54**	**5,071**	**47.8**	**41.8**
Manufacturing industries	**2,411**	**52.71**	**31.83**	**2,435**	**48.3**	**42.1**
Stone, clay, and glass	120	43.50	30.12	119	45.1	40.9
Gravel and other stone	51	44.38	33.97	52	46.9	43.0
Lime, cement, and plaster	24	40.40	27.07	24	43.1	----
Brick, tile, pottery, clay products	33	35.94	37.41	29	41.8	38.6
Glass and glass products	12	47.56	28.95	14	45.6	40.8
Metals and machinery	853	54.50	33.87	889	48.7	42.7
Blast furnaces and rolling mills	29	52.95	35.89	32	45.3	41.0
Foundry and forge products	91	54.28	34.64	98	49.1	44.6
Sheet iron and tin plate	121	49.74	30.20	126	47.9	40.1
Cutlery, edge tools, hardware	64	53.54	29.22	63	51.4	42.6
Heating plumbing equipment	78	52.48	30.75	78	46.6	37.8
Machinery and machine tools	214	57.09	36.57	220	50.1	42.6
Electrical machinery apparatus	130	57.63	34.98	132	50.5	44.0
Agricultural implements	20	49.68	30.70	31	48.7	41.9
Nonferrous metals and products	89	48.43	33.58	91	46.9	42.1
Watches, clocks, and jewelry	17	48.93	28.31	18	45.4	40.9
Transportation equipment	185	55.95	39.30	184	48.4	45.1
Automobiles (excluding repair)	44	55.88	37.31	44	48.5	45.6
Cars-locomotives, electric-steam	113	46.43	29.50	109	47.3	38.4
Other transportation equipment	28	62.85	41.66	31	49.1	45.4
Wood and allied products	117	42.93	29.17	114	46.5	41.6
Sawmills and planing mills	23	37.07	23.14	23	44.4	41.3
Furniture and cabinet work	51	41.93	31.04	50	44.7	40.7
Other wood products	43	48.00	28.25	41	51.1	42.6
Rubber products	14	45.08	26.43	14	47.3	41.0
Leather and allied products	63	44.65	27.77	81	45.2	39.6
Leather, tanning	14	48.68	38.70	15	47.5	42.0
Boots and shoes	23	41.59	25.44	39	42.4	39.0
Other leather and fur goods	26	39.40	27.90	27	44.9	40.1
Chemicals and allied products	186	48.68	31.11	190	47.2	43.6
Drugs, compounds, cosmetics	23	35.46	25.91	21	39.4	38.9
Paints, varnishes, dyes, colors	50	40.22	25.72	52	44.2	38.8
Petroleum refining	11	53.26	42.82	12	45.2	----
Chemicals, explosives, soap	102	49.66	31.97	105	48.0	44.5
Paper goods, printing, publishing	243	51.65	24.27	239	44.9	38.4
Paper boxes, bags, tubes	55	42.65	24.85	58	44.9	38.7
Other paper goods	48	47.15	25.04	47	47.7	39.4
Job printing	64	54.11	23.18	63	45.0	37.2
Newspapers and periodicals	18	51.43	31.18	16	35.7	37.3
Bookbinding and publishing	20	52.12	26.20	19	42.3	40.3
Lithography and engraving	38	67.36	20.27	36	48.2	36.3
Textiles	93	46.12	27.38	94	48.2	39.9
Cotton, woolen, silk goods	73	47.19	28.58	73	48.4	40.4
Knit goods	14	38.52	22.95	13	47.3	39.4
Thread and twine	6	41.62	25.24	8	46.4	37.7
Clothing and millinery	136	44.70	26.20	125	39.3	38.5
Men's clothing	47	44.42	29.26	46	38.0	38.1
Men's furnishings, work clothes	30	37.75	24.44	26	42.4	39.5
Women's and children's clothing	35	54.83	23.85	34	41.3	38.6
Women's and children's underwear	12	35.71	25.77	11	41.8	38.1
Millinery	12	50.15	30.83	8	----	32.5
Food, beverages, and tobacco	322	49.37	27.71	321	50.3	41.4
Slaughtering and meat packing	54	53.73	30.67	55	53.4	44.0
Dairy products	64	45.32	26.44	64	49.5	41.4
Flour, feed, and other cereals	29	42.45	24.95	27	47.9	42.1
Fruit and vegetable canning	35	40.87	26.52	34	44.0	39.8
Other groceries	33	47.31	26.28	35	48.6	40.8
Bakery products	31	44.18	25.21	33	46.6	41.8
Confectionery	34	43.63	26.23	34	45.7	39.4
Beverages	36	48.05	27.30	34	45.9	37.9
Tobacco products	6	43.54	29.06	5	48.5	43.7

See footnotes at end of table.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Average Weekly Earnings and Weekly Hours of Women Wage Earners as Compared with Men, in Illinois Industrial Establishments, January 1944—Continued

Industry group	Number of firms reporting, by sex	Average weekly earnings [1]		Number of firms reporting man-hours	Average weekly hours [2]	
		Men	Women		Men	Women
Miscellaneous manufacturing	79	$48.36	$35.30	65	46.3	42.6
Nonmanufacturing industries	**1,942**	**47.42**	**20.13**	**2,636**	**44.7**	**38.4**
Trade—wholesale and retail	1,007	48.18	18.76	1,416	42.4	36.0
Wholesale groceries	113	51.41	25.25	102	43.4	36.9
Jobbing metals, electric goods	79	53.42	28.55	75	45.1	39.3
Other wholesale	154	54.66	28.01	142	41.0	39.3
Department and variety stores	107	34.32	12.14	33	38.2	33.2
Mail-order houses				21		
Retail apparel	153	33.95	21.95	239	38.2	30.1
Retail furniture, household goods	41	40.20	24.70	28	44.2	39.9
Retail food	149	31.61	18.52	603	39.4	34.7
Milk distribution	25	59.17	18.78	22	45.5	
Other retail	186	40.01	21.89	151	44.2	37.3
Services	362	37.30	20.78	374	46.9	41.2
Hotels	53	25.17	18.59	46	46.1	43.1
Restaurants	46	25.67	21.76	64	45.3	40.3
Laundering, cleaning, dyeing	60	41.83	19.57	53	48.5	39.0
Automobiles, sales, repairs	109	48.02	30.85	141	47.4	
Other services	94	49.49	30.96	70	47.1	40.8
Public utilities	60			348		
Water, gas, light, and power	19			23		
Telephone	33			316		
Street and electric railways	8			9		
Coal mining	63	54.34		61	44.6	
Building construction, contracting	404	54.15		390	37.8	
Building construction	354	57.14		340	38.0	
Road construction	33	34.05		33	37.3	
Other contracting	17	52.45		17	35.6	
Miscellaneous nonmanufacturing	46	45.22		47	47.5	40.5

[1] 718,157 employees reported.
[2] 681,544 employees reported.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Wage and Hour Statistics

Trend of Earnings Among White-Collar Workers During the War[1]

Summary

WHITE-COLLAR workers, as represented by clerical and professional employees, currently number about 11 million. The great majority of these workers have always received modest incomes, and during the past few years they have felt the increased cost of living more keenly than the other major divisions of the labor force. The less favorable position of the white-collar workers results in part from the fact that the demand for their services has not expanded proportionately with that for factory workers, and in part from the traditional rigidity of their salaries, their relative lack of union organization, and other causes.

Although the salary scales of white-collar workers have risen less rapidly than factory wage rates, there is considerable evidence that they have increased substantially since January 1941. Retail trade, an industry that employs many thousands of clerical and sales people, shows increases in hourly earnings of 25 percent and substantial gains in weekly earnings. Other white-collar industries employing numerous clerical workers show increases in hourly and weekly earnings ranging from 15 to over 30 percent. Even in small towns that are relatively unaffected by war production, salary adjustments of about 20 percent have taken place. Unlike factory operatives, however, white-collar employees have had their hours of work only slightly lengthened on the average. Premium rates for overtime work are also less common among white-collar groups. Their weekly earnings, therefore, have increased but little more than their hourly earnings.

Little information is available regarding the salary trends of professional and semiprofessional workers. Certain groups directly involved in the war production program, however, such as engineers and chemists, have undoubtedly enjoyed very substantial increases. On the other hand, the salaries of public-school teachers in the school year 1942–43 averaged only 8 to 10 percent above their prewar level, and most teachers in institutions of higher learning probably fared even less well. Nurses in hospitals appear to have enjoyed wartime salary increases of 15 percent or more, but public-health nurses have had smaller increases. Radio workers' salary scales have gone up more than 20 percent.

[1] Prepared in the Bureau's Division of Wage Analysis by Margaret L. Plunkett, under the supervision of Louis M. Solomon.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

White-collar workers employed by the Federal Government have had no wartime increase in base rates. Longer hours of work, however, have resulted in an increase in earnings amounting to slightly more than 20 percent. Of 45 States reporting to the U. S. Bureau of Labor Statistics, only 3 have failed to adjust salaries upward since January 1941. The average increase for white-collar workers employed by the States appears to be about 16 percent. City and county workers have had much smaller increases.

Much of the rise in the salary scales of white-collar workers has resulted from individual merit increases and reclassification of employees. General salary adjustments affecting all or substantial proportions of the employees in a given establishment probably have accounted for less than half of the rise in salary levels.

Nature of the Problem of the White-Collar Worker

The movement of wages and earnings since the outbreak of the war has become a matter of major public interest. Among subjects of concern is the fact that not all segments of the working population have experienced equivalent wage adjustments, and therefore that the impact of the rising cost of living has fallen with particular severity upon certain groups. Salaried workers and other persons on relatively stable incomes inevitably suffer more than other groups in a period of rising prices. Several million clerical, professional, and other so-called "white-collar" workers fall into this class.

The situation of the white-collar worker is particularly difficult to depict because of the inadequacy of available statistical information. Wage statistics for professional and clerical workers and related groups have never been very satisfactory; and their interpretation during recent years has been rendered doubly difficult by wartime changes in hours of work and in job content, the substitution of women for men in many occupations, and other factors difficult to measure.

Much of the material presented in this article was assembled by the Bureau of Labor Statistics for use by the Subcommittee on Wartime Health and Education of the Senate Committee on Education and Labor, which held hearings early in 1944 on the problems of the white-collar worker. Certain information assembled by other agencies is also presented in the following pages; some of this was previously discussed at the hearings of the subcommittee.

WHO IS THE WHITE-COLLAR WORKER?

The term "white-collar worker" does not lend itself to precise definition. It is sometimes extended beyond its more obvious meaning to include the service trades and other groups of nonmanufacturing employees. This report, however, is confined to the narrower concept, namely to those persons receiving salaries or wages for clerical or office duties, retail selling, and certain professional and technical work. Excluded for present purposes are the executive and managerial groups, the self-employed, and workers in nonmanufacturing industries whose duties are not primarily of a clerical or professional nature. Although their number varies according to the definition employed, the white-collar workers under discussion embrace many millions of persons.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

In 1940, according to the Bureau of the Census, professional and semiprofessional groups alone comprised almost 3½ million employees, and 7½ million were found in the clerical and sales groups (tables 1 and 2). Together these groups included some 11 million workers. The number of workers employed in these classifications today is probably somewhat higher than in 1940.

TABLE 1.—*Major Occupational Groups in the Employed Population in the United States, 1940* [1]

Occupational group	Number of persons employed (in thousands)		
	All industries	Agriculture	Nonagricultural industries
All groups	45,166	8,372	36,794
Professional and semiprofessional workers	3,345	10	3,335
Proprietors, managers, and officials	8,893	5,155	3,738
Clerical, sales, and kindred workers	7,518	13	7,505
Craftsmen, foremen, and kindred workers	5,056	9	5,047
Operatives and kindred workers	8,252	39	8,213
Protective-service workers	682	2	680
Service workers except protective [2]	4,888	3	4,885
Laborers	6,154	3,141	3,013
Occupation not reported	378	(3)	378

[1] Data are from Sixteenth Census of the United States, 1940, Population, Volume III.
[2] Includes 2,111,000 domestic workers, of whom 1,885,000 were employed in nonagricultural industries.
[3] Less then 500 workers.

TABLE 2.—*Clerical, Sales, and Professional Employees in the United States, by Major Industrial Groups, 1940* [1]

Industry group	White-collar workers (in thousands)			Total, all occupational groups (in thousands)
	Clerical, sales, and kindred workers	Professional and semiprofessional workers	Total	
All industries	7,518	3,345	10,863	45,166
Agriculture	13	10	23	8,372
Mining	34	18	52	913
Construction	54	64	118	2,056
Manufacturing	1,479	321	1,800	10,573
Transportation, communication, and other public utilities	727	85	812	3,113
Wholesale and retail trade	2,818	118	2,936	7,539
Finance, insurance, and real estate	941	18	959	1,468
Business and repair services	111	32	143	864
Personal services	122	83	205	4,009
Amusement, recreation, and related services	49	103	152	395
Professional and related services	365	2,304	2,669	3,318
Government	630	171	801	1,753
Miscellaneous and not reported [2]	175	18	193	793

[1] Data are from Sixteenth Census of the United States, 1940, Population, Volume III.
[2] Includes forestry and fishery.

WORKING CONDITIONS

Certain obvious and important differences in working conditions have always distinguished white-collar workers from factory craftsmen and operatives. Not all of these have an immediate influence on the relative trends of their earnings, but several have a very definite effect on the current income status of the white-collar worker. Factory workers, for instance, are customarily paid premium rates for

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

overtime, whereas the office worker only infrequently enjoys this added compensation. Factory operatives working on night shifts are typically paid at premium rates, but ordinarily the clerical or professional employee who works on an extra shift receives no differential in pay. The lengthening workweek in the manufacturing industries, with premium pay for overtime hours, has contributed to the upswing of gross earnings for factory workers. The clerical and professional worker has not enjoyed the same opportunity for this extra compensation; even where he is working somewhat longer hours, his earnings are generally not increased to the same extent as those of factory workers. Finally, factory operatives have the protection of union organization to a much greater degree than white-collar workers and through such organizations are more effectively represented when applications for wage increases are involved.

In his attempt to increase his earnings, therefore, the white-collar worker's normal conditions of employment have put him at a disadvantage as compared with the factory craftsman or operative. On the other hand, the white-collar worker enjoys certain advantages in his working life which the factory employee does not have, and although most of these advantages do not contribute to increased earnings, they are undoubtedly important factors influencing an individual in his choice of occupation. Generally speaking, for instance, the white-collar worker enjoys cleaner, more comfortable, and less dangerous working surroundings than does the factory operative. There is, on the whole, a larger measure of personal independence and opportunity for advancement. Provisions for vacations and sick leave are more liberal for office than for factory workers. Usually job security is greater, and participation in nonproduction bonuses more extensive.

Trend of Wages of Clerical and Office Workers

Probably the most comprehensive information available regarding wage trends for clerical, office, and kindred workers consists of the Bureau's monthly reports on average weekly and hourly earnings in various branches of nonmanufacturing industry. These industries, it is true, cover substantial numbers of service workers, maintenance and custodial employees, and others whose duties are not even remotely related to office work. Most of them, however, include large numbers of clerical, office, and related workers, and in some—such as brokerage and insurance and the various branches of retail trade—these workers predominate. In the absence of more refined measures for these broad industry groups, therefore, the data are of value as rough measures of the extent of wage increases.

The material presented in table 3 reveals substantial increases in hourly and weekly earnings between January 1941 and January 1944. Hourly earnings in retail trade as a whole rose 25 percent, with the figures for individual branches ranging from 22 percent in general merchandising to 35 percent in apparel. Employees in electric utilities companies had average increases of 21 percent, and those in the communications industry (telephone and telegraph) of 7 percent. Owing to the merger of the two great telegraph companies, Western Union and Postal Telegraph, earnings data are not available after August 1943 for the communications industry. The change of 7

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

percent through August is believed to further understate the full extent of the increase in this industry, since it has been influenced considerably by the employment of new workers at beginner's rates.[2] Fragmentary information for a group of 400 telephone exchanges in the Southwest indicates increases in straight-time rates ranging from about 12 to 20 percent for various groups of white-collar workers between January 1941 and April 1943. These apparently include a general increase of $2 per week granted to operators and other traffic employees in the summer of 1942. No adequate information of this type is available for telegraph companies.

TABLE 3.—*Average Hours and Earnings in Selected Nonmanufacturing Industries, January 1941 and January 1944* [1]

Industry	Average hours worked per week		Average hourly earnings			Average weekly earnings		
	January 1941	January 1944 [2]	January 1941	January 1944 [2]	Percent of increase January 1941 to January 1944	January 1941	January 1944 [2]	Percent of increase January 1941 to January 1944
Public utilities:			*Cents*	*Cents*				
Telephone and telegraph	39.7	[3] 42.1	80.4	[3] 86.1	7	$31.69	[3] $36.10	14
Electric light and power	39.4	42.2	90.3	109.4	21	35.49	46.99	32
Street railways and busses	45.3	49.6	73.1	90.4	24	33.63	45.98	37
Trade								
Wholesale	40.6	42.4	75.0	97.2	30	30.59	41.20	35
Retail	42.7	40.3	54.5	68.0	25	21.53	26.16	22
Food	43.3	39.9	53.1	67.5	27	24.51	29.60	21
General merchandising	38.8	36.8	46.5	56.9	22	18.22	21.26	17
Apparel	39.0	36.9	55.8	75.6	35	21.89	27.22	24
Furniture	43.7	42.7	68.3	86.7	27	27.96	35.71	28
Automotive	46.7	48.8	61.0	75.8	24	28.26	39.27	39
Lumber	41.7	43.3	64.0	86.0	34	26.16	36.28	39
Hotels (year-round)	45.9	44.5	33.8	48.2	43	15.65	21.34	36
Laundries	42.9	44.1	42.9	59.4	38	18.37	26.29	43
Dyeing and cleaning	41.9	43.8	48.8	69.5	42	19.92	29.64	49
Brokerage	[4]	[4]	[4]	[4]	[4]	37.92	51.27	35
Insurance	[4]	[4]	[4]	[4]	[4]	37.52	44.65	19

[1] Data are from monthly statistics of the Bureau's Division of Employment Statistics.
[2] Preliminary, subject to revision.
[3] August 1943 figures are the latest available; figures for later periods are not available, owing to the merger of Western Union and Postal Telegraph.
[4] Not available.

In most cases percentage increases in weekly earnings in these industries were larger than in hourly earnings. Typically, however, the difference was less pronounced than in manufacturing industry. Decreases in average hours of work in several lines of retailing—resulting from the large-scale employment of part-time workers—artificially restricted the rise in average weekly earnings in these lines. It may be assumed that the weekly earnings of full-time retail employees increased at least as much, on the average, as did their hourly earnings, namely, 25 percent. Employees in brokerage establishments enjoyed a 35-percent increase in weekly earnings and those in insurance offices a 19-percent increase.

[2] In general, average hourly and weekly earnings in nonmanufacturing industries have been affected less than those in manufacturing by labor turnover, changes in occupational structure, and interindustry transfers. Weekly earnings in retail trade and certain other nonmanufacturing industries, however, have been considerably influenced by the employment of part-time workers. The figures presented in table 3, although indicating beyond doubt that substantial increases have occurred, should not be accepted as precise measures of the extent of those increases.

583621—44——9

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

EARNINGS OF RAILROAD OFFICE WORKERS

Various groups of professional and clerical employees of the Nation's class I railways had increases in straight-time average hourly earnings of 6 and 9 percent between September 1940 and September 1943.[3] The larger percentage increase went to those paid on an hourly basis, who constituted in 1943 roughly 80 percent of the 200,000 persons employed in the classes covered. With the additional increase of approximately 9 cents an hour granted retroactively to these workers by the Economic Stabilization Director early in 1944, the estimated increase in straight-time earnings between 1940 and 1944 amounted roughly to 21 percent for hourly workers and 14 percent for those paid on a daily basis, the latter group consisting mainly of inspectors, claim agents, and accountants. Overtime payments contribute to somewhat higher increases in daily and weekly earnings.

EARNINGS OF EMPLOYEES OF LARGE INSURANCE COMPANIES

It has been seen from table 3 that average weekly earnings in insurance companies have increased by about 20 percent since January 1941. This resulted from various types of adjustment, including general wage increases affecting large groups of workers, and promotions and merit increases affecting individual workers or small groups. An attempt to discover the comparative effect of general wage increases in this industry was made through a limited special inquiry relating to 23 large insurance companies. This information, which covers more than 60,000 employees, applies primarily to the home offices of these companies, located throughout the eastern and midwestern sections of the country, but also includes the branch offices of a few companies.

TABLE 4.—*General Increases in Salary Scales Granted by Large Insurance Companies, January 1941 to January 1944, by Type of Increase*

Percent of increase in earnings attributable to general changes in salary scales [1]	Total companies reporting	Number of companies reporting type of general increases		
		Percentage change [2]	Flat amount	Other and combination changes
All companies	23	14	1	4
None	4			
Less than 5				
5 but less than 10	9	7	1	1
10 but less than 15	5	4		1
15 but less than 20	3	2		1
20 or more	2	1		1

[1] Does not include individual promotions, merit increases, or other increases affecting individuals or small groups.

[2] The percent of increase may not have been granted at one time, and may not have affected all workers in equal proportion. Most companies reported minimum and maximum amount of change which usually operated in such a manner as to give the lowest-paid workers a higher proportionate increase than the higher-paid workers.

Nineteen of these companies (see table 4) reported that they had granted general increases averaging from 5 percent to more than 20 percent; 4 had effected no general increases. Half of these companies

[3] Based on Wage Statistics of Class I Steam Railways in the United States, Interstate Commerce Commission, September 1940 and September 1943.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

granted increases between 5 and 10 percent; the average general increase, weighted roughly by the number of employees affected, was approximately 8 percent. There is no indication of any consistent difference in percentage of increase resulting either from geographic location or size of company.

Supplementary information supplied by many of these companies throws additional light on the nature of salary trends in this industry. A few companies granted uniform percentage increases to all workers, but usually the salary changes were graduated in such a way as to give the greatest percentage increase to the lowest-paid workers. In addition, a majority of the increases appear to have been considered as temporary, not permanent, changes in salary scales.

It is of interest to note that even in these large companies salary increases were frequently effected on an individual basis rather than by means of the general increases presented in table 4. Indeed, informal and individual adjustments were probably equally important with formal increases affecting large groups. Several companies, for example, granted no general salary increases but accomplished approximately the same result by means of individual merit increases, promotions, and liberalization of overtime-pay provisions, while many companies combined general salary increases with liberal raises for merit. Some companies reporting general wage increases averaging less than 10 percent stated that additional individual adjustments had exhausted the full 15-percent increase permitted under the "Little Steel" formula. A number of companies increased their weekly hours of work, in many cases as much as 4 or 5 hours per week, and this increase was paid for at time and a half. Apparently more than half of the companies are paying appreciably more for overtime than they did 3 years ago.

Professional and Semiprofessional Workers

Bureau of the Census figures indicate that there were almost 3½ million professional and semiprofessional workers in 1940, of whom about 1 million were distributed among various industrial groups (see table 2). Salary or wage changes for these workers have undoubtedly shown extreme variation. Many groups, including certain classes of engineers, chemists, and other highly specialized workers, have played a direct and vital part in the war production program. They have not only enjoyed salary increases within their jobs but have had opportunities for advancement to better jobs. Other groups, including various classes of teachers, have fared less well. Information is readily available for only a few of these professional groups.

PUBLIC-SCHOOL TEACHERS

According to the National Education Association,[4] the average salary of almost 900,000 public-school teachers for the school year 1942–43 was $1,550. This is an increase of 8 percent over the $1,441 paid in 1939–40, and of 10 percent over the average salary for the last pre-war year, 1938–39. The averages cited here include only the earnings resulting from their major employment and hence may

[4] National Education Association, Research Bulletin Vol. XXI, No. 4: Teachers' Salaries and the Public Welfare. Washington, 1943.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

not reflect exactly the trend of their total earnings. Nevertheless, although teachers may work at some other occupation during the summer months, it is not always possible for them to do so and their basic situation in the current upswing of prices must therefore be judged by the increases in the salaries of their principal occupation. The low level of earnings of public-school teachers is indicated by the fact that in spite of the generally upward movement since 1938–39, slightly more than 75 percent earned less than $2,000 in 1942–43, and almost a third earned less than $1,000. Only 8 percent earned $3,000 or more, and these were mainly principals and superintendents.

COLLEGE AND UNIVERSITY PROFESSORS

College and university professors, numbering nearly 125,000, appear to have fared no better than public-school teachers.[5] Indeed, their position has in some ways been less favorable, for loss of enrollment (amounting to 18 percent from 1940 to 1942) has strained the fiscal position of many institutions and discouraged them from making additional financial outlays. Large Army-Navy programs (recently curtailed in many colleges) enabled some institutions to grant increases—often accompanied by a heavier teaching load—and a few have effected cost-of-living or other increases independently of these service programs. Statistical data regarding salary changes are not available, but it is improbable that salary scales in institutions of higher learning have risen by as much as 10 percent since 1941.

NURSES

Nurses have always been among the lowest-paid professional workers, but available data indicate that their earnings have increased appreciably in recent years. Salary scales and earnings vary considerably for the different types of nursing service, and comparisons from period to period are somewhat hazardous. Studies made by the American Nurses Association for 1936 and 1942 for general staff nurses,[6] however, indicate that median cash annual earnings have risen by slightly more than 15 percent for nurses receiving either full or partial maintenance. Earnings of those receiving no maintenance appear to have dropped, but the data are inconclusive for this group.[7]

Data for 392 identical agencies supplied by the National Organization for Public Health Nursing indicate that increases gained by public health nurses have been considerably less than for institutional nurses [8]. No direct comparison with other branches of the profession can be made, however, since the period covered for this group is from December 1938 to January 1942, a span of only 3 years as compared with 6 years for institutional nurses. Increases varied from one type of agency to another, but generally averaged about 5 percent. Increases occurred in greater proportion in the smaller than in the larger

[5] Information summarized from a statement presented to the Senate Subcommittee on Wartime Health and Education by the American Association of University Professors, January 29, 1944.

[6] Data for 1936 are from American Journal of Nursing, November 1938: 1942 data are from the report Annual Salaries and Salary Increases and Allowances Paid to General Staff Nurses, prepared by the National League of Nursing Education (New York), 1943.

[7] Attention is called to the scanty but highly accurate data regarding hourly earnings of general duty nurses in small-town hospitals, presented in table 8. Of the eight communities for which figures were obtained, only one showed an increase of less than 20 percent in the earnings of these nurses from January 1941 to December 1943.

[8] Data from unpublished study by National Organization for Public Health Nursing entitled "Changes in Public Health Nursing Salaries, 1938–1942."

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

agencies, and in nonofficial agencies as compared with public-health departments of various types. Although the percentage increases in salaries of public-health nurses appear to have been small in comparison with those of other groups, it should be noted that their earnings are considerably higher, median salaries in 1942 ranging from about $1,600 to $2,900 per year, depending upon the type of position and the type of organization providing employment. The range for these same groups in 1938 was about $100 lower.

RADIO EMPLOYEES

The radio broadcasting industry, although essentially a commercial enterprise, employs large numbers of artists, musicians, and other types of professional workers in addition to its clerical and sales personnel. For this reason wage increases in this industry throw some light on the situation of the salaried professional worker.

Reports to the Federal Communications Commission[9] indicate that these professional workers increased their average weekly earnings, including overtime, from about $40 to $50, or by about 24 percent between 1940 and 1943. Both part-time and full-time workers are covered and, generally speaking, the part-time workers have enjoyed proportionately higher increases. The personnel studied does not include the artists paid by program sponsors, but only those persons hired and paid by the radio networks themselves.

Gross average weekly earnings for all employees in the industry, excluding executives and miscellaneous workers, increased 22 percent, from $38 to $47, in the 3 years between October 1940 and October 1943. The 4,000 part-time employees covered have fared relatively better, with a 38-percent increase, than the 17,000 full-time employees, whose average weekly earnings increased only about 20 percent. Increases for salesmen, and general administrative and clerical employees, as a group, were considerably less, however, than for the professional employees, and amounted to only 16 percent in the 3-year period for which data are available.

Government Employees

FEDERAL EXECUTIVE SERVICE

Basic rates for clerical and professional workers in the Federal service have remained unchanged since the beginning of the war. Longer hours, paid for at approximately straight-time rates, together with merit increases and promotions, have, however, increased average salaries since 1941 by about 23 percent for the Executive service, exclusive of the Agriculture, Interior, and Post Office Departments. If these three departments (for which wage data on white-collar and non-white-collar workers cannot readily be segregated) are included with the other executive departments, the increase in average salaries amounts to only 20 percent (table 5).

[9] Based on Summaries of Functional Employee Data, October 1940 and October 1943, furnished by the Federal Communications Commission.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 5.—*Number and Average Annual Pay of Employees in Federal Executive Service, Exclusive of Selected Groups of Non-White-Collar Workers, 1939–43* [1]

Period	Total executive service, including non-white-collar workers	Executive service, excluding selected non-white-collar groups [2]				
		Total including Post Office, Interior, and Agriculture [3]	Total excluding Post Office, Interior, and Agriculture [3]	War	Navy	Other war agencies [4]
	Average pay per employee					
1939	$1,817	$1,855	$1,854	$1,531	$1,603	$2,265
1940	1,818	1,838	1,782	1,512	1,553	1,503
1941	1,835	1,794	1,710	[5] 1,522	1,791	1,446
1942	1,935	1,803	1,737	1,536	1,943	1,890
1943 [6]	2,276	2,158	2,110	1,969	2,217	2,369
January 1941	1,856	1,832	1,755	1,452	1,627	1,393
November 1941	1,843	1,769	1,697	[5] 1,475	1,767	1,694
November 1942	1,987	1,847	1,816	1,592	1,852	1,892
May 1943	2,306	2,195	2,162	1,999	2,278	2,328
	Number of employees (in thousands)					
1939	916.7	784.2	345.2	70.3	25.4	2.1
1940	1,031.9	855.1	412.7	98.3	33.4	7.7
1941	1,404.4	1,091.9	641.9	246.5	56.6	24.2
1942	2,319.4	1,816.4	1,368.9	750.4	161.1	102.8
1943 [6]	3,013.2	2,438.2	1,995.0	1,261.1	262.6	192.1
January 1941	1,151.1	918.1	485.7	143.5	47.8	19.6
November 1941	1,545.1	1,181.2	728.7	355.5	76.7	29.1
November 1942	2,750.1	2,240.6	1,796.4	1,061.7	200.6	132.1
May 1943	3,065.0	2,486.0	2,045.3	1,298.9	246.8	203.7

[1] Compiled in the Bureau's Division of Construction and Public Employment from data collected by the U. S. Civil Service Commission.

[2] Non-white-collar groups excluded are as follows: Manufacturing arsenals, navy yards (including Pearl Harbor), torpedo stations, aircraft factories, force-account construction, and Government Printing Office. Data for the Public Buildings Administration, Bureau of Engraving and Printing, Bureau of the Mint, and manufacturing quartermaster depots could not be segregated.

[3] Employees of the Post Office, Interior, and Agriculture Departments could not be segregated into white-collar and non-white-collar groups.

[4] Excludes Panama Canal. In 1939 the only "other war agencies" consisted of the Maritime Commission and National Advisory Committee for Aeronautics. In 1940 and 1941 the Selective Service System dominated the group, and because of the low average pay in that agency, the average for the group was low.

[5] Estimated.

[6] Average based on first 11 months.

In the war agencies percentage increases since 1941 have been somewhat higher than for the Executive service generally, increases in the War Department amounting to 29 percent, in the Navy to 24 percent, and in other war agencies to 64 percent. As overtime pay for white-collar workers is estimated to represent about 21 percent of the base salary, it would appear that more upgrading has taken place in the war agencies than in other branches of the Executive service.

Compared with earnings in 1939, the average salary of white-collar employees in the Executive service as a whole in 1943 increased approximately 15 percent, whereas non-white-collar employees enjoyed increases averaging about 75 percent. It is interesting to note that average salaries of the white-collar employees actually declined between 1939 and 1942, and showed a substantial increase only after overtime pay legislation became effective in 1943.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

STATE AND LOCAL EMPLOYEES

The average annual pay of white-collar employees of State governments and of the larger units of local government, exclusive of school teachers, rose about 10 percent between 1941 and 1943 (table 6). The salaries of these workers in 1943 averaged $1,757. The increase was less than half the percentage increase gained by the non-white-collar workers in the same jurisdictions, although the average annual salaries of the two groups in 1943 were approximately the same. Additional information indicates that employees of the smaller cities and counties received somewhat larger percentage increases during the same period, but that average salaries in these units remained much lower than in the larger jurisdictions. For white-collar workers alone, increases by the States averaged slightly over 16 percent whereas in cities of over 25,000 the increases amounted to only 6 percent and in counties of over 50,000 only about 3 percent. For non-white-collar workers these cities and counties granted somewhat greater increases than the 18 percent granted by the States. The 1943 *levels* of pay, however, remained higher for the white-collar functions in most jurisdictions. These generally higher levels are attributable to the inclusion, with white-collar workers, of firemen and policemen, who constitute a considerable proportion of the employees in these jurisdictions and whose salaries are comparatively high. If these two groups were excluded the average yearly pay of white-collar workers for the States and the larger units of local government would be $1,404 as compared with $1,461 for non-white-collar workers in 1941, and $1,548 as compared with $1,761 in 1943. The average increase for policemen and firemen alone in the 2-year period was 7 percent.

TABLE 6.—*Average Annual Pay of Nonschool Employees of State and Local Governments, by White-Collar and Non-White-Collar Functions, 1941 and 1943* [1]

Type and size of governmental unit	White-collar functions [2]				Non-white-collar functions [3]			
	1941	1943	Percent of change	Proportion of total employment 1943	1941	1943	Percent of change	Proportion of total employment 1943
All types	$1,606	$1,757	+9.4	60.1	$1,461	$1,761	+20.6	39.9
States [4]	1,304	1,516	+16.2	60.0	1,261	1,492	+18.3	40.0
Cities over 25,000 [5]	1,902	2,021	+6.2	54.5	1,624	1,958	+20.6	45.5
Over 1,000,000	2,422	2,499	+3.1	47.8	2,139	2,372	+10.9	52.2
500,000–1,000,000	1,776	1,860	+4.7	59.7	1,505	2,093	+39.1	40.3
250,000–500,000	1,645	1,739	+5.7	53.9	1,448	1,732	+19.7	46.1
100,000–250,000	1,918	2,033	+6.0	57.4	1,437	1,724	+20.0	42.6
50,000–100,000	1,725	1,978	+14.6	54.7	1,387	1,658	+19.5	45.3
25,000–50,000	1,635	1,794	+9.9	56.2	1,273	1,580	+24.1	43.8
Counties over 50,000 [6]	1,605	1,650	+2.8	83.7	1,413	1,811	+28.1	16.3
Over 100,000	1,686	1,679	−.4	87.1	1,662	2,064	+24.1	12.9
50,000–100,000	1,225	1,473	+20.2	67.5	895	1,322	+47.6	32.5

[1] Compiled in the Bureau's Division of Construction and Public Employment from data collected by the U. S. Bureau of the Census in its Quarterly Employment Survey. Data based on identical governments reporting in the 2 periods indicated.

[2] Police and fire department employees have been included with white-collar functions.

[3] Covers the following functions: Highways, sanitation, conservation and development of natural resources, recreation, and public-service enterprises.

[4] Data are for January 1941 and July 1943; employment data for July 1943.

[5] Data are for July 1941 and July 1943; employment data for July 1943.

[6] Data are for January 1942 and October 1943; employment data for October 1943.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

GENERAL SALARY ADJUSTMENTS BY STATE GOVERNMENTS

In an effort to determine what proportion of the increases in salaries of State employees was attributable to general rate changes alone, the Department of Labor addressed a special inquiry to State Governors, requesting this type of information for permanent, salaried employees. The tabulation presented in table 7 indicates the nature of the various salary changes instituted by 45 States from January 1941 to January 1944, and reveals considerable variation not only in the extent of salary revision but in the procedures employed in making readjustments.

TABLE 7.—*Salary Adjustments Affecting Permanent Salaried Employees of 45 State Governments, January 1941 to January 1944*

[Preliminary, subject to revision]

State	Date of change	Nature of increase	Percent of workers affected (approx.)
Alabama	(1)	Revision of salary ranges for classified workers	(2)
Arizona	(1)	10 percent to highway department	(2)
California	July 1942	$15 per month emergency cost-of-living bonus	(3)
	Feb. 1943	$10 per month on salaries under $300; $5 on those over $300.	(3)
Colorado	(1)	Individual increases	100
Connecticut	Fall 1941	$120–$240 a year for clerical workers	35
	Fall 1942	Clerical minimum raised to $1,080	25
	Feb. 1943	$180 on salaries under $1,800 a year; $240 on those of $1,800 or more.	100
Florida	(1)	Individual increases	100
Georgia	(1)	Individual increases to lower-salaried workers	(2)
Idaho	1942	Individual increases averaging 15 percent, on salaries under $100 a month.	(2)
Illinois	July 1943	$10 per month cost-of-living bonus on salaries of $200 a month or less.	(2)
		18 percent general wage increase	100
Indiana	(1)	15–25 percent on salaries under $200 a month; 15 percent on those over $200.	(2)
Iowa	(1)	15 percent for lower-salaried workers, ranging to 7½ percent for higher-paid workers.	85
Kansas	June 1941	10 percent to highway department	(2)
	Oct. 1942	do	(2)
	Apr. 1943	15 percent adjustment in rate ranges	(2)
Kentucky	(1)	Salary-range revisions	100
Louisiana	Jan. 1943	Classifications established, and individual increases	100
Maine	Feb. 1942	10 percent on salaries less than $30 a week	50
	May 1943	Revision of salary ranges	100
Maryland	July 1943	Standardization of rates	80
		$200 bonus on salaries under $3,000	50
Massachusetts	July 1943	$240 bonus on salaries under $1,600	60
		15 percent bonus on salaries of $1,601–$2,399	28
		$360 bonus on salaries of $2,400 or over	11
Michigan	(1)	Revision of salary ranges	95
Minnesota	July 1943	$7.50 monthly, plus 5 percent; maximum increase, $15	90
Mississippi		No change	
Missouri	(1)	Individual increases	(3)
Montana	(1)	do	75
Nebraska	Sept. 1941	Classifications established	100
	July 1943	Classifications established	100
Nevada	Aug. 1942	15 percent to highway department (white collar)	60
	Sept. 1942	12 percent to clerical	2
	Mar. 1943	15 percent to clerical	20
	July 1943	20 percent to clerical	3
New Hampshire	July 1943	$75 a year, plus 5 percent; minimum increase $150, maximum $300.	100
New Jersey	Jan. 1943	$120 on salaries under $800; 15 percent on salaries $800–$2,000; $300 on salaries $2,000–$5,000.	(2)
New Mexico	(1)	Individual increases	100
New York	May 1943	10 percent on salaries under $2,000	70
		7½ percent on salaries between $2,000 and $4,000	20
		$300 increase in clerical minimum	2
North Carolina	Jan. 1943	$5–$24 a month, with greater percentage but smaller dollar increment for lowest salaries.	100
North Dakota	(1)	Departmental increases	100
		10 percent on maintenance allowances	(2)

See footnotes at end of table.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 7.—*Salary Adjustments Affecting Permanent Salaried Employees of 45 State Governments, January 1941 to January 1944*—Continued

State	Date of change	Nature of increase	Percent of workers affected (approx.)
Ohio	Jan. 1943	10 percent on salaries under $1,800; $15 on those of $1,800–$3,600.	95
Oklahoma		No change	
Oregon	July 1943	Standardization of rates	100
Pennsylvania	Oct. 1942	15 percent on salaries under $3,000; those between $3,000 and $3,456 increased to $3,456.	95
Rhode Island	Feb. 1942	Classifications and salary ranges established	80
South Carolina	July 1943	$10 a month on salaries under $2,500	65
		15 percent to 2 departments	10
South Dakota	(1)	Individual increases	(2)
Tennessee	Oct. 1943	Standardization of rates	100
Texas		No change	
Vermont	Jan. 1943	Individual increases	100
Virginia	Jan. 1942	10 percent on first $1,000 and 5 percent on second $1,000, on salaries under $2,400.	(2)
	After Jan. 1942.	Individual increases	(2)
Washington	Aug. 1943	Departmental increases; amount not specified	100
West Virginia	(1)	10 percent on salaries under $2,400	75
Wisconsin	July 1942	$10 a month on minimum salaries of $100 or less	6
	Apr. 1943	Bonus of $7–$15, lower amounts going to higher-paid workers.	85
Wyoming	After Jan. 1943.	Individual increases	100

[1] After January 1941, but exact date not available.
[2] No data.
[3] All employees paid on monthly basis.

Three of the 45 States—Mississippi, Texas, and Oklahoma—reported that they had effected no general salary increases since January 1941. The 42 States that have increased salaries may be grouped in four chief classes: (1) Although no State reported a uniform increase to all employees, 19 States—the largest group—granted systematic percentage or dollar increases to substantial groups of employees (often the lowest-paid workers). In some instances the period of effectiveness of these salary revisions was limited by the legislature or by executive directives to 1 or 2 years or the duration of the war. (2) Ten States gave no specific salary increases, but raised the salary levels of large numbers of workers by establishing or raising salary ranges for specific occupations. (3) Nine States effected increases by means of adjustments for individual employees. (4) The remaining four States employed combinations of the above methods.

It is difficult to evaluate the net effect on salary levels of the various measures taken. Of 37 States for which fairly reliable estimates can be made, however, 6 raised salaries about 10 percent on the average, and 17 raised salaries by amounts varying from 10 to 20 percent. The median for all 37 States was about 12 percent.

It would appear that merit increases and similar adjustments for individual workers or small groups have been almost as important as general salary increases in accounting for the rise in salaries of State employees.

Salary Changes in Small Towns

The material presented in the preceding pages, although indicating wide differences in the extent of salary increases for various groups of white-collar workers, provides convincing evidence of an appreciable general upward movement. In order to discover whether increases

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

for these workers were confined to large industrial centers or had occurred more generally, the Bureau conducted a brief, special study of the salary trends of such workers in a number of small towns not substantially affected by the war production program. The subjects of the study were 12 widely scattered towns ranging in size from 6,000 to 20,000 inhabitants.

The methods employed were such as to yield highly dependable results. Except for their limited scope, the findings of this study are probably the most reliable information at hand regarding the movement of white-collar wages during the war period. All data were obtained by the Bureau's trained field representatives and were based on company pay rolls and other basic records for the months of January 1941 and December 1943. The findings here shown apply to one key job in each of 7 nonmanufacturing industries, and to two clerical occupations common to both manufacturing and nonmanufacturing. The figures for the two periods refer to identical establishments and in many cases to identical workers. The increases shown are in terms of hourly earnings and reflect not only general increases but also merit increases, seniority promotions within the job, and all similar adjustments. The commissions of certain sales clerks are included, but not overtime premiums.

The study indicates that although white-collar workers in these towns are still employed at relatively low rates, they have enjoyed substantial and widespread wage adjustments (table 8). Despite the absence of a highly competitive labor market in these communities, white-collar workers received increases in straight-time hourly earnings averaging somewhat over 20 percent.

TABLE 8.—*Straight-Time Average Hourly Earnings,*[1] *December 1943, in Key Occupations in Selected Industries in 12 Towns, and Percent of Change Since January 1941*

Town and State	Banks		Department and clothing stores		Hospitals		Hotels		Insurance and real estate	
	Paying and receiving tellers		Sales clerks		Nurses [2] general duty		General desk clerks		Cashiers	
	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941
Town A, Vermont	$0.923	11.2	$0.465	10.9	$0.441	14.8	$0.516	25.9	$0.563	11.3
Town B, New York	1.055	−11.6	.538	19.3	.577	40.0	.507	38.5	1.156	14.9
Town C, Maryland	.845	10.5	.394	24.7	(3)	(3)	(3)	(3)	-------	-------
Town D, Virginia	.676	5.3	.471	22.3	.460	42.9	.439	28.0	-------	-------
Town E, Ohio	.915	−.7	.471	4.9	(3)	(3)	.382	8.2	.548	1.1
Town F, Michigan	.636	40.1	.422	43.1	(3)	(3)	[4] .283	133.9	(3)	(3)
Town G, Illinois	.835	7.9	.407	26.4	.414	36.2	.412	15.4	-------	-------
Town H, Nebraska	.667	28.8	.415	28.1	.476	23.0	[4] .157	27.6	.392	81.5
Town I, Colorado	.749	9.5	.521	15.8	.531	45.5	.518	26.7	-------	-------
Town J, Oklahoma	.920	−11.7	.416	23.8	-------	-------	.314	52.4	-------	-------
Town K, California	.845	5.5	.510	15.6	.760	67.8	.624	33.6	-------	-------
Town L, Washington	.811	9.3	.489	5.4	.832	33.1	.432	28.6	-------	-------

See footnotes at end of table.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 8.—*Straight-Time Average Hourly Earnings,[1] December 1943, in Key Occupations in Selected Industries in 12 Towns, and Percent of Change Since January 1941*

Town and State	Limited-price variety stores		Public utilities		All industries				Median percent of increase for occupations other than stenographers and general office clerks, 1941–43
	Sales clerks		Meter readers		Stenographers		General office clerks		
	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	Current rate, December 1943	Percent of change since January 1941	
Town A, Vermont	$0.259	22.2	$0.705	50.0	$0.549	11.4	$0.542	10.4	15
Town B, New York	.310	21.1	.814	16.5	.563	14.9	.469	19.9	19
Town C, Maryland	.298	36.7	[3]	[3]	.481	28.3	.381	28.3	25
Town D, Virginia	.266	26.1	.543	17.3	.515	19.8	[3]	[3]	24
Town E, Ohio	.283	24.7	.608	17.6	.564	31.2	.472	37.2	7
Town F, Michigan	.312	41.8	.700	31.1	.547	41.3	.459	36.6	42
Town G, Illinois	.306	28.0	.762	0	.566	19.4	.493	14.4	26
Town H, Nebraska	.293	36.3	.550	24.4	.348	43.8	.346	33.1	28
Town I, Colorado	.295	17.1	.719	13.6	.546	30.3	.460	14.4	16
Town J, Oklahoma	.310	40.3	.918	10.1	.791	25.0	.407	23.3	24
Town K, California	.446	20.2	.975	30.0	.934	21.1	.827	20.2	25
Town L, Washington	.385	14.2	.889	13.2	.921	14.3	.636	10.6	14

[1] Exclusive of premium payments for overtime or night work.
[2] Excludes allowances for board and room. These additional perquisites are commonly furnished in hospitals in addition to wages.
[3] Data not available.
[4] Excludes allowances for meals.

The wage increases, it will be noted, were not confined to a single industry but extended to all of the industries included in the study. Meter readers, selected as being typical of public-utilities systems, received increases averaging between 10 and 30 percent (the median increase was 17 percent). Sales clerks in department stores and in limited-price variety stores were granted wage adjustments averaging approximately 21 and 25 percent, respectively. Bank tellers received somewhat smaller increases on the whole, the average being about 10 percent. In this occupation the limited increase is due in large measure to the fact that women, who have been replacing male tellers in increasing numbers in recent months, have not been employed long enough to receive the automatic wage adjustments which are commonly granted in banking houses after specified periods of service.

Data for the two general clerical occupations for which wage information was reported—stenographers and general office clerks—also give evidence of substantial wage increases. The median increases in salary for these two groups were approximately 23 and 20 percent, respectively. Increases for clerks in the hotel industry averaged 28 percent, while general-duty nurses in hospitals received sufficient increases to bring their December 1943 wage rates approximately 38 percent above the average for January 1941.

Comparative Increases in Manufacturing Industries

Although, as is indicated above, salary adjustments granted to many groups of white-collar and professional workers have been fairly substantial, the available evidence indicates that these increases have not

gitized for FRASER
tps://fraser.stlouisfed.org
ederal Reserve Bank of St. Louis

kept pace with the wage adjustments extended to the Nation's factory workers.

Data regularly collected by the Bureau's Division of Employment Statistics indicate the variations in wage increases for manufacturing and nonmanufacturing employees. Average hourly earnings of factory workers have increased by about 47 percent since January 1941, and average weekly earnings have increased almost 70 percent. These data include overtime pay and other premium payments. Similar data for the nonmanufacturing industries in which large proportions of white-collar workers are employed indicate increases in average hourly earnings of only 20 to 30 percent for most of the industries for which data are available, and in weekly earnings of 35 percent or less.

Wage and income data compiled by the U. S. Bureau of Foreign and Domestic Commerce also indicate a contrast in the movement of average weekly earnings for these two major groups of workers for the period 1939–43 (table 9). By the end of 1943 increases in those private nonmanufacturing fields which employ large numbers of white-collar workers ranged from 7 to 30 percent above 1939 levels. Other branches of nonmanufacturing in which much smaller proportions of white-collar workers are employed showed considerably higher percentage increases in weekly earnings. Factory workers during the same period enjoyed increased earnings of almost 75 percent.

TABLE 9.—*Average Weekly Wage and Salary Income, in Private Nonagricultural Employments, 1939–43* [1]

Branch of employment	Estimated average numbers of employees in 1943 (thousands)	Average weekly wage and salary income		
		1939	1943	Percent of increase
All establishments excluding agriculture, Government, and the armed forces	38,554	$24.81	$39.17	58
Manufacturing	17,265	26.06	45.44	74
Private nonmanufacturing—				
Including mining, construction, and transportation	21,289	24.40	34.08	40
Excluding mining, construction, and transportation	16,092	22.85	30.23	32
Service	4,984	17.92	25.83	44
Wholesale trade	1,625	32.50	46.13	42
Power and gas	344	33.96	43.56	28
Retail trade	5,491	20.31	26.10	29
Insurance	561	32.71	39.21	20
Banking	404	35.90	38.50	7
Communications	491	30.06	34.65	15
Security, brokerage, and real estate	539	24.69	30.65	24
Other	1,653	24.87	32.29	30

[1] Derived from data supplied by the Bureau of Foreign and Domestic Commerce.

COMPARISON OF INCREASES IN IDENTICAL MANUFACTURING ESTABLISHMENTS

Further light is shed on comparative increases for factory and salaried employees by the Bureau's experimental study of applications filed with the National War Labor Board by employers seeking approval of wage increases. These applications offered an unusual opportunity for examining the relationship between salary adjustments affecting white-collar workers and wage revisions of factory employees in identical manufacturing establishments. Although the individuals included in the category of salaried workers apparently

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

covered some nonclerical workers, such as superintendents and truck drivers, most of the persons included were office employees.

Some 20,000 applications for wage increases were filed with the Board during the 4 months from October 1942 to January 1943 (the period during which such applications included the data essential to this study). After elimination of all applications which for one reason or another were not usable for the special purpose of this survey, only 1,600 remained; these included representation for each of the major geographical areas of the country.

Table 10 shows the number of establishments studied for each of the Board's administrative regions. The establishments included are not necessarily representative of all applicants before the Board; but, for the purpose of the present inquiry, this was not necessary since the comparison is between white-collar and factory workers in identical manufacturing establishments. The table indicates that in each of the 11 regions for which data are shown, white-collar workers suffered a disadvantage in wage adjustments, by amounts ranging from 1 cent per hour in the Atlanta region to almost 6 cents in the Mountain area and in Michigan. For the country as a whole the median difference, based on the workers covered, was about 3 cents an hour. The median increase in average straight-time hourly earnings for factory workers, based on plant averages, was about 13 cents while the median increase for office workers in the same group of plants was about 10 cents. Stated another way, in the period between January 1941 and January 1943, the 1,600 manufacturing plants covered granted factory workers wage increases averaging 3 cents an hour more than those they granted to salaried workers.

TABLE 10.—*Increases in Straight-Time Average Hourly Earnings* [1] *of Salaried and Plant Workers in Identical Factories, January 1941–January 1943*

War Labor Board administrative regions	Number of workers employed, winter 1942–43 (in thousands)			Excess of plant over salaried workers' increase (in cents per hour) [2]	Number of plants studied	Number of plants in which salaried workers received increases (in cents)—		
	All	Plant	Salaried			Equal to those of plant workers	Less than those of plant workers	More than those of plant workers
All regions	704	611	93	3.1	1,600	172	780	648
I. Boston	73	66	7	2.3	133	12	63	58
II. New York	101	85	16	4.0	222	23	114	85
III. Philadelphia	106	94	12	3.4	247	22	127	98
IV. Atlanta	38	35	3	1.0	79	12	24	43
V. Cleveland	98	87	11	3.0	197	26	100	71
VI. Chicago	130	114	16	2.6	284	31	151	102
VII. Kansas City	44	36	8	3.9	101	13	46	42
VIII. Dallas	34	28	6	4.2	105	16	39	50
IX. Denver	3	2	1	5.5	13	1	6	6
X. San Francisco [3]	33	26	7	4.0	140	13	69	58
XI. Detroit	44	38	6	5.7	79	3	41	35

[1] Exclusive of premium payments for overtime and night work.

[2] Estimated median amount by which increases of (individual) salaried workers fell short of average increase of wage workers in the same plant. If the median were computed on the basis of plant averages, salaried workers would still be shown to sustain some disadvantage, but in a smaller amount.

[3] Includes Region XII, Seattle.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Average Hourly Earnings in the Airframe Industry, 1943[1]

Summary

FACTORY workers on the first shift in the metal-airframe industry had straight-time average hourly earnings of 95.0 cents in December 1943. Over half of these workers were in occupations with average hourly earnings ranging from 85 cents to $1.00, and well over a fourth were in occupations averaging $1.00 or more an hour. Substantial additional payments were made for overtime work and for work on late shifts. The earnings of workers in 9 representative office occupations varied from 65.8 cents an hour for office boys and girls to 87.5 cents an hour for bookkeepers. These figures are based on data for 420,480 first-shift factory workers and 29,222 office workers in 50 metal-airframe plants.

General wage levels in the metal-airframe industry were much the same in three of the four broad regions into which the country was divided for purposes of the study. The average for the Eastern region, 98.2 cents, was only 2.7 cents higher than that for the southern California region and 3 cents higher than that for the Central region. The general wage level in the Midwestern region, however, was from 8 to 11 cents below that in the other three regions.

As a group, men earned substantially more than women, the respective averages for the two groups being 98.2 and 86.7 cents an hour. The difference was due in part to the fact that women were found only in small numbers in the higher-skilled and higher-paying jobs, and in part to the fact that many women had been employed but a short time and were still receiving beginner's rates or but little more. In those occupations in which women have been employed for some time and have acquired as much experience as men, differences in wage rates were small.

Development of the Industry

The rapid development of the airframe industry during the past decade is readily appreciated when it is noted that only 7,800 workers were known to be employed in the industry in 1933. That number of workers would constitute only a fraction of the labor force in any one of the larger airframe plants now in operation. Much of this development has taken place during the past 3 years.

[1] Prepared in the Bureau's Division of Wage Analysis by Theodore W. Reedy, under the supervision of Victor S. Baril.

This is one of a series of Bureau studies of wartime wages in the manufacture of airframes and in related industries. The results of earlier studies will be found in Bulletins No. 704 (Wage Rates in the California Airframe Industry, 1941); No. 728 (Earnings in Eastern and Midwestern Airframe Plants, 1942); and No. 744 (Earnings in Aircraft Parts Plants, November 1942); also reprints, Serial No. R 1505 (Earnings in Aircraft-Engine Plants, May 1942); and Serial No. R 1526 (Wages in Aircraft-Propeller Industry, October 1942). An additional bulletin, No. 746 (Wage Stabilization in California Airframe Industry, 1943), provides information on the impact of the National War Labor Board's wage order of March 3, 1943.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

The structural development of the airplane has been no less dramatic than the increase in employment. As an illustration, approximately 35 years ago, the U. S. Signal Corps asked for bids on the first military plane to be used by the Army. The specifications of this plane are worthy of note: A speed of 40 miles per hour in level flight, with a bonus of 10 percent for every mile over 40; capable of carrying two persons and a total load (including persons) of 350 pounds; and the ability to fly at least 1 hour and carry sufficient fuel for 125 miles. Even at the end of World War I, the popular plane was a wood, fabric, and wire "kite," mounting a heavy, unreliable motor which drove a laminated wood propeller of fixed pitch. The barnstorming JN–4 ("Jenny") of the early 1920's was just such a ship, powered with an OX–5 8-cylinder, 90-horsepower water-cooled motor.

The present heavy metal ships, carrying huge bomb loads and equipped with high-caliber armament, were undreamed of a few years ago, as were also the great factories from which planes now flow in continuous streams. The tremendous increase in the volume of production becomes even more noteworthy when it is realized that the earlier planes were small, custom-built, and produced at the rate of only a few per month, whereas in December 1943 almost 9,000 military planes of all types were produced.

THE LABOR FORCE

The tremendous expansion of the working force in airframe manufacturing virtually ceased late in 1943, with employment leveling off to a total of approximately 1,000,000 workers. Mass-production techniques, coupled with the increased efficiency of the large numbers of new workers, now make it possible to meet the heavy production schedules without the addition of more employees. In most plants, the present hiring schedule is for replacement only.

This decrease in new employment, combined with the provisions for automatic advancement found in most plants, has led to a material reduction in the number of learners. This, in itself, has done much to raise the general level of average hourly earnings, in addition to such factors as upgrading and promotion.

Airframe plants are primarily concerned with the assembling of thousands of parts into a complete plane. Much of the work of manufacturing the component parts of a plane and even the assembling of these parts into units is done in other plants. This no doubt accounts in part for the fact that, on the average, over half of the workers in a typical metal-airframe plant are engaged in assembly and installation work—approximately 25 percent assembling, 10 percent installing, and 11 percent riveting. Less than a fifth of the workers are engaged either in the operation of machines or in work at a bench. About 6 percent of the workers are performing any one of the many inspection jobs. Maintenance, service, and other auxiliary work account for the remainder of the labor force.

In December 1943, two of every five airframe-factory workers were women. Many of these women had limited factory experience. As a result, they were most frequently found in the lower grades of the various occupations in which they were employed. Although some women were employed in most of the occupations, they were found in substantial numbers in comparatively few; for example,

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

assemblers, filers and burrers, general helpers, inspectors, janitresses, riveters, sheet-metal workers, and stock and store clerks.

Of 50 plants studied by the Bureau in the latter part of 1943, 17 were organized completely by unions affiliated with the C. I. O. and 9 by the A. F. of L. unions. Independent unions were found in 3 plants. Two plants had both a C. I. O. and an A. F. of L. union, one plant had a C. I. O. and an independent union, and one plant had an A. F. of L. and an independent union. The C. I. O. had its principal strength in the Eastern and Central regions with 9 and 5 plants, respectively, and the A. F. of L. in the West with 5 plants. The remaining plants were not organized by any union when visited by the Bureau's field representative. Most of the nonunion establishments were in the Midwest, the Eastern, and the Central regions.

Purpose and Nature of Study

The present study of the airframe-manufacturing industry was designed to provide current basic wage data for the use of those Government agencies charged with the development of the aircraft program and with stabilizing wages in the industry, as well as to meet the needs of labor and management for such data. In addition, the survey depicted the industry's wage structure after a period of adjustment and regulation which began in March 1943, when the National War Labor Board issued a wage order affecting eight West Coast airframe companies. Wage changes resulting from this order, as well as from subsequent wage orders issued by the Board through December 1943, are reflected in the figures presented in this report.

In order to arrive at as full comparability as possible among the various establishments, only those manufacturing completed airframes were included in the study; thus, all manufacturers of engines, propellers, parts, and subassemblies were excluded. The present survey consequently differs slightly from the earlier survey of the airframe industry, which included a few subassembly plants. Such plants will be covered in a separate study of aircraft plants engaged in the production, on a contract basis, of large sheet-metal parts or sections of metal airframes.

Airframe plants constitute a homogeneous segment of the broad aircraft-industry group. There are relatively few plants in the industry and most of them are large, employing many thousands of workers. Wage levels in the industry are fairly well standardized, particularly in the metal-airframe group, the largest of the three groups in the industry. Most of the plants and the greater proportion of the workers are in this group. The second group includes a small number of plants engaged in the manufacture of light-weight airframes, which frequently are made largely of wood and fabric. The third group includes those plants engaged in the manufacture of gliders. Wage data for the two smaller segments of the industry are not included in this article but will appear in a forthcoming bulletin.

Metal-airframe plants are divided about equally among the four broad regions used in this report. The majority of the plants found in the Eastern region are in the Northeastern States, including Connecticut with 2, eastern New York with 4, New Jersey with 2, Pennsylvania with 3, Maryland with 3, and Georgia with 1. Plants in the Central region are widely distributed, Ohio having 4, western New

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

York 2, Tennessee 2, and 6 other States one each. In the Midwest, Kansas and Texas each have 3 plants, Louisiana and Oklahoma, 2 each, and Nebraska 1. All western plants for which wage data are included are on the Pacific Coast—principally in southern California. Light-weight airframe plants are largely concentrated in the Central and Midwestern regions, while the plants making complete gliders are well distributed over the country.

Altogether, 84 establishments were studied. Of this number, 50 were engaged in the manufacture of metal airframes, 11 produced light-weight planes, and 23 made gliders or glider parts. Wage data were obtained for 439,785 first-shift workers in selected occupations. Of this number, 96 percent were in metal-airframe plants, 2 percent in light-weight airframe plants, and 2 percent in glider plants.

METHOD OF STUDY

Occupational wage data and general background information were obtained from virtually all plants engaged in the manufacture of metal airframes, light-weight airframes, and gliders, and from a few modification centers. Field representatives of the Bureau visited each plant in the Eastern, Central, and Midwestern regions and those plants in the Western region not situated in southern California, and obtained the desired information directly from pay rolls and other pertinent records. Although most of the visits were made during the summer of 1943, the data collected have been adjusted to include the few general wage changes which took place between the period scheduled and December 1943. The figures herein presented, therefore, depict the structure of the industry at the end of the year. Wage data for the southern California airframe plants were compiled by the Southern California Airframe Industry and represent the situation in December 1943. Only general background information for these plants was collected by representatives of the Bureau.

Wage data were obtained for approximately half of the occupations in metal-airframe plants. This group includes all numerically important occupations as well as a substantial number of strategically important occupations in which comparatively few workers are found. More than 90 percent of the first-shift plant workers were found in the selected occupations covered in this survey. In those plants engaged in the production of light airframes and gliders, in which substantial amounts of wood or fabric are used, data were obtained for a somewhat different and more limited list of occupations. In most airframe manufacturing plants, wage data were also obtained for workers in 9 representative office occupations.

For purposes of this survey, the country was divided into four broad regions, corresponding to the former Army Air Forces procurement districts. Their boundaries extend from the northern to the southern border of the United States. No separate figures are shown for the South, since the wage levels found in the small number of southern plants do not differ materially from those found in northern plants. The Eastern region includes all Atlantic Seaboard States from Maine to Florida, plus West Virginia and minus western New York, which is included with the Central region. The Central region includes all remaining States east of the Mississippi River, plus Missouri and

583621—44——10

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Arkansas. The Midwest region includes North and South Dakota, Minnesota, Nebraska, Iowa, Colorado, Kansas, Oklahoma, Louisiana, and Texas. The Western region includes the States in the Rocky Mountain region and the three States on the Pacific Coast. Separate occupational wage-rate information is presented for each of these regions.

The wage data presented in this report for selected occupations are straight-time average hourly earnings exclusive of premium overtime and shift-differential earnings. Incentive payments are included in these earnings.

The three segments of the airframe industry are basically different. Metal-airframe plants have a much more diversified occupational structure than either light-weight airframe or glider plants. The occupational structure of modification centers follows that of metal-airframe plants and for that reason these centers have been combined with such plants. Many of these occupations do not have their counterpart in plants manufacturing light planes which include a substantial amount of wood and fabric. Glider plants are wholly different from either metal- or light-plane plants. Because of these basic differences, the occupational wage data for light-airframe and glider plants have not been combined with those for metal airframes, but will be presented in a forthcoming bulletin.

Hourly Earnings in Metal-Airframe Manufacture

FACTORS AFFECTING AVERAGE HOURLY EARNINGS

The level of earnings in the airframe industry is influenced not only by the basic rates for the various occupations but also by entrance rates, provisions for automatic advancement, extra pay for work on late shifts and for overtime work, and incentive methods of wage payment. These factors are discussed briefly in the following paragraphs.

Entrance rates of unskilled workers in the 50 metal-airframe plants studied in this survey varied from 50 to 85 cents per hour (table 1). Of these plants, 30 had entrance rates of 60 cents per hour. The prevalence of the 60-cent entrance rate is due in large measure to the influence of National War Labor Board directives stabilizing wages in the Southern California Airframe Industry and in other airframe plants. Aside from the 60-cent rate, there are only limited concentrations of entrance rates at other levels, 6 plants having an entrance rate of 79 cents, 4 a rate of 65 cents, and 3 a rate of 62 cents.

Provisions for automatic increases, which also appear in table 1, show somewhat less variation than entrance rates. The great majority of the plants granted an initial 5-cent increase in the worker's hourly base rate after 4 weeks or 30 days, and periodic increases thereafter until the minimum classified job rate was reached. This usually occurred within 3 months. Promotion beyond this level was based upon merit in most plants, although in a few instances these increases continued until specific job rates were reached. For example, plants operating under the Southern California Airframe Industry (SCAI) job-classification system started unskilled workers at 60 cents, advancing them 5 cents every 30 days until the 75-cent classified minimum rate was reached. Beyond this rate, increases were based on merit. In some plants, automatic increases continued until the

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

hourly rate for the job to which the worker is assigned was reached, regardless of its wage level.

TABLE 1.—*Entrance Rates of Unskilled Workers, and Provisions for Automatic Increases in Metal-Airframe Plants, 1943*

Number of plants	Entrance rates	Provision for automatic increases
1 plant	$0.85	5-cent increase every 2 weeks to minimum job rate.
1 plant	.825	Increase according to merit, ability, and openings in higher labor grade.
1 plant	[1].79	5-cent increase in 30 days, 10-cent increase next 30 days; then 5 cents each 30 days to minimum job rate.
5 plants	[2].79	10-cent increase in 30 days, thereafter 5-cent increase monthly to maximum job rate.
1 plant	.75	None.
1 plant	.65	5-cent increase monthly for 3 months, thereafter 5 cents each 90 days to maximum job rate.
1 plant	.65	5-cent increase monthly for 3 months, thereafter 5 cents each 90 days to minimum job rate.
1 plant	.65	5-cent increase monthly for 2 months.
1 plant	[3].65	Not available.
2 plants	.62	10-cent increase after 60 days; 5-cent increase after next 60 days.
1 plant	[4].62	6-cent increase after 4 weeks and 8 weeks, 3 cents after 13 weeks.
30 plants	[5].60	5-cent increase monthly for 3 months; then to minimum job rate.
1 plant	.55	5-cent increase after 13 weeks.
1 plant	[6].55	5-cent increase after 60 days, and advance to "learner." At end of 4 to 6 months, receive specific rate for job.
1 plant	[7].50	None.
1 plant	----------	Entrance rate for each occupation.

[1] Entrance rate from training school. Workers enter training school at 70 cents.
[2] Employees with vocational-school training or equivalent receive 5 cents more for each 160 hours of training.
[3] Entrance rate from training school. Workers enter training school at 60 cents.
[4] Entrance rate from training school. Workers enter training school at 50 cents.
[5] Includes plants with automatic increase at 4-, 8-, and 12-week or similar intervals. One plant reported a 50-cent entrance rate for women.
[6] Plus guaranteed bonus of 24.5 percent.
[7] New plant: Plans were under consideration at time of Bureau study.

Wage differentials for work on late shifts were paid in all except 1 of the 50 metal-airframe plants scheduled (table 2). Approximately half of these plants paid either 5 or 6 cents extra per hour for work on the second shift, 7 paid 10 cents extra per hour, and 8 paid 5 percent over the base rate. A third shift was operated by 37 of the 50 plants. In 27 of these, 8 hours' pay was given for 6½ hours' work, in addition to shift differentials ranging from 5 to 10 cents per hour. In about half of the plants, the shift differential paid was either 5 or 6 cents per hour. Seven plants paid a shift differential of 5 percent over the base rate, with 1 of these plants giving 8 hours' pay for 7¼ hours' work.

Practically complete uniformity was found in methods of overtime payment. All plants paid time and a half after 40 hours per week or 8 hours per day, and on the sixth consecutive day and holidays. Double time was paid on the seventh consecutive day in all but one plant.

Incentive methods of wage payments were found in only six plants. In two plants, only supervisory or administrative employees were affected; in two other plants practically all workers received production bonuses based upon percentage increases in total production. Incentive plans found in the remaining two plants affected workers in certain departments only. In one of these plants, a bonus was paid for departmental production above a fixed standard, while in the other plant both individual and group incentive plans were used. This latter plant was the only one surveyed in which an incentive system was calculated to increase the pay of the worker in direct ratio to his individual output.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 2.—*Differentials Paid for Work on Late Shifts in Metal-Airframe Plants, by Region, 1943*

Differential[1]	Number of plants in—				
	United States	Eastern region	Central region	Midwest region	Western region
Second-shift differential	50	15	14	11	10
10 cents per hour	7	2	4		1
9 cents per hour	2	2			
8 cents per hour	4	2		1	1
7.5 cents per hour	2	2			
7 cents per hour	3		3		
6 cents per hour	11		1	2	8
5 cents per hour	12	2	3	7	
5 percent over base rate	8	5	2	1	
No differential	1		1		
Third-shift differential	37	8	10	9	10
11 cents per hour	1	1			
10 cents per hour plus 8 hours' pay for 6½ hours' work	1				1
10 cents per hour	1			1	
8 cents per hour plus 8 hours' pay for 6½ hours' work	2			1	1
6 cents per hour plus 8 hours' pay for 6½ hours' work	10		1	2	7
6 cents per hour plus 8 hours' pay for 6¾ hours' work	1				1
5 cents per hour plus 8 hours' pay for 6½ hours' work	13	2	7	4	
5 cents per hour	1		1		
5 percent over base rate plus 8 hours' pay for 7¼ hours' work	1			1	
5 percent over base rate	6	5	1		

[1] 13 plants operated on 2 shifts only; 37 plants operated both second and third shifts.

EARNINGS OF FACTORY WORKERS

Wage data are presented in table 3 for a total of 145 classes or grades of workers in 57 specific occupations. It will be noted that in 42 of these 57 occupations figures are shown for three classes of workers, designated as A, B, and C, and that in 4 of the occupations figures are shown for two classes of workers, namely, A and B. A single average is shown for only 11 occupations. The refinement of the data in the 46 occupations was necessary in view of the wide variation in the nature of the duties performed within these occupations. For example, the duties of workers operating any one of the standard machine tools may vary from simple repetitive work requiring only very limited training and little or no skill to highly complicated and exacting work which only a skilled mechanic can perform. Equally wide variations are found in the many types of assembly and inspection occupations, as well as in many other processing and maintenance occupations.

The classifications within jobs used in this study were originally developed by the Southern California Airframe Industry and are now applied by many establishments in other parts of the country. The workers in factories not using this job-classification system were grouped on the basis of written definitions issued by the SCAI. In some cases—particularly in factories previously engaged in the production of automobiles—this grouping involved great difficulty and was accomplished with only approximate accuracy. The SCAI job-classification system differs somewhat from the classifications customarily employed in Bureau wage studies.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Metal-Airframe Plants, by Region, 1943*

Occupation	United States[1]		Eastern			Central			Midwest			Southern California		
	Percent of total employment	Average hourly earnings	Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average	
				Lowest	Highest		Lowest	Highest		Lowest	Highest		Lowest	Highest
Total, all occupations	100.0	$0.950	$0.982			$0.952			$0.869			$0.955		
Assemblers, electrical and radio, A	.4	.992	1.080	$1.019	$1.100	1.026	$0.900	$1.100	1.002	$0.923	$1.402	.955	$0.950	$0.960
Assemblers, electrical and radio, B	.8	.893	.954	.765	1.020	.903	.822	1.150	.842	.802	1.163	.864	.850	.870
Assemblers, electrical and radio, C	.9	.843	.883	.663	.910	.863	.760	1.100	.827	.750	1.033	.783	.770	.800
Assemblers, general, A	4.4	1.136	1.143	.924	1.304	1.126	.929	1.297	1.041	.945	1.408	1.126	1.080	1.150
Assemblers, general, B	6.5	.957	.965	.791	1.048	.972	.816	1.161	.910	.809	1.244	.957	.940	.970
Assemblers, general, C	9.9	.868	.857	.655	.914	.934	.788	1.102	.827	.754	1.104	.846	.840	.850
Assemblers, precision, bench, A	.3	1.144	1.172	.955	1.317	1.085	1.017	1.109	1.054	1.020	1.425	1.132	1.090	1.150
Assemblers, precision, bench, B	.5	.997	1.020	.825	1.257	1.032	.881	1.118	.906	.879	.942	.958	.900	.970
Assemblers, precision, bench, C	.5	.871	.906	.798	1.102	.894	.768	.910	.821	.777	.851	.863	.850	.900
Cable splicers, A	.1	.977	(2)			.984	.833	1.133	(2)			.939	.900	.950
Cable splicers, B	.1	.916	(2)			.978	.772	1.150	.858	.800	1.300	.860	.840	.870
Cable splicers, C	.1	.831				(2)			.880	.750	1.133	.791	.780	.810
Carpenters, maintenance, A	.3	1.155	1.098	.966	1.260	1.211	1.060	1.334	1.101	1.000	1.444	1.142	1.070	1.170
Carpenters, maintenance, B	.2	1.036	1.088	.897	1.180	1.102	.875	1.229	.947	.913	1.191	.964	.940	1.010
Carpenters, maintenance, C	.1	.882	(2)			(2)			.866	.831	1.047	.872	.850	.880
Clerks, stock and stores	4.9	.874	.859	.726	1.070	.886	.731	1.100	.795	.758	1.010	.893	.830	1.040
Craters, A	.2	1.037	1.043	.979	1.116	1.088	.973	1.165	.986	.943	1.075	1.009	1.000	1.050
Craters, B	.3	.925	.894	.805	.976	.987	.825	1.130	.867	.825	1.019	.899	.870	.920
Drill-press operators, A	.3	1.042	1.006	.914	1.128	1.046	.928	1.161	.961	.930	1.358	1.009	.990	1.060
Drill-press operators, B	.7	.917	.944	.783	1.075	.968	.801	1.112	.845	.820	1.141	.888	.880	.900
Drill-press operators, C	.6	.833	.895	.775	.930	.875	.750	.943	.797	.750	1.020	.784	.770	.790
Electricians, maintenance, A	.4	1.264	1.259	1.100	1.324	1.282	1.106	1.441	1.207	1.063	1.452	1.278	1.240	1.320
Electricians, maintenance, B	.3	1.105	1.143	.867	1.238	1.089	.935	1.289	1.042	.856	1.258	1.121	1.100	1.140
Electricians, maintenance, C	.1	.948	1.016	.838	1.055	.953	.834	1.127	.900	.794	1.076	.944	.930	.960
Filers and burrers, A	1.0	.861	.918	.717	.966	.921	.752	1.100	.802	.750	1.016	.752	.750	.770
Grinder operators, A	.1	1.225	1.261	1.012	1.391	1.231	1.121	1.483	1.214	1.121	1.251	1.176	1.110	1.220
Grinder operators, B	.2	1.080	1.035	.756	1.233	1.078	.924	1.292	1.013	.950	1.070	1.009	.980	1.040
Grinder operators, C	.2	.903	.882	.790	1.044	.929	.793	1.150	.877	.812	1.038	.888	.890	.900
Helpers, general	3.8	.760	.730	.565	.849	.788	.688	.957	.751	.729	.826	.752	.750	.890
Inspectors, detail, A	.3	1.132	1.096	1.017	1.206	1.189	.979	1.348	1.112	1.096	1.165	1.109	1.070	1.150
Inspectors, detail, B	.4	1.001	.985	.918	1.090	1.051	.833	1.252	.950	.913	1.056	.945	.930	.970
Inspectors, detail, C	.6	.877	.874	.812	.926	.900	.789	1.131	.853	.717	1.085	.850	.830	.860
Inspectors, final assembly, A	.4	1.229	1.178	1.005	1.300	1.189	1.066	1.360	1.195	1.080	1.264	1.255	1.180	1.290
Inspectors, final assembly, B	.6	1.094	1.111	.831	1.201	1.088	.931	1.250	1.039	.951	1.256	1.114	1.070	1.140

See footnotes at end of table.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Metal-Airframe Plants, by Region, 1943*—Continued

Occupation	United States[1]		Eastern			Central			Midwest			Southern California		
	Percent of total employment	Average hourly earnings	Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average	
				Lowest	Highest		Lowest	Highest		Lowest	Highest		Lowest	Highest
Inspectors, final assembly, C	0.4	$0.907	$0.907	$0.885	$1.090	$0.888	$0.751	$1.143	$0.892	$0.833	$1.108	$0.958	$0.920	$0.980
Inspectors, general assembly, A	.6	1.152	1.165	.950	1.237	1.154	.950	1.348	1.111	1.050	1.322	1.122	1.090	1.140
Inspectors, general assembly, B	.8	.993	1.021	.770	1.130	.998	.823	1.244	.947	.902	1.183	.963	.930	1.000
Inspectors, general assembly, C	.8	.873	.872	.709	.958	.878	.723	1.131	.876	.798	1.103	.860	.850	.880
Inspectors, machined parts, A	.1	1.240	1.297	.963	1.406	1.273	1.150	1.361	1.181	1.138	1.214	1.189	1.150	1.230
Inspectors, machined parts, B	.2	1.024	1.081	.779	1.160	1.007	.955	1.252	1.022	.947	1.136	1.018	.990	1.050
Inspectors, machined parts, C	.2	.881	.903	.655	1.005	.826	.760	.917	.921	.821	1.092	.897	.890	.910
Inspectors, service and flight, A	.2	1.345	1.315	1.250	1.367	1.361	1.160	1.511	1.300	1.189	1.426	1.345	1.290	1.390
Inspectors, service and flight, B	.1	1.189	1.073	.958	1.158	(2)			1.111	.963	1.176	1.194	1.150	1.210
Inspectors, service and flight, C	(3)	.987	1.002	.770	1.152	1.004	.956	1.132	.970	.915	1.010	(2)		
Installers, controls, A	.3	1.113	1.162	.940	1.305	1.136	1.000	1.300	1.017	.967	1.046	1.075	1.060	1.120
Installers, controls, B	.4	1.044	.969	.800	1.062	1.088	.775	1.118	.902	.838	.918	.957	.940	.980
Installers, controls, C	.1	.852	.842	.667	.958	.902	.788	.938	.819	.777	1.022	.852	.830	.860
Installers, electrical, A	.5	1.118	1.159	1.063	1.165	1.177	1.018	1.256	1.034	.972	1.166	1.069	1.000	1.090
Installers, electrical, B	.5	.959	.993	.909	1.030	.969	.835	1.200	.914	.868	1.238	.951	.950	.970
Installers, electrical, C	.5	.897	(2)			.981	.785	1.107	.818	.770	1.073	.857	.840	.870
Installers, general, A	1.6	1.074	1.151	.900	1.173	1.015	.961	1.272	1.029	.945	1.398	1.069	1.050	1.090
Installers, general, B	2.1	1.006	.988	.914	1.022	1.095	.842	1.155	.940	.818	1.282	.956	.940	.960
Installers, general, C	2.8	.866	.867	.700	.879	.900	.775	1.100	.839	.759	1.128	.848	.840	.930
Installers, hydraulics, A	.4	1.145	(2)			1.088	1.033	1.272	1.026	.990	1.050	1.128	1.080	1.140
Installers, hydraulics, B	.3	.970	.916	.783	.924	1.052	.889	1.156	.905	.863	.937	.964	.960	.980
Installers, hydraulics, C	.2	.930	(2)			1.036	.806	1.100	.817	.794	.841	.850	.850	.860
Installers, power plant, A	.2	1.115	1.123	.950	1.190	1.065	1.006	1.272	1.046	.983	1.413	1.125	1.060	1.160
Installers, power plant, B	.2	.969	1.004	.800	1.121	1.030	.900	1.155	.928	.884	1.219	.960	.940	1.000
Installers, power plant, C	.2	.863	(2)			.891	.800	.938	.850	.772	1.113	.856	.850	.870
Janitors, A	2.4	.779	.765	.524	.882	.821	.565	.933	.747	.570	.912	.753	.750	.760
Jig builders, A	.5	1.351	1.370	1.234	1.457	1.344	1.150	1.430	1.292	1.107	1.665	1.344	1.290	1.550
Jig builders, B	.8	1.171	1.239	.900	1.362	1.192	1.010	1.323	1.071	.984	1.367	1.156	1.140	1.190
Jig builders, C	.8	.979	.974	.750	1.085	.983	.866	1.106	.939	.857	1.206	.999	.990	1.030
Laborers, A	.9	.774	.726	.526	.960	.843	.504	1.020	.747	.656	.899	.764	.750	.780
Lathe operators, engine, A	.3	1.197	1.194	.992	1.310	1.171	1.033	1.267	1.235	1.038	1.571	1.186	1.170	1.240
Lathe operators, engine, B	.2	1.022	1.029	.773	1.295	.974	.818	1.150	1.024	.917	1.101	1.019	1.010	1.030
Lathe operators, engine, C	.1	.907	.927	.835	.980	.917	.812	1.123	.887	.800	1.080	.900	.890	.920
Lathe operators, turret, A	.2	1.202	1.174	1.008	1.372	1.188	1.043	1.348	1.214	1.057	1.279	1.192	1.150	1.230
Lathe operators, turret, B	.3	1.041	1.084	.894	1.513	1.007	.840	1.250	1.031	.980	1.323	1.016	.990	1.030
Lathe operators, turret, C	.2	.904	.884	.775	.957	.933	.818	1.200	.892	.866	1.080	.893	.870	.920

gitized for FRASER
ps://fraser.stlouisfed.org
ederal Reserve Bank of St. Louis

Learners	5.5	.689	.685	.550	.795	.708	.567	1.030	.675	.600	.860	(4)	(4)	(4)
Machinists, bench, A	.2	1.172	1.212	1.075	1.301	1.188	1.089	1.461	1.136	1.000	1.500	1.129	1.110	1.140
Machinists, bench, B	.2	.990	1.036	.950	1.183	1.025	.925	1.330	.948	.898	1.281	.957	.940	.990
Machinists, bench, C	.6	.848	.949	.811	1.000	.849	.846	.925	.847	.757	1.073	.845	.840	.890
Mechanics, experimental, A	.1	1.306	1.163	1.060	1.293	1.305	1.122	1.503	(2)			1.322	1.260	1.340
Mechanics, experimental, B	.3	1.148	(2)			1.131	1.000	1.390	(2)			1.159	1.140	1.190
Mechanics, experimental, C	.3	.969	(2)			.942	.805	1.266	(2)			1.017	1.010	1.050
Mechanics, field and service, A	.4	1.298	1.223	1.028	1.331	1.301	1.148	1.411	1.204	1.110	1.483	1.318	1.260	1.350
Mechanics, field and service, B	.8	1.126	1.130	.881	1.201	1.144	.913	1.260	1.041	.962	1.278	1.125	1.100	1.150
Mechanics, field and service, C	.4	.965	.950	.848	1.021	1.005	.825	1.144	.922	.844	1.130	.969	.960	.980
Mechanics, maintenance, A	.4	1.220	1.201	1.029	1.354	1.190	1.056	1.341	1.150	1.062	1.508	1.275	1.240	1.330
Mechanics, maintenance, B	.4	1.077	1.124	.900	1.243	1.072	.867	1.175	.973	.876	1.241	1.107	1.090	1.160
Mechanics, maintenance, C	.2	.940	.937	.779	1.088	.927	.853	.985	.917	.829	1.038	.955	.940	1.000
Metal fitters, A	.3	1.137	1.125	.931	1.253	1.165	1.063	1.178	1.118	1.066	1.403	1.135	1.100	1.150
Metal fitters, B	.3	.987	1.017	.788	1.082	1.038	.900	1.178	.937	.900	1.248	.961	.950	.990
Metal fitters, C	.5	.838	.804	.729	.898	.827	.794	.944	.838	.804	1.085	.845	.830	.860
Milling-machine operators, A	.3	1.202	1.164	.978	1.315	1.202	1.115	1.433	1.221	1.100	1.265	1.179	1.160	1.230
Milling-machine operators, B	.5	1.053	1.048	.796	1.150	1.063	.827	1.332	1.024	.964	1.331	1.025	1.000	1.080
Milling-machine operators, C	.5	.892	.891	.750	1.008	.892	.764	1.175	.880	.810	1.120	.896	.890	.920
Oilers, maintenance, A	.2	.907	.840	.737	.948	.980	.750	1.105	.805	.744	.893	.911	.880	.930
Painters, aircraft, A	.4	1.093	1.090	.923	1.270	1.104	.950	1.244	1.054	1.000	1.409	1.080	1.040	1.090
Painters, aircraft, B	.3	.971	1.016	.788	1.149	.963	.813	1.150	.923	.841	1.227	.957	.940	.970
Painters, aircraft, C	.4	.853	.882	.757	.942	.830	.772	1.080	.848	.777	1.045	.855	.830	.860
Painters, maintenance, A	.1	1.064	1.019	.955	1.280	1.085	1.000	1.206	1.045	.970	1.100	1.079	1.050	1.100
Painters, maintenance, B	.1	1.066	1.097	.929	1.146	1.233	.950	1.305	.894	.831	1.106	.960	.950	.980
Painters, maintenance, C	(3)	.892	.918	.800	1.020	(2)			.829	.798	.981	(2)		
Plant protection	1.6	.901	.847	.729	.949	.927	.759	1.047	.855	.770	1.054	.966	.840	1.040
Plumbers, maintenance, A	.1	1.178	1.159	1.031	1.238	1.246	1.010	1.386	1.150	1.050	1.168	1.167	1.131	1.180
Plumbers, maintenance, B	(3)	1.038	1.027	.965	1.085	1.116	1.013	1.233	.957	.917	1.175	(2)		
Plumbers, maintenance, C	(3)	.880	(2)			(2)			.859	.800	1.069	(2)		
Power-shear operators, A	.1	1.045	1.065	.804	1.342	1.044	.896	1.229	(2)			1.022	.980	1.040
Power-shear operators, B	.2	.914	.913	.783	1.067	.960	.809	1.150	.877	.820	1.181	.894	.880	.920
Power-shear operators, C	.1	.813	.872	.826	.951	.852	.750	.873	.806	.755	.983	.788	.780	.810
Punch-press operators, A	.3	1.074	1.054	.857	1.285	1.136	.971	1.232	.997	.832	1.375	1.026	1.020	1.050
Punch-press operators, B	.4	.946	.954	.769	1.117	1.010	.850	1.180	.872	.800	1.238	.889	.860	.910
Punch-press operators, C	.2	.925	.883	.789	.994	1.027	.763	1.112	.815	.777	1.069	.786	.780	.790
Riveters, A	1.6	1.056	1.088	.900	1.177	1.003	.866	1.328	.864	.813	1.369	1.021	.990	1.030
Riveters, B	6.6	.958	1.059	.763	1.120	.918	.768	1.161	.866	.788	1.158	.886	.880	.890
Riveters, C	2.3	.840	.902	.690	.949	.834	.750	.914	.834	.767	1.026	.786	.760	.820
Saw operators, A	.3	1.000	1.033	.814	1.126	1.008	.846	1.214	.947	.871	1.140	.968	.930	.980
Saw operators, B	.3	.911	.872	.814	.981	1.019	.782	1.144	.820	.780	1.013	.855	.840	.870
Sheet-metal workers, bench, A	.5	1.120	1.134	.978	1.430	1.097	1.008	1.400	1.149	.975	1.495	1.120	1.100	1.160
Sheet-metal workers, bench, B	1.0	.971	.968	.784	1.151	.969	.850	1.250	.992	.871	1.346	.967	.950	.980
Sheet-metal workers, bench, C	1.4	.874	.833	.715	.972	.914	.792	1.150	.855	.800	1.140	.846	.820	.860
Spot welders, A	.2	1.073	1.072	.960	1.109	1.109	.888	1.205	1.033	.900	1.125	1.015	.990	1.040
Spot welders, B	.2	.900	.914	.848	1.064	.965	.850	1.116	.889	.800	1.169	.885	.880	.900
Spot welders, C	.2	.871	(2)			.960	.750	1.150	.812	.759	1.020	.782	.780	.800

See footnotes at end of table.

Digitized for FRASER
https://fraser.stlouisfed.org
Federal Reserve Bank of St. Louis

TABLE 3.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Metal-Airframe Plants, by Region, 1943*—Continued

Occupation	United States [1]		Eastern			Central			Midwest			Southern California		
	Percent of total employment	Average hourly earnings	Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average		Average hourly earnings	Plant average	
				Lowest	Highest		Lowest	Highest		Lowest	Highest		Lowest	Highest
Template makers, A	0.2	$1.211	$1.290	$1.130	$1.422	$1.187	$1.041	$1.300	$1.108	$1.003	$1.523	$1.176	$1.150	$1.190
Template makers, B	.2	1.031	1.130	.933	1.300	.994	.901	1.047	.992	.880	1.333	1.010	.990	1.030
Template makers, C	.2	.888	.900	.805	1.197	.913	.853	.970	.871	.777	1.207	.885	.870	.900
Tool and die makers, A	.5	1.404	1.442	1.288	1.547	1.387	1.231	1.573	1.332	1.130	1.684	1.403	1.360	1.450
Tool and die makers, B	.3	1.210	1.235	.988	1.422	1.181	1.008	1.455	1.150	1.109	1.450	1.178	1.130	1.230
Tool and die makers, C	.1	1.039	1.049	.800	1.150	1.057	.825	1.319	.958	.923	1.017	1.009	.970	1.020
Tool-crib attendants, A	.3	.976	.968	.808	1.079	1.032	.878	1.200	.936	.807	1.305	.951	.950	.970
Tool-crib attendants, B	.5	.856	.872	.667	1.089	.869	.782	1.150	.829	.780	1.120	.855	.840	.870
Tool-crib attendants, C	.4	.911	.802	.650	.957	1.043	.750	1.072	.804	.736	1.038	.774	.760	.780
Truck-crane operators	.1	.966	.945	.880	1.021	.935	.836	1.151	.857	.821	.898	1.017	.900	1.180
Truck drivers, A	.2	1.013	.952	.799	1.150	.989	.813	1.338	.940	.911	.990	1.010	.970	1.020
Truck drivers, B	.2	.893	.944	.800	1.070	.826	.650	.965	.843	.600	.995	.907	.850	.920
Truckers, power, A	.4	.938	.935	.735	1.088	1.025	.783	1.100	.839	.667	.913	.885	.840	.950
Truckers, power, B	.1	.824	[2]			.842	.778	.951	.783	.737	.852	.793	.760	.820
Tube benders, bench, A	.1	.999	1.031	.970	1.176	1.013	.863	1.321	.982	.925	1.343	.969	.950	1.030
Tube benders, bench, B	.2	.874	.827	.760	.908	.903	.795	1.158	.852	.796	1.113	.865	.860	.880
Tube benders, bench, C	.2	.839				.886	.750	1.100	.836	.757	1.069	.787	.780	.800
Welders, aluminum, A	.1	1.210	1.148	1.028	1.373	1.187	1.020	1.278	1.342	1.225	1.590	1.236	1.160	1.260
Welders, aluminum, B	.1	1.066	.959	.900	1.000	1.072	.875	1.239	1.076	.808	1.375	1.061	1.030	1.090
Welders, aluminum, C	[3]	.889	[2]			[2]			.887	.817	1.193	.877	.860	.950
Welders, gas, A	.3	1.248	1.216	1.211	1.286	1.154	1.037	1.345	1.272	1.092	1.603	1.300	1.250	1.320
Welders, gas, B	.2	1.078	1.057	.911	1.118	.910	.820	.985	1.118	.900	1.248	1.103	1.080	1.120
Welders, gas, C	.1	.901	.916	.750	.983	.895	.800	.977	.883	.822	1.069	.893	.860	.930
Welders, jig and fixtures, A	.3	1.264	1.213	1.083	1.300	1.236	1.000	1.448	1.216	1.082	1.613	1.296	1.275	1.314
Welders, jig and fixtures, B	.1	1.139	1.115	.925	1.240	1.214	.850	1.326	1.123	.925	1.300	1.089	1.064	1.131
Welders, jig and fixtures, C	[3]	.952	1.059	.825	1.157	.862	.823	.946	.935	.875	1.099	.910	.880	.980
Working supervisors, maintenance	.2	1.110	1.106	.934	1.326	1.179	1.138	1.463	[2]			[4]	[4]	[4]
Working supervisors, production	2.2	1.192	1.222	1.016	1.246	1.149	1.058	1.302	1.146	1.076	1.180	[4]	[4]	[4]

[1] Data for Boeing Aircraft Co. of Seattle included in United States totals but omitted from regional figures to avoid disclosure of individual operations.
[2] Insufficient number of plants and/or employees to justify presentation of averages.
[3] Less than a tenth of 1 percent.
[4] Adequate data unavailable.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Of necessity the criteria employed in establishing classes within occupations vary from job to job. Common criteria which apply to many metalworking-machine operations will not apply to inspection or assembly operations. In a machine-tool operation, such as an engine-lathe operation, a class A operator would be called upon to perform complicated and diversified work, to work to close tolerances, to perform difficult set-ups, and to assume a high degree of responsibility; a class B operator, although working to close tolerances, would have less diversity of work and less complicated set-ups; and a class C operator would normally perform highly repetitive operations and would be not much more than a machine tender. It should be pointed out that the A, B and C classifications used are not comparable from occupation to occupation, owing to wide differences in the levels of skill represented. For example, a class A tool and die maker is a much more skilled worker than class A operators in many other occupations.

The straight-time average hourly earnings of factory workers in the metal-airframe industry in the United States amounted to 95.0 cents an hour in December 1943. These earnings are based on data for first-shift workers in the 57 representative occupations. More than 90 percent of all first-shift workers were employed in these occupations.

The wide dispersion in the occupational average hourly earnings indicates, among other things, widely different skill levels in the industry. Earnings varied from 68.9 cents an hour for learners to $1.404 for class A tool and die makers. Of the 145 classes of workers for which figures are presented, 67, in which 29.8 percent of the workers were employed, averaged $1.00 or more an hour. Another 65 occupational classes, accounting for 52.2 percent of the workers, averaged between 85 cents and $1.00 an hour. Only 13 occupations, with less than a fifth of the workers, had average hourly earnings under 85 cents.

Much the same general wage levels were found in three of the four broad geographic regions. The average for the Eastern region, 98.2 cents, was only 2.7 cents higher than that for the Southern California region [2] and 3 cents higher than that for the Central region. In all three regions the averages for more than three-fourths of the occupational classifications were distributed over the 35-cent range from 85 cents to $1.20. The general wage level in the Midwest was substantially lower, from 8 to 11 cents, than in the other three broad regions. In this region, workers in nearly two-thirds of the occupational classes averaged less than $1.00 an hour. In the Eastern and Central regions workers in less than 45 percent of the occupational classes had average hourly earnings below $1.00. In southern California, 56 percent of the workers were in occupations averaging less than that amount.

Some idea of the variations in occupational average hourly earnings within regions may be had from the high and low plant averages shown in table 3 for each of the four regions. These figures are based on data for all workers in all occupations. It should be pointed out that

[2] It should be noted that the average for all occupations for the southern California region excludes learners and working supervisors, data for whom were not available. The net effect of these important exclusions has probably been to overstate the average slightly. In the following figures, data for learners and working supervisors have been omitted from all regions: Eastern region, $0.977; Central, $0.967; Midwest, $0.902; and southern California, $0.955.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

the figures appearing in these two columns in any one region relate to a number of different establishments and not to the same establishment, as no single plant in any one region pays the lowest or the highest wages in all occupations.

The range in plant averages was influenced by many factors. Important among these were incentive-wage systems; these were in use in too few plants to affect the average in any region materially, but they had, nevertheless, a material effect in many occupations upon the upper limit of the range. Lower limits in plant averages were influenced by a few low-wage plants. In most cases these were small plants which exercised little effect on the occupational averages. The range in earnings for individual workers was, of course, much greater than the range in plant averages.

Variations in Earnings by Sex

Separate occupational averages for men and women factory workers in the Eastern, Central, and Midwestern regions are shown in table 4. Similar information is not available, however, for southern California.

As a group, men earned substantially more per hour than women. For the Eastern, Central, and Midwestern regions combined, men averaged 98.2 cents an hour, or 11.5 cents more than women. Much of this advantage is undoubtedly due to the fact that women either are not found or are found only in small numbers in many of the higher-skilled and higher-paying occupations. When the comparison is confined to the 35 occupational classifications in which both men and women are employed in all regions, the men's advantage is reduced from 11.5 to 4.1 cents. The latter difference, which represents lower pay for women apparently doing the same work as men, is due in part to variations among regions in the ratio of women in the occupations and in part to the fact that the large majority of women have not worked a sufficient length of time to have received the same proportion of automatic and merit increases as men. In those occupations in which women have been employed over a long period of time and have acquired as much experience as men, the differences in the earnings of men and women are undoubtedly very small.

TABLE 4.—*Straight-Time Average Hourly Earnings of Metal-Airframe Workers in Selected Occupations in Eastern, Central, and Midwestern Regions, by Sex, 1943*

Occupation	Eastern region		Central region		Midwestern region	
	Men	Women	Men	Women	Men	Women
All occupations	$1.019	$0.900	$0.997	$0.899	$0.912	$0.779
Assemblers, electrical and radio, A	1.064	[1]	1.035	[1]	1.067	[1]
Assemblers, electrical and radio, B	.892	.975	.913	.894	.898	.823
Assemblers, electrical and radio, C	[1]	.885	.858	.866	.841	.822
Assemblers, general, A	1.144	1.133	1.138	1.110	1.044	.988
Assemblers, general, B	.973	.924	.966	.989	.934	.872
Assemblers, general, C	.859	.855	.910	.952	.838	.816
Assemblers, precision, bench, A	1.172	[1]	1.086	[1]	1.055	[1]
Assemblers, precision, bench, B	1.034	[1]	1.030	1.050	.908	.904
Assemblers, precision, bench, C	.971	.871	.890	.895	.833	.810
Cable splicers, A	[1]	[1]	1.013	[1]	[1]	[1]
Cable splicers, B	[1]	[1]	.969	.988	.887	.834
Cable splicers, C			[1]	[1]	[1]	[1]

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

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 4.—*Straight-Time Average Hourly Earnings of Metal-Airframe Workers in Selected Occupations in Eastern, Central, and Midwestern Regions, by Sex, 1943*—Con.

Occupation	Eastern region		Central region		Midwestern region	
	Men	Women	Men	Women	Men	Women
Carpenters, maintenance, A	$1.098		$1.211		$1.101	
Carpenters, maintenance, B	1.088		1.102		.947	
Carpenters, maintenance, C	(1)		(1)		.866	
Clerks, stock and stores	.901	$.822	.913	$.852	.818	$0.762
Craters, A	1.043	(1)	1.088	(1)	.986	
Craters, B	.896	(1)	.988	(1)	.868	(1)
Drill-press operators, A	1.013	(1)	1.048	1.021	.968	(1)
Drill-press operators, B	.936	.948	.980	.949	.849	.841
Drill-press operators, C	.921	.884	.885	.870	.801	.794
Electricians, maintenance, A	1.259		1.281	(1)	1.207	
Electricians, maintenance, B	1.143		1.089		1.042	
Electricians, maintenance, C	1.016		.951	(1)	.906	.855
Filers and burrers, A	.923	.916	.917	.921	.810	.798
Grinder operators, A	1.261		1.231		1.214	
Grinder operators, B	1.167	(1)	1.103	(1)	1.014	(1)
Grinder operators, C	.882		.942	.912	.881	.862
Helpers, general, A	.718	.741	.790	.787	.758	.744
Inspectors, detail, A	1.103	(1)	1.202	1.104	1.121	(1)
Inspectors, detail, B	.997	.971	1.109	1.001	.963	.935
Inspectors, detail, C	.905	.855	.914	.893	.868	.847
Inspectors, final assembly, A	1.176	(1)	1.206	(1)	1.199	(1)
Inspectors, final assembly, B	1.133	.974	1.091	1.068	1.050	.976
Inspectors, final assembly, C	.921	.888	.897	.878	.906	.865
Inspectors, general assembly, A	1.167	1.160	1.157	(1)	1.108	(1)
Inspectors, general assembly, B	1.027	.986	.996	1.003	.961	.916
Inspectors, general assembly, C	.902	.840	.840	.905	.904	.854
Inspectors, machined parts, A	1.303	(1)	1.277	(1)	1.182	(1)
Inspectors, machined parts, B	1.111	(1)	1.056	.957	1.026	(1)
Inspectors, machined parts, C	.921	.841	.832	.824	.951	.887
Inspectors, service and flight, A	1.315		1.361		1.300	
Inspectors, service and flight, B	1.073		(1)	(1)	1.111	(1)
Inspectors, service and flight, C	(1)	(1)	.998	(1)	.969	(1)
Installers, controls, A	1.162	(1)	1.136		1.017	(1)
Installers, controls, B	.996	.893	1.088	1.076	.905	(1)
Installers, controls, C	(1)	(1)	.912	.891	.814	(1)
Installers, electrical, A	1.159		1.177		1.039	(1)
Installers, electrical, B	1.009	(1)	.955	1.018	.915	.910
Installers, electrical, C	(1)	(1)	.946	1.000	.829	.803
Installers, general, A	1.152	(1)	1.015		1.031	(1)
Installers, general, B	.994	.936	1.096	1.093	.942	.919
Installers, general, C	.870	.864	.892	.908	.850	.813
Installers, hydraulics, A	(1)	(1)	1.088		1.027	(1)
Installers, hydraulics, B	.905	(1)	1.049	(1)	.906	(1)
Installers, hydraulics, C	(1)		1.003	1.064	.819	.814
Installers, power plant, A	1.123		1.065		1.047	(1)
Installers, power plant, B	1.005	(1)	1.033	.998	.930	(1)
Installers, power plant, C	(1)	(1)	.890	.892	.859	.829
Janitors, A	.767	.760	.815	.829	.747	.742
Jig builders, A	1.370		1.344		1.292	(1)
Jig builders, B	1.239		1.192		1.071	
Jig builders, C	.974		.983		.940	.906
Laborers, A	.725	.728	.842	.866	.748	.734
Lathe operators, engine, A	1.192	(1)	1.171	(1)	1.235	
Lathe operators, engine, B	1.033	(1)	.983	(1)	1.026	(1)
Lathe operators, engine, C	.930	(1)	.925	.891	.890	(1)
Lathe operators, turret, A	1.169	(1)	1.188		1.214	
Lathe operators, turret, B	1.092	(1)	1.028	.844	1.032	(1)
Lathe operators, turret, C	.887	.880	.923	.942	.895	.879
Learners	.701	.676	.724	.691	.677	.674
Machinists, bench, A	1.212		1.188		1.137	(1)
Machinists, bench, B	1.036		1.022	(1)	.952	(1)
Machinists, bench, C	.974	(1)	.853	.846	.852	.804
Mechanics, experimental, A	1.163		1.305		(1)	
Mechanics, experimental, B	(1)		1.132	(1)	(1)	
Mechanics, experimental, C	(1)		.946	(1)	(1)	
Mechanics, field and service, A	1.223		1.301		1.205	(1)
Mechanics, field and service, B	1.130		1.144	(1)	1.041	(1)
Mechanics, field and service, C	.949	(1)	1.002	1.047	.921	(1)
Mechanics, maintenance, A	1.201		1.190		1.150	(1)
Mechanics, maintenance, B	1.124		1.072	(1)	.973	
Mechanics, maintenance, C	.937		.928	(1)	.917	(1)

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

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 4.—*Straight-Time Average Hourly Earnings of Metal-Airframe Workers in Selected Occupations in Eastern, Central, and Midwestern Regions, by Sex, 1943*—Con.

Occupation	Eastern region		Central region		Midwestern region	
	Men	Women	Men	Women	Men	Women
Metal fitters, A	$1.127	(1)	$1.165	----	$1.120	(1)
Metal fitters, B	1.026	$0.956	1.039	(1)	.942	(1)
Metal fitters, C	.804	.804	.829	$0.823	.831	$0.862
Milling-machine operators, A	1.160	(1)	1.202	----	1.222	(1)
Milling-machine operators, B	1.050	(1)	1.069	1.000	1.025	(1)
Milling-machine operators, C	.913	.855	.891	.893	.889	.847
Oilers, maintenance, A	.837	(1)	.980	.982	.806	(1)
Painters, aircraft, A	1.099	1.012	1.104	----	1.054	(1)
Painters, aircraft, B	1.024	1.004	.944	(1)	.954	.868
Painters, aircraft, C	.912	.843	.820	.835	.856	.836
Painters, maintenance, A	1.019	----	1.085	----	1.045	----
Painters, maintenance, B	1.097	----	1.233	----	.924	(1)
Painters, maintenance, C	.918	----	(1)	----	.829	----
Plant protection	.853	.801	.930	.913	.858	.821
Plumbers, maintenance, A	1.159	----	1.246	----	1.150	----
Plumbers, maintenance, B	1.027	----	1.116	----	.957	(1)
Plumbers, maintenance, C	(1)	----	(1)	(1)	.859	----
Power-shear operators, A	1.059	(1)	1.045	(1)	(1)	----
Power-shear operators, B	.926	(1)	1.016	.878	.888	.827
Power-shear operators, C	.922	(1)	.857	.842	.807	.799
Punch-press operators, A	1.053	(1)	1.136	----	1.007	(1)
Punch-press operators, B	.914	.984	1.060	.913	.877	.856
Punch-press operators, C	(1)	(1)	1.066	.963	.831	.792
Riveters, A	1.075	1.120	1.028	.907	.954	.829
Riveters, B	1.070	1.049	1.032	.887	.911	.815
Riveters, C	.910	.895	.852	.827	.837	.831
Saw operators, A	1.034	1.026	1.039	.880	.942	(1)
Saw operators, B	.876	.869	1.071	.858	.825	.797
Sheet-metal workers, bench, A	1.139	(1)	1.097	(1)	1.149	(1)
Sheet-metal workers, bench, B	.978	.921	1.016	.840	.994	.960
Sheet-metal workers, bench, C	.829	.835	.948	.884	.869	.836
Spot welders, A	1.072	(1)	1.108	(1)	1.046	(1)
Spot welders, B	.878	.957	.980	.936	.901	.869
Spot welders, C	(1)	(1)	1.022	.935	.843	.799
Template makers, A	1.290	----	1.187	----	1.108	----
Template makers, B	1.130	----	.994	----	1.009	(1)
Template makers, C	.900	(1)	.913	----	.895	.832
Tool and die makers, A	1.442	----	1.387	----	1.332	----
Tool and die makers, B	1.235	----	1.181	----	1.150	----
Tool and die makers, C	1.049	----	1.057	----	.958	----
Tool-crib attendants, A	.971	(1)	1.044	.974	.948	.891
Tool-crib attendants, B	.902	.813	.877	.863	.828	.830
Tool-crib attendants, C	.822	.771	.960	1.060	.844	.778
Truck-crane operators, A	(1)	----	.973	(1)	(1)	(1)
Truck-crane operators, B	(1)	----	.851	----	(1)	----
Truck drivers, A	.952	----	.991	(1)	.940	(1)
Truck drivers, B	.948	(1)	.828	(1)	.846	.807
Truckers, power, A	.939	(1)	1.026	(1)	.840	(1)
Truckers, power, B	(1)	----	.842	----	.787	.756
Tube benders, bench, A	1.036	(1)	1.018	.983	.990	(1)
Tube benders, bench, B	.836	(1)	.943	.865	.882	.831
Tube benders, bench, C	----	----	.875	.890	.846	.822
Welders, aluminum, A	1.146	(1)	1.188	(1)	1.365	(1)
Welders, aluminum, B	(1)	(1)	1.102	1.019	(1)	(1)
Welders, aluminum, C	(1)	(1)	(1)	(1)	.931	.866
Welders, gas, A	1.208	(1)	1.158	(1)	1.272	(1)
Welders, gas, B	1.062	1.037	.949	(1)	1.158	1.000
Welders, gas, C	.948	.881	.912	.884	.903	(1)
Welders, jig and fixtures, A	1.206	(1)	1.237	(1)	1.217	(1)
Welders, jig and fixtures, B	1.121	(1)	1.222	(1)	1.133	(1)
Welders, jig and fixtures, C	1.088	(1)	(1)	(1)	.941	(1)
Working supervisors, maintenance	1.119	(1)	1.179	----	(1)	(1)
Working supervisors, production	1.227	1.080	1.149	(1)	1.150	(1)

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

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Earnings in Plants of Aircraft and Other-Than-Aircraft Origin

The tremendous expansion in the airframe industry in recent years was accomplished in part by enlarging and streamlining the facilities of firms already in the field and in part by converting to the manufacture of airframes some of the facilities of other mass-production industries. As a result, there are within the industry two general types of airframe plants—those of "aircraft" origin (i. e., which were already in the industry or which were developed solely for the purpose of airframe assembly) and those of "other than aircraft" origin (which were converted to airframe manufacture or which are operated by companies normally engaged in other types of production). Predominant in the latter group are factories operated by automobile manufacturers; other industries are also represented.

A limited comparison of wage levels in these two general types of airframe plants can be made for the Central region. This comparison is limited to 29 broad occupations. Because of the difficulty encountered in classifying jobs in certain plants operated by the automobile industry, and also because of the small number of plants available for such a comparison, figures are presented only for the broad occupations and not for classes of workers within these jobs.

TABLE 5.—*Straight-Time Average Hourly Earnings of Metal-Airframe Workers in Selected Occupations in Central Region, by Plant Origin, 1943*

Occupation	Total, all airframe plants	Plant origin	
		Aircraft	Other than aircraft
Assemblers, electrical and radio	$0.883	$0.848	$1.039
Assemblers, general	.968	.915	1.061
Carpenters, maintenance	1.171	1.146	1.218
Clerks, stock and stores	.886	.840	.964
Craters	1.017	1.000	1.084
Drill-press operators	.936	.918	1.021
Electricians, maintenance	1.175	1.128	1.248
Filers and burrers	.921	.846	.995
Grinder operators	1.070	1.043	1.181
Inspectors, general assembly	.983	.933	1.163
Inspectors, machined parts	1.004	.938	1.187
Installers, electrical	1.014	.982	1.085
Installers, general	.985	.956	1.057
Janitors	.821	.794	.874
Jig builders	$1.162	$1.098	$1.274
Laborers	.843	.834	.921
Lathe operators, engine	1.050	1.045	1.073
Lathe operators, turret	1.020	.868	1.131
Machinists, bench	.970	.951	1.053
Milling-machine operators	1.007	.977	1.185
Painters, aircraft	.978	.930	1.077
Power-shear operators	.977	.950	1.044
Punch-press operators	1.055	.968	1.133
Riveters	.913	.874	.957
Sheet-metal workers	.960	.926	1.040
Template makers	1.055	1.002	1.190
Tool and die makers	1.271	1.221	1.414
Truckers, power	1.009	.888	1.094
Tube benders, bench	.912	.870	.986

In all 29 occupations, workers in plants of other than aircraft origin averaged more per hour than did similar workers in plants of aircraft origin. The difference varied from 2.8 cents for engine-lathe operators to 26.3 cents an hour for turret-lathe operators (table 5). In 22 of the occupations, the difference was 10 cents or more and in 5 it was 20 cents or more. The average difference in favor of plants of other than aircraft origin amounted to 13.1 cents.[3] The greatest differences between the two groups of plants were in the earnings of workers in the intermediate and lower classes within occupations.

[3] This figure represents the difference between the weighted averages for each group of plants for the 29 selected occupations only. The averages in each case were arrived at by using as a weight for each occupation the total number of workers in that occupation in the region, rather than the actual number in each group of plants. Thus, variations in occupational structure between the two groups of plants were not reflected in the comparison.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Differences in the earnings of workers in the upper classes were, on the whole, quite limited. The higher earnings in plants of other than aircraft origin are due largely to the level of earnings in plants either converted from automobile production or operated by former automobile manufacturers. These plants pay automotive wages, which are, on the whole, considerably higher than those paid in plants of aircraft origin.

Trend of Factory Workers' Hours and Earnings

Wage rates in this industry have risen rapidly since the outbreak of the war. Hourly earnings for aircraft and parts plants averaged only 78 cents in January 1941, while the somewhat more restricted airframe industry paid an average of $1.12 in December 1943 (table 6). These figures indicate an increase of almost 45 percent. Little of this rise was due to increased overtime payments, since average weekly hours of work rose but slightly. On the other hand, shift differentials have exercised an influence of increasing importance. Drastic changes in occupational structure have also occurred.

Dependable information regarding changes in average wage rates is not available for this entire period. On the basis of available information, it appears that wage changes resulting from general wage increases accounted for less than half of the over-all increase. Since these do not take into account merit increases and other adjustments affecting individual workers or small groups, it must be considered as a minimum estimate of the wartime increase in wage rates in the airframe industry. The total increase was undoubtedly in excess of 25 percent.

TABLE 6.—*Weekly Hours and Hourly Earnings in Manufacture of Aircraft and Parts, 1941 and 1942, and Airframes, 1943*

Industry and date	Weekly hours	Hourly earnings	
		Unadjusted [1]	Adjusted [2]
Aircraft and parts			
1941:			
January	44.7	$0.78	$0.73
February	45.5	.78	.73
March	45.2	.78	.73
April	45.1	.79	.73
May	45.4	.79	.74
June	45.0	.80	.74
July	44.8	.81	.76
August	45.6	.85	.79
September	45.5	.85	.79
October	45.2	.87	.81
November	44.4	.90	.85
December	46.3	.92	.85
1942:			
January	48.7	.96	.88
February	47.7	.95	.87
March	47.6	.96	.88
April	47.3	.97	.89
May	47.7	.98	.90
June	47.2	.99	.91
July	46.6	.99	.92
August	46.7	.99	.92
September	46.3	1.01	.94
October	46.3	.99	.92
November	46.6	1.00	.92
December	46.9	1.00	.92
Airframes			
1943:			
January	46.5	.99	.91
February	46.0	1.00	.93
March	46.1	.99	.92
April	47.1	1.04	.96
May	46.6	1.05	.97
June	46.4	1.06	.98
July	45.4	1.06	.99
August	45.6	1.07	.99
September	46.4	1.11	1.03
October	46.6	1.10	1.02
November	46.6	1.11	1.03
December	45.6	1.12	1.04

[1] Gross earnings including both premium-overtime and shift-differential earnings.
[2] Net earnings excluding premium-overtime earnings but including shift-differential earnings.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Changes in Occupational Rates, 1942–43

Information regarding changes in hourly wage rates is available for a period of approximately 1½ years. Table 7 presents occupational wage rates reported in an earlier study by the Bureau of Labor Statistics and applying to the spring and fall of 1942. These are compared with data for the same occupations and classes as of December 1943. Comparable figures are available for 72 classifications within 30 occupations. The comparison in both years is confined to establishments engaged in the manufacture of metal airframes.

TABLE 7.—*Comparison of Straight-Time Average Hourly Earnings of Metal-Airframe Workers in Selected Occupations in the United States, 1942 and 1943*

Occupation	Average hourly earnings		Percent of increase
	1942	1943	
Assemblers, general, A	$1.026	$1.122	9.4
Assemblers, general, B	.909	.955	5.1
Assemblers, general, C	.802	.870	8.5
Assemblers, precision, bench, A	1.047	1.137	8.6
Assemblers, precision, bench, B	.903	.995	10.2
Assemblers, precision, bench, C	.783	.870	11.1
Carpenters, maintenance, A	1.068	1.151	7.8
Carpenters, maintenance, B	.904	1.027	13.6
Drill-press operators, A	.915	1.000	9.3
Drill-press operators, B	.821	.910	10.8
Drill-press operators, C	.769	.829	7.8
Electricians, maintenance, A	1.140	1.263	10.8
Electricians, maintenance, B	.948	1.100	16.0
Grinder operators, A	1.169	1.210	3.5
Grinder operators, B	.951	1.042	9.6
Grinder operators, C	.819	.896	9.4
Helpers, general, A	.747	.754	.9
Inspectors, detail, A	1.034	1.128	9.1
Inspectors, detail, B	.874	1.000	14.4
Inspectors, final assembly, A	1.135	1.217	7.2
Inspectors, final assembly, B	.987	1.094	10.8
Inspectors, general assembly, A	1.040	1.147	10.3
Inspectors, general assembly, B	.909	.993	9.2
Inspectors, general assembly, C	.834	.873	4.7
Installers, electrical, A	1.014	1.092	7.7
Installers, electrical, B	.882	.957	8.5
Installers, general, A	.938	1.060	13.0
Installers, general, B	.844	1.006	19.2
Installers, general, C	.791	.867	9.6
Janitors, A	.744	.776	4.3
Jig builders, A	1.199	1.342	11.9
Jig builders, B	.982	1.158	17.9
Jig builders, C	.838	.978	16.7
Laborers, A	.750	.772	2.9
Lathe operators, engine, A	1.154	1.190	3.1
Lathe operators, engine, B	.952	1.009	6.0
Lathe operators, engine, C	.821	.907	10.5
Lathe operators, turret, A	$1.153	$1.191	3.3
Lathe operators, turret, B	.975	1.025	5.1
Lathe operators, turret, C	.827	.904	9.3
Machinists, bench, B	.889	.990	11.4
Machinists, bench, C	.780	.849	8.8
Mechanics, field and service, A	1.107	1.289	16.4
Mechanics, field and service, B	.950	1.115	17.4
Mechanics, field and service, C	.825	.963	16.7
Mechanics, maintenance, A	1.080	1.217	12.7
Mechanics, maintanance, B	.953	1.068	12.1
Mechanics, maintenance, C	.846	.939	11.0
Milling-machine operators, A	1.156	1.185	2.5
Milling-machine operators, B	.967	1.045	8.1
Milling-machine operators, C	.828	.890	7.5
Painters, aircraft, A	.957	1.085	13.4
Painters, aircraft, B	.849	.970	14.3
Painters, aircraft, C	.805	.851	5.7
Riveters, A	.888	1.044	17.6
Riveters, B	.809	.954	17.9
Saw operators, A	.857	.990	15.5
Saw operators, B	.804	.907	12.8
Sheet-metal workers, bench, B	.905	.970	7.2
Sheet-metal workers, bench, C	.806	.873	8.3
Tool and die makers, A	1.312	1.397	6.5
Tool and die makers, B	1.067	1.190	11.5
Tool and die makers, C	.887	1.028	15.9
Tool-crib attendants, A	.863	.976	13.1
Tool-crib attendants, B	.789	.856	8.5
Tube benders, bench, A	.924	.984	6.5
Tube benders, bench, B	.818	.870	6.4
Welders, aluminum and gas, A	1.148	1.233	7.4
Welders, aluminum and gas, B	.992	1.073	8.2
Welders, aluminum and gas, C	.825	.898	8.8
Welders, jig and fixtures, A	1.216	1.255	3.2
Welders, jig and fixtures, B	1.003	1.135	13.2

It is apparent from this table that wage rates were presumably higher in 1943 than in 1942. The increases ranged from 0.9 percent for general helpers, class A, to 19.2 percent for general installers, class B. In 32 instances the increases exceeded 10 percent, in 31 instances they varied from 5 to 10 percent, and in 9 cases they amounted to less than 5 percent. However, these gains were not Nation-wide in all

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

occupations, decreases in certain occupational averages occurring within specific regions. These decreases, as well as the variations in the amount of increase in earnings among the remaining occupations, are due largely to changes in the distribution of workers within the rate ranges in given occupations. An increased concentration of workers at the lower limits of the rate range as a result of labor turnover would obviously result in a lower average without a decrease in the wage rate of any individual worker.

EARNINGS OF OFFICE WORKERS

Wage data were collected during the course of the survey of the metal-airframe manufacturing industry for 29,222 office workers in 9 occupations. Data for these occupations, all of which are below the executive and administrative levels, are presented in table 8. All but 8 percent of the employees are women and, as a result, it is not feasible to show separate figures by sex. Although some plants recognize A, B, and C grades in these occupations, many more do not recognize these divisions; hence, the averages shown for each occupation are for all employees combined.

Earnings of office workers varied from 65.8 cents an hour for office boys and girls to 87.5 cents an hour for bookkeepers. Most of the workers were concentrated in 3 of the 9 occupations, namely, general clerks, stenographers, and typists. Earnings were somewhat higher in the Western region than in the other regions. The greatest variation in earnings among occupations was found in the Eastern region where earnings varied from 58.6 cents an hour for office boys and girls to 93.9 cents an hour for bookkeepers. The least variation in earnings was found in the Central region, where there was a spread of only 21.8 cents between the lowest average (57.4 cents for office boys and girls) and the highest average (79.2 cents an hour for bookkeepers).

TABLE 8.—*Average Hourly Earnings of Metal-Airframe Workers in Selected Office Occupations, by Region, 1943*

Occupation	United States	Eastern region	Central region	Midwest region	Western region
Accounting clerks	$0.852	$0.838	$0.738	$0.856	$0.905
Bookkeepers	.875	.939	.792	.906	.906
Calculating-machine operators	.780	.731	.763	.753	.836
File clerks	.733	.684	.727	.724	.777
General clerks	.748	.759	.712	.795	.776
Office boys and girls	.658	.586	.574	.692	.777
Stenographers	.838	.781	.742	.788	.929
Switchboard operators	.796	.701	.719	.789	.861
Typists	.728	.691	.709	.746	.773

Trend of Factory Earnings, 1939 to February 1944

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to February 1944.[1] The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income and victory taxes, bond purchases, etc.).

[1] Compare "Trends in Factory Wages 1939–43," Monthly Labor Review, November 1943, pp. 869–884, especially table 4, p. 879. For detailed data regarding weekly earnings see Detailed Reports for Industrial and Business Employment, February 1944, table 6, p. 1114, of this issue.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Weekly earnings in all manufacturing averaged $45.54 in February 1944—96.4 percent above the average in January 1939, 70.9 percent above January 1941, and 17.1 percent above October 1942. Such factors as longer hours of work, merit increases for individual workers, premium pay for overtime worked, changing composition of the labor force within plant, shifts in the distribution of workers among plants and among industries, as well as wage-rate increases, account for the rise in earnings.

Gross hourly earnings in all manufacturing averaged 100.3 cents in February 1944—58.7 percent above the average in January 1939, 46.9 percent above January 1941, and 12.3 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are estimated to exclude premium pay at time and a half for work in excess of 40 hours. The effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in February 1944 was 93.1 cents per hour; this was 49.4 percent higher than in January 1939, 40.2 percent above January 1941, and 11.0 percent above October 1942.

Earnings of Factory Workers, Selected Months, 1939 to February 1944

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings [1]			Estimated straight-time average hourly earnings weighted by January 1939 employment [2]		
	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1939: Jan.	$23.19	$25.33	$21.57	$0.632	$0.696	$0.583	$0.623	$0.688	$0.574	$0.623	$0.688	$0.574
1940: Jan.	24.56	27.39	22.01	.655	.717	.598	.644	.703	.589	.635	.697	.589
1941: Jan.	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601	.648	.711	.600
1942: Jan.	33.40	38.98	26.97	.801	.890	.688	.762	.835	.670	.729	.810	.667
July	36.43	42.51	28.94	.856	.949	.725	.809	.885	.701	.759	.846	.694
Oct.	38.89	45.31	30.66	.893	.990	.751	.839	.919	.723	.782	.869	.716
1943: Jan.	40.62	46.68	32.10	.919	1.017	.768	.859	.941	.733	.794	.886	.724
Apr.	42.48	48.67	33.58	.944	1.040	.790	.878	.957	.751	.808	.897	.741
July	42.76	48.76	34.01	.963	1.060	.806	.899	.981	.766	.823	.919	.750
Oct.	44.86	51.26	35.18	.988	1.086	.824	.916	.997	.781	.836	.929	.765
Dec.	44.58	50.50	35.61	.995	1.093	.832	.927	1.011	.788	.846	.942	.773
1944: Jan.[3]	45.25	51.32	35.91	1.002	1.100	.837	.930	1.013	.792	.849	.946	.776
Feb.[3]	45.54	51.48	36.33	1.003	1.100	.841	.931	1.012	.795	.851	.943	.781

[1] Average hourly earnings, excluding the effect of premium pay for overtime.
[2] Average hourly earnings, excluding premium pay for overtime, weighted by man-hours of employment in the major divisions of the manufacturing industry for January 1939.
[3] Preliminary.

The shift of workers from relatively low-wage to relatively high-wage industries since 1939 would have raised the average earnings of factory workers, even if no other influences had been present. The effects of such interindustry shifts have been eliminated from the averages shown in columns 10 to 12 of the table. If employment had been distributed between industries as it was in January 1939, the straight-time hourly earnings of factory workers would have averaged 85.1 cents in February 1944, or 36.6 percent above the corresponding average in January 1939, 31.3 percent above January 1941, and 8.8 percent above October 1942. Between January 1944 and February 1944 the rise in straight-time hourly earnings, after eliminating the influence of shifting employment, amounted to two-tenths of 1 percent.

583621—44——11

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Even this latter series of averages exaggerates the rise in wage rates, because it includes the influence of interplant shifts of employment, merit increases for individual workers, and premium rates for work on extra shifts and on holidays.

Hours and Earnings in Great Britain and Northern Ireland, July 1943[1]

ACTUAL hours worked in Great Britain and Northern Ireland averaged 50 per week in July 1943, according to the first investigation of hours made since October 1938, when the average was 46½ a week. For the same two periods, average weekly earnings were 93s. 7d. and 53s. 3d.,[2] respectively. Computed on the basis of these figures, average hourly earnings were 1s. 10½d. in July 1943, a rise of 63 percent over the October 1938 earnings.

Beginning in 1938, studies of weekly earnings were made periodically,[3] but only in the October 1938 and the July 1943 inquiries were hours included. From the October 1938 level weekly earnings rose 29.9 percent to 69s. 2d. in July 1940, 42.4 percent to 75s. 10d. in July 1941, and 59.9 percent to 85s. 2d. by July 1942. The studies covered approximately 6 million workers, but the figures were weighted according to the estimated number employed in the various industries. Part-time male workers are excluded from the data; part-time female workers are covered, however, two part-time workers being considered as equivalent to one full-time worker. The inquiries did not include such industries as agriculture, coal mining, railway service, and merchant shipping.

The increases in earnings during the war period result from a number of factors, including increases in rates of wages; fuller employment, with longer working hours and more extended working of night shifts; extensions of systems of payment by results and increased output by the workers affected; and changes in the proportions of men, boys, women, and girls employed. Increased wage rates are estimated to account for a 30-percent rise. The difference between this and the average advance of 76 percent represents the net effects of the other factors.

Weekly Earnings

The 1943 weekly earnings were 121s. 3d. for men 21 years of age and over, 47s. 2d. for youths and boys under 21 years, 62s. 2d. for women 18 years and over, and 33s. 10d. for girls under 18 years. In October 1938, the comparable figures were 69s. 0d., 26s. 1d., 32s. 6d., and 18s. 6d., respectively. The fact that women's earnings rose more, proportionately, than those of men is partly attributable to the marked increase in the numbers of women engaged on work formerly performed by men. In most of the principal industries in which such increases occurred, the employers' and workers' organizations agreed either to equal pay for equal work or to the payment of a specific proportion of the men's rate; in either case, wages were obtained which were higher than those generally paid for work not done by men. Similarly,

[1] Data are from Great Britain, Ministry of Labor Gazette (London), February 1944.
[2] Average exchange rate of pound (20 shillings) for 1938=$4.889; after 1940=$4.035.
[3] See Monthly Labor Review, April 1943 (p. 782).

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

the percentage increases for all industries combined include the effects of the transference of large numbers of workers from lower-paid jobs to the munitions ndustries where earnings are relatively high.

Average weekly earnings for 16 broad groups of industries are shown in table 1 for July 1943 by sex and age group. The averages cover unskilled laborers as well as skilled workers and include payments for overtime, night work, piece work, etc. Wide variations in earnings between industries are therefore at least partially due to differences in the proportions of skilled and unskilled workers and in the opportunities for extra earnings from overtime, night work, and piece work.

TABLE 1.—*Average Weekly Earnings in Great Britain and Northern Ireland, by Industry July 1943*

Industry group	All workers	Men (21 and over)	Youths and boys	Women (18 and over)	Girls
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
All groups	93 7	121 3	47 2	62 2	33 10
Iron, stone, etc., mining and quarrying	91 7	97 11	52 0	(1)	(1)
Treatment of nonmetalliferous mine and quarry products	97 10	109 5	51 9	59 0	37 8
Brick, pottery, and glass	78 3	104 3	44 6	49 4	29 4
Chemical, paint, oil, etc	90 1	116 3	42 8	63 7	32 1
Metal, engineering, and shipbuilding	108 3	138 3	50 9	69 10	38 8
Textiles	64 2	96 11	41 5	52 11	35 8
Leather, fur, etc	74 5	100 2	42 3	50 10	31 3
Clothing	54 9	98 9	39 3	50 3	30 2
Food, drink, and tobacco	72 9	101 8	40 1	50 10	30 5
Woodworking	79 4	102 3	37 8	56 9	34 0
Paper, printing, stationery, etc	80 6	112 7	32 5	51 2	28 6
Building, contracting, etc	100 4	108 4	46 10	61 5	(1)
Miscellaneous manufacturing industries	84 1	122 10	48 9	59 3	35 10
Transport, storage, etc. (excluding railways)	95 0	104 2	43 10	71 5	(1)
Public utility services	80 3	88 7	37 1	47 10	27 0
Government industrial establishments	107 5	132 3	49 5	81 0	40 6

[1] The number of workers covered was too small to provide a satisfactory basis for a general average.

Weekly Hours and Hourly Earnings

Hours actually worked in July 1943 averaged approximately 53 for men, 48 for youths and boys, 46 for women, and 45 for girls. In October 1938 the corresponding figures were about 47¾, 46¼, 43½, and 44½. Changes in the hours of boys and girls "were to some extent affected by the operation of the Factories Act, 1937, which reduced the maximum weekly hours of juveniles employed in factories (subject to certain qualifications) from 48 to 44 as from July 1939."

Average hourly earnings were 2s. 3½d. for men, nearly 1s. for youths and boys, nearly 1s. 4½d. for women, and 9d. for girls in July 1943. Although women's and girls' earnings in 1943 were still substantially below men's and boys', the proportionate increase from October 1938 was much greater than for males. For women and girls the rise was 81 percent; for youths and boys 74 percent; and for men 58 percent. Weekly earnings increased more sharply between 1938 and 1943 than did hourly earnings, owing to the rise in hours worked. The single exception was for girls; since their hours rose only slightly, the increase in their hourly earnings kept pace with the rise in weekly earnings.

The average weekly hours actually worked and the hourly earnings received are indicated in table 2 for July 1943, for the principal subdivisions within 16 industries. Hours include all overtime and exclude time lost during the scheduled workweek and recognized intervals for meals.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 2.—*Average Hours and Hourly Earnings in Great Britain and Northern Ireland, by Industry, July 1943* [1]

Industry group	Average hours worked				Average hourly earnings			
	Men	Women		All workers	Men	Women		All workers
		Other than part time	Including part time [2]			Other than part time	Including part time [2]	
					d.	*d.*	*d.*	*d.*
Iron, stone, etc., mining and quarrying:								
Iron-ore and ironstone mining, etc.	48.3	-------	-------	48.0	27.4	-------	-------	26.2
Stone quarrying and mining	48.7	-------	-------	48.7	23.1	-------	-------	22.1
Clay, sand, gravel, and chalk pits	53.3	-------	-------	52.7	21.8	-------	-------	20.7
Other mining and quarrying	47.3	-------	-------	46.8	25.3	-------	-------	22.5
Treatment of nonmetalliferous mining products:								
Coke ovens and byproduct works	51.1	-------	-------	50.7	27.4	-------	-------	26.1
Cement, lime, whiting, etc.	52.4	44.0	44.0	51.3	24.4	18.2	18.1	23.2
Cast-stone and cast-concrete products manufacture	51.8	-------	-------	50.1	23.4	-------	-------	20.9
Other nonmetalliferous mine and quarry products	52.8	44.8	44.8	50.7	25.1	15.0	14.9	22.1
Brick, pottery, and glass industries:								
Brick, tile, pipe, etc.	52.0	45.0	44.9	50.4	22.8	13.2	13.3	20.7
Pottery, earthenware, etc.	49.7	45.0	45.0	46.9	24.2	13.0	13.0	16.7
Glass and glass-bottle manufacture	49.7	43.4	43.7	47.1	27.3	13.8	13.7	20.9
Chemical, paint, oil, etc., industries:								
Chemicals and explosives	52.5	44.5	44.7	48.8	27.0	17.7	17.4	22.3
Paint, varnish, red lead, etc.	51.7	44.6	44.7	49.5	23.5	13.7	13.7	20.0
Oil, glue, soap, ink, matches, etc.	52.1	44.1	44.2	49.1	26.2	16.3	16.0	21.9
Metal, engineering, and shipbuilding industries:								
Pig-iron manufacture (blast furnaces)	50.1	-------	-------	49.8	29.5	-------	-------	28.2
Iron puddling, steel smelting, rolling, forging, etc.	53.0	44.9	44.9	51.4	30.1	18.4	18.3	27.4
Nonferrous-metal manufacture	53.6	45.8	45.9	51.5	30.0	18.9	18.8	26.9
Tinplate and steel-sheet manufacture	45.8	43.0	43.1	45.0	31.6	13.6	13.6	26.7
Iron- and steel-tube manufacture	52.4	43.5	43.6	50.4	29.7	18.9	18.8	26.5
Wire, wire netting, wire ropes, etc.	53.5	45.2	45.3	50.3	26.8	14.7	14.7	21.7
Engineering, etc.:								
General engineering and engineers' iron and steel founding	54.4	46.7	46.8	51.7	28.9	17.9	17.8	24.2
Electrical engineering	54.5	46.7	46.9	50.7	29.0	16.6	16.6	21.9
Marine engineering	58.1	47.9	47.9	55.6	27.4	17.6	17.6	24.2
Constructional engineering	53.5	45.9	45.9	51.6	27.4	17.1	17.1	24.1
Motor-vehicle, cycle, and aircraft (including components) manufacture and repair	53.6	48.0	48.1	51.4	34.9	19.8	19.6	28.7
Ship building and repairing	56.3	47.6	47.6	54.6	30.5	18.1	18.1	27.5
Railway-carriage, wagon, and tram building and repairing	52.2	43.0	43.0	50.5	28.0	16.7	16.6	24.3
Electric-cables, apparatus, lamps, etc., manufacture	54.4	47.0	47.0	49.6	28.2	16.4	16.3	20.5
Hand tools, cutlery, saws, files, etc.	51.3	44.5	44.7	48.2	29.0	15.5	15.4	21.3
Bolts, nuts, screws, rivets, nails, etc.	54.0	48.0	47.9	50.4	26.5	15.2	15.2	19.4
Brass and yellow metal goods	52.8	45.1	45.1	49.4	28.4	16.6	16.7	22.3
Heating and ventilating engineering	54.1	-------	-------	51.9	29.4	-------	-------	24.5
Watches, clocks, plate, jewelry, etc.	50.8	45.1	45.2	48.0	26.9	14.8	14.8	20.4
Other metal industries	52.9	45.6	45.7	49.2	30.3	17.0	16.9	23.0
Textile industries:								
Cotton	51.2	48.4	48.3	49.1	22.5	14.2	14.2	16.1
Woolen and worsted	50.6	45.5	45.5	47.6	21.6	13.3	13.3	16.1
Silk throwing, spinning, and weaving (including artificial silk weaving)	51.1	45.1	45.2	47.0	25.4	14.8	14.7	17.4
Artificial silk spinning	53.0	45.5	45.6	49.6	26.6	15.1	15.0	20.9
Flax spinning and weaving	50.4	46.1	46.1	47.2	20.5	10.6	10.6	12.1
Jute spinning and weaving	51.1	46.4	46.4	47.7	19.5	12.5	12.5	13.9
Hemp, rope, cord, twine, etc.	54.4	45.2	45.2	47.3	21.9	12.5	12.5	14.0
Hosiery	49.6	45.9	46.1	46.7	27.0	14.3	14.4	15.4
Lace	49.6	45.4	45.3	46.8	23.7	12.1	12.1	16.2
Carpets and rugs	47.5	44.4	44.5	44.4	22.4	14.0	13.8	16.3
Other textiles	54.7	45.0	45.2	47.5	22.8	14.0	14.0	15.7
Textile bleaching, printing, dyeing, finishing, etc.	52.6	44.5	44.6	49.6	21.9	12.7	12.7	18.2
Leather, leather goods, and fur industries:								
Tanning, currying, and dressing	49.7	44.1	44.2	48.2	24.4	14.2	14.1	20.7
Leather-goods manufacture	50.2	45.2	45.2	47.0	22.8	13.1	13.1	15.4
Fur dressing, etc.	47.7	43.7	43.4	45.3	28.3	14.7	14.8	19.5
Clothing industries:								
Tailoring:								
Ready-made and wholesale bespoke	47.5	44.3	44.4	44.8	27.5	14.2	14.2	14.7
Retail bespoke:								
Firms employing 10 or more workers	46.7	43.9	44.1	45.0	26.3	13.7	13.8	16.0

See footnotes at end of table.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 2.—*Average Hours and Hourly Earnings in Great Britain and Northern Ireland, by Industry, July 1943*[1]—Continued

Industry group	Average hours worked				Average hourly earnings			
	Men	Women		All workers	Men	Women		All workers
		Other than part time	Including part time [2]			Other than part time	Including part time [2]	
Clothing industries—Continued.								
Tailoring—Continued.								
Retail bespoke—Continued.					*d.*	*d.*	*d.*	*d.*
Firms employing less than 10 workers	45.9	43.9	44.0	44.7	22.3	13.3	13.3	16.2
Dressmaking and millinery:								
Firms employing 10 or more workers	46.5	43.6	43.7	43.7	29.1	15.2	15.1	13.6
Firms employing less than 10 workers	-------	41.8	41.9	42.2	-------	15.7	15.6	14.2
Hats and caps (including straw plait)	43.9	40.7	40.8	42.2	26.4	14.8	14.8	17.3
Shirts, collars, underclothing, etc	48.0	43.6	43.7	44.2	23.8	13.0	13.0	12.0
Other dress industries	47.9	43.3	43.4	44.1	23.4	13.9	13.9	13.8
Boot, shoe, and slipper making and repairing:								
Firms employing 10 or more workers	46.3	44.1	44.1	45.1	25.7	14.7	14.7	18.9
Firms employing less than 10 workers	48.3	-------	-------	47.3	22.3	-------	-------	18.8
Laundries:								
Firms employing 10 or more workers	49.7	44.7	44.9	45.7	22.9	12.6	12.6	13.0
Firms employing less than 10 workers	-------	37.3	37.4	38.6	-------	11.7	11.7	11.9
Dyeing, dry cleaning, etc	49.4	45.5	45.5	46.5	23.3	13.4	13.3	15.2
Food, drink, and tobacco industries:								
Bread, biscuits, cakes, etc.:								
Firms employing 10 or more workers	52.5	45.8	46.0	49.4	23.8	13.9	13.8	18.4
Firms employing less than 10 workers	53.4	44.5	44.6	49.8	22.5	13.0	13.1	18.0
Grain milling	51.2	43.8	43.8	49.4	25.5	14.3	14.2	22.4
Cocoa, chocolate, and sugar confectionery	50.4	46.0	46.1	47.3	26.2	14.2	14.1	17.8
Other food industries	52.8	45.6	45.7	48.8	23.2	13.0	13.0	17.2
Drink industries	51.0	44.3	44.3	48.4	22.3	12.8	12.8	18.3
Tobacco, cigars, cigarettes, etc	49.7	44.9	45.1	46.3	26.0	14.7	14.5	16.0
Woodworking:								
Mill sawing and machine joinery	51.1	44.8	44.8	49.4	23.6	15.6	15.6	20.0
Wood-box and packing-case manufacture	50.8	43.6	43.8	47.4	24.9	15.9	15.8	18.8
Cabinetmaking, furniture making, upholstery, etc.:								
Firms employing 10 or more workers	49.0	44.3	44.5	47.0	25.2	15.4	15.4	19.7
Firms employing less than 10 workers	46.0	41.5	41.7	44.9	24.5	13.8	13.8	19.5
Carriage, cart, etc., building	51.0	44.3	44.4	49.0	28.5	17.4	17.2	22.9
Other woodworking	50.3	44.2	44.4	47.8	25.2	15.3	15.2	19.6
Paper, printing, etc., industries:								
Paper and paper-board manufacture	56.0	44.3	44.4	51.6	24.1	13.9	13.9	20.2
Cardboard-box, paper-bag, and stationery manufacture	49.7	45.0	45.0	46.3	24.9	13.7	13.7	15.8
Stationery and typewriting requisites (not paper)	49.0	44.6	44.8	46.5	26.4	15.2	14.9	17.8
Printing, publishing, and bookbinding	45.7	44.6	44.6	45.3	29.9	13.7	13.7	22.5
Building, contracting, etc.:								
Building, decorating, etc	52.2	45.9	45.9	51.7	24.1	15.4	15.3	22.4
Public works contracting, etc	55.1	-------	-------	54.7	24.4	-------	-------	23.7
Electrical contracting	55.7	-------	-------	53.7	27.3	-------	-------	21.1
Miscellaneous manufacturing industries:								
Rubber (excluding rubber garments)	54.7	46.4	46.6	51.0	27.8	15.8	15.7	22.4
Oilcloth, linoleums, etc	51.0	43.2	43.3	49.0	22.2	14.4	14.4	19.9
Brushes and brooms	49.8	43.6	43.9	46.0	23.7	13.9	13.7	16.1
Scientific and photographic instruments and apparatus	52.2	48.1	48.0	49.7	31.1	16.3	16.3	22.4
Musical instruments, toys, games, and sports requisites	48.5	44.4	44.4	46.5	25.2	12.7	12.8	18.3
Other manufacturing industries	52.7	45.0	45.2	48.2	27.0	15.4	15.3	19.6
Transport, storage, etc.:								
Railway and omnibus service, and other road passenger transport	50.2	46.5	46.5	49.1	24.2	19.0	19.0	22.4
Goods transport by road	53.8	44.7	44.7	53.0	23.0	17.1	17.0	21.7
Dock, harbor, canal, etc. service	54.1	43.3	43.3	53.6	27.1	14.4	14.3	26.2
Warehousing, storage, etc	50.9	45.0	45.0	49.7	24.6	14.3	14.3	22.5
Public utility services:								
Gas supply	51.5	41.2	41.3	50.5	22.7	15.7	15.7	21.7
Water supply	50.2	-------	-------	49.9	22.0	-------	-------	21.6
Electricity supply	50.6	42.2	42.2	49.9	24.3	18.7	18.6	23.0
Local authorities' (nontrading) services	49.8	41.9	41.5	48.1	19.9	13.0	13.1	18.3
Government industrial establishments	55.1	45.6	45.6	50.9	28.8	21.3	21.3	25.3

[1] Where no figure is given, the number of workers covered was too small to provide a satisfactory basis for a general average.

[2] Part-time workers are included on the basis of two part-time workers representing one full-time worker.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Earnings in Coal Mining and in Railway Service

In the coal-mining industry, which was not covered by the inquiry, the average cash earnings per man-shift worked for all classes of workpeople combined (including juveniles) were approximately 19s. 2d. in the 3 months ended September 1943, or about 69 percent above the corresponding period of 1939, when earnings were 11s. 4d.

The railway service was also excluded from the broad investigation described above. Average earnings on railroads are shown below for March of the years 1939, 1942, and 1943. Included are war bonus; piece-work payments and tonnage bonus; payment for overtime, Sunday duty, and night duty; and all other payments for work performed. Traveling and out-of-pocket expenses and meal and lodging allowances are not covered. No figures are available for earnings of women and girls in 1939, since the number employed was insufficient to provide a satisfactory basis for general averages.

	Average weekly earnings					
	March 1943		*March 1942*		*March 1939*	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*
Men	105	4	96	2	68	9
Youths and boys	38	6	35	10	28	10
Women	74	2	63	1	------	
Girls	47	5	40	2	------	

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Cost of Living and Retail Prices

Cost of Living in Large Cities, March 1944

LOWER food prices in March counterbalanced higher costs for spring clothing, household equipment, and services in the family budget. As a result there was no net change in the average cost-of-living essentials from February 15 to March 15, 1944. The total cost of living has remained stable, with only minor variations, for a year. Prices of living essentials in March averaged 0.8 percent higher than in the same month of 1943, and 22.8 percent above the level in January 1941 (base date of the "Little Steel" formula). Since the beginning of the war in Europe, the rise in the cost of living has amounted to 26 percent, as compared with an advance of 61 percent during the same period of the first World War.

The reduction of 0.3 percent in the total cost of a typical family grocery bill from mid-February to mid-March was due principally to lower prices for fresh vegetables, and seasonal declines for eggs. A general reduction in point values was announced by the OPA, following reports of larger food supplies. This was reflected in reduced prices for a number of nonrationed foods. The largest price declines for food during the month were for green beans (19 percent), cabbage (12 percent), and lettuce (7 percent). Prices for carrots, potatoes, and spinach were also lower, as spring supplies came into the market. The acute shortage of onions continued throughout the country, with prices slightly higher for the limited supply available for general sale. Oranges rose seasonally by about 11 percent as the supply of Florida oranges diminished and the new California crop came on the market. Prices of meats remained fairly stable, and adequate supplies of beef and pork were reported in most cities. Prices for chickens and fresh fish were somewhat higher than in February but there were continued shortages in some communities. Canned peas and canned green beans both declined almost 3 percent.

Scattered price increases occurred in most articles of clothing in March. Particularly outstanding were advances in the cost of women's spring coats, which were higher in 33 of the 34 cities surveyed. Although cotton dresses were not yet on display in all stores, prices were appreciably above those of the summer of 1943. In several stores, the advance was over 50 percent, and the average rise for all cities was 15 percent. Rayon hosiery rose slightly as retailers received new supplies at the higher prices permitted by OPA on the qualities priced by the Bureau. Price rises were noted for work clothing, men's felt hats, shirts, shorts, and pajamas, and women's

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

underwear and cotton nightgowns, in most cases as a result of the unavailability of lower-priced lines. Shoe-repair prices again showed advances in most large cities. Retailers reported general shifts in demand from blended to all-wool fabrics following larger allocations of wool for civilian garments.

Anthracite coal dropped 45 cents per ton in most cities as prices returned to previously established ceilings. This change was largely responsible for the decrease of 0.4 percent in the costs of fuel, electricity, and ice, as a group, from February to March. Slight increases were reported in bituminous-coal prices in some cities where dealers had been selling below the prices established by OPA in November.

The increasing scarcity of lower-priced lines raised March costs for dining room and bedroom suites, dinnerware, and towels in several cities. Large increases in the cost of brooms, ranging from 1 percent to 35 percent, were reported in most of the large cities, because of disappearance of the lower grades. Quotations on steel-frame bedsprings replaced those for wood-frame springs in the Bureau's reports in a number of cities, resulting in small price decreases, owing to the lower maximum price established by OPA for steel-frame springs.

The cost of miscellaneous goods and services advanced by an average of 0.3 percent during the month. The cost of medical care increased in 12 cities. Scattered rises were reported for beauty- and barber-shop services, laundry, drugs, soaps, domestic services, and auto repairs.

Rents remained unchanged in the 34 large cities combined; slight increases were reported in 9 cities and slight decreases in 2. Increasing vacancies in substandard housing were reported in some large cities where population was reduced because of war migration, or where public housing units were made available.

TABLE 1.—*Indexes of Cost of Living in Large Cities, March 15, 1944 and Previous Dates*

[Some indexes for January and February 1944 are revised]

Date	Indexes [1] (1935–39=100) of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1939: August 15	98.6	93.5	100.3	104.3	97.5	100.6	100.4
1941: January 15	100.8	97.8	100.7	105.0	100.8	100.1	101.9
1942: May 15	116.0	121.6	126.2	109.9	104.9	122.2	110.9
September 15	117.8	126.6	125.8	108.0	106.2	123.6	111.4
1943: March 15	122.8	137.4	127.6	108.0	107.4	124.5	114.5
1944: January 15	124.2	136.1	134.7	108.1	109.5	128.3	118.4
February 15	123.8	134.5	135.2	108.1	110.3	128.7	118.7
March 15	123.8	134.1	136.7	108.1	109.9	129.0	119.1

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.

itized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

TABLE 2.—*Percent of Change*[1] *in Cost of Living in Large Cities in Specified Periods, by Groups of Items*

Period	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Feb. 15, 1944, to Mar. 15, 1944	0	−0.3	+1.1	0	−0.4	+0.2	+0.3
Mar. 15, 1943, to Mar. 15, 1944	+0.8	−2.4	+7.1	+0.1	+2.3	+3.6	+4.0
Sept. 15, 1942, to Mar. 15, 1944	+5.1	+5.9	+8.7	+.1	+3.5	+4.4	+6.9
May 15, 1942, to Mar. 15, 1944	+6.7	+10.3	+8.3	−1.6	+4.8	+5.6	+7.4
Jan. 15, 1941, to Mar. 15, 1944	+22.8	+37.1	+35.7	+3.0	+9.0	+28.9	+16.9
Aug. 15, 1939, to Mar. 15, 1944	+25.6	+43.4	+36.3	+3.6	+12.7	+28.2	+18.6

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.

TABLE 3.—*Percent of Change*[1] *in Cost of Living in Specified Periods, By Cities*

City	Mar. 15, 1943, to Mar. 15, 1944	Aug. 15, 1939, to Mar. 15, 1944	Jan. 1, 1941, to Mar. 15, 1944	Sept. 15, 1942, to Mar. 15, 1944	May 15, 1942, to Mar. 15, 1944
Average: Large cities	+0.8	+25.6	+22.8	+5.1	+6.7
New England:					
Boston	−.1	+24.1	+21.6	+3.7	+6.3
Manchester	+.1	+29.1	+26.0	+5.1	+6.7
Portland, Maine	+.7	+26.6	+24.8	+4.2	+6.1
Middle Atlantic:					
Buffalo	−1.3	+26.7	+22.5	+3.6	+3.6
New York	+2.2	+26.0	+23.5	+7.2	+10.1
Philadelphia	+1.1	+25.5	+23.7	+5.0	+7.0
Pittsburgh	+1.4	+26.3	+22.8	+5.8	+7.3
Scranton	+.3	+25.9	+21.9	+4.9	+6.5
East North Central:					
Chicago	+.2	+24.1	+21.0	+4.4	+5.2
Cincinnati	+1.0	+26.6	+23.7	+4.4	+6.3
Cleveland	+1.8	+27.8	+25.3	+6.9	+7.6
Detroit	+.4	+26.4	+23.3	+5.2	+4.8
Indianapolis	+.7	+26.9	+22.0	+4.5	+4.6
Milwaukee	+.7	+25.4	+22.6	+5.5	+6.2
West North Central:					
Kansas City	+1.2	+23.8	+24.1	+6.5	+7.0
Minneapolis	+.2	+21.7	+19.2	+3.9	+4.7
St. Louis	+.6	+24.9	+21.3	+5.1	+6.0
South Atlantic:					
Atlanta	+.5	+26.1	+23.8	+5.4	+7.8
Baltimore	+.9	+27.6	+25.0	+5.1	+6.5
Jacksonville	+1.7	+31.1	+26.7	+6.3	+8.3
Norfolk	+1.1	+32.9	+29.2	+6.5	+8.6
Richmond	0	+23.7	+21.7	+3.4	+5.6
Savannah	+2.9	+32.8	+30.1	+8.0	+9.1
Washington, D. C.	+1.0	+24.2	+22.6	+4.6	+6.8
East South Central:					
Birmingham	+3.3	+28.8	+24.9	+6.8	+6.9
Memphis	+1.0	+29.8	+27.2	+6.4	+8.5
Mobile	+.3	+28.2	+25.9	+4.5	+6.5
West South Central:					
Houston	−.7	+21.7	+20.2	+3.9	+5.5
New Orleans	−1.0	+29.2	+26.6	+5.9	+9.0
Mountain: Denver	+.9	+24.6	+22.9	+4.9	+6.3
Pacific:					
Los Angeles	+1.3	+25.6	+23.1	+3.7	+6.9
Portland, Oreg.	+.5	+29.3	+26.9	+3.6	+6.3
San Francisco	+1.0	+28.3	+25.1	+5.4	+8.3
Seattle	+.9	+27.8	+25.6	+4.5	+5.8

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 4.—*Percent of Change* [1] *in Cost of Living, December 15, 1943, to March 15, 1944, by Groups of Items and Cities*

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities	−0.5	[2]−2.2	+1.6	0	+0.5	+0.9	+0.8
New England:							
Boston	−.5	−1.8	+1.7	0	+.4	−.5	+.1
Manchester	−.1	−1.3	+2.6	0	+.3	+1.7	+.5
Portland, Maine	−.5	−2.1	+1.7	−.1	+.5	+1.6	+.3
Middle Atlantic:							
Buffalo	−1.0	−3.1	+.8	+.1	+.8	+.3	+.1
New York	−.3	−2.4	+1.7	0	+.3	+1.6	+2.7
Philadelphia	−.7	−3.1	+2.9	0	+1.7	+.8	+.7
Pittsburgh	−.1	−1.6	+3.6	0	−.1	+1.4	0
Scranton	−.5	−2.8	+2.7	−.1	+2.1	+2.2	+1.3
East North Central:							
Chicago	−.5	−1.6	+.9	0	+.6	+.6	+.1
Cincinnati	−.8	−2.2	+.5	+.1	+.2	+.2	+.2
Cleveland	−.4	−1.6	+.7	+.1	+.2	+.9	+.5
Detroit	−.7	−2.5	+1.6	0	+.5	+1.2	0
Indianapolis	−.3	−2.5	+1.9	0	+.4	+2.1	+1.1
Milwaukee	+.1	−.8	+1.8	+.1	+.6	+1.4	+.3
West North Central:							
Kansas City	−.2	−2.2	+1.5	+.2	+.9	+.1	+1.4
Minneapolis	−.7	−2.7	+2.4	−.1	+.2	+1.9	+.3
St. Louis	−.6	−2.4	+1.6	0	+.5	+2.2	+.3
South Atlantic:							
Atlanta	−.6	−3.1	+.8	0	+.2	+1.9	+1.9
Baltimore	0	−2.2	+2.9	−.1	+.5	+1.1	+2.6
Jacksonville	−1.0	−3.2	+1.3	+.1	0	+.5	+.3
Norfolk	−.2	−1.0	+1.4	+.1	0	+1.1	+.1
Richmond	−.7	−3.1	+1.8	+.1	0	0	+.9
Savannah	+.1	−1.7	+2.9	+.1	+.4	+2.6	+1.4
Washington, D. C	−.7	−3.1	+1.2	0	+.2	+.7	+.8
East South Central:							
Birmingham	−.5	−3.5	+.8	0	+.6	0	+3.1
Memphis	−.6	−2.4	+1.5	+.1	+.2	+.7	+.5
Mobile	−.1	−1.5	+2.2	+.6	+.2	+.5	+.8
West South Central:							
Houston	−.6	−1.7	+.4	+.1	0	0	+.3
New Orleans	−.4	−1.2	+.7	0	+.4	0	+.7
Mountain: Denver	−.5	−2.2	+1.3	+.1	+.1	+2.2	+.5
Pacific:							
Los Angeles	−.3	−1.7	+.7	+.1	0	+.5	+1.0
Portland, Oreg	−.1	−1.1	+2.2	+.2	+.2	+.2	+.3
San Francisco	−.1	−1.0	+2.1	+.1	+.5	0	+.1
Seattle	−.3	−1.8	+1.4	+.1	+.7	+.3	+.9

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.
[2] Based on prices for 56 cities collected on the Tuesday nearest the 15th of the month.

TABLE 5.—*Indexes of Cost of Living in Large Cities, 1935 to March 1944*

Year	Indexes [1] (1935–39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1935	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943	123.6	138.0	129.7	108.0	107.7	125.6	115.9
1944:							
Jan. 15	124.2	136.1	134.7	108.1	109.5	128.3	118.4
Feb. 15	123.8	134.5	135.2	108.1	110.3	128.7	118.7
Mar. 15	123.8	134.1	136.7	108.1	109.9	129.0	119.1

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Retail Prices of Food in March 1944

PERCENTAGE changes in retail food costs on March 14, 1944, as compared with costs in February 1944, March 1943, September 1942, January 1941, and August 1939, are given in table 1.

TABLE 1.—*Percent of Change in Retail Costs of Food in 56 Large Cities Combined,*[1] *in Specified Periods, by Commodity Groups*

Commodity group	Feb. 15, 1944, to Mar. 14, 1944	Mar. 16, 1943, to Mar. 14, 1944	Sept. 15, 1942, to Mar. 14, 1944	Jan. 14, 1941, to Mar. 14, 1944	Aug. 15, 1939, to Mar. 14, 1944
All foods	−0.3	−2.4	+5.9	+37.1	+43.4
Cereals and bakery products	−.1	+.9	+2.5	+13.8	+15.6
Meats	+.1	−4.9	0	+29.2	+36.5
Beef and veal	−.2	−8.1	−5.5	+8.9	+19.6
Pork	−.2	−11.2	−9.4	+30.4	+27.6
Lamb	+.1	−2.4	+.3	+35.9	+35.7
Chickens	+.2	+3.7	+12.3	+54.5	+58.8
Fish, fresh and canned	+1.4	+8.0	+30.9	+85.5	+121.1
Dairy products	+.1	−2.5	+4.6	+27.1	+43.5
Eggs	−4.9	−4.8	−12.7	+39.1	+49.4
Fruits and vegetables	−.1	−1.2	+25.6	+74.6	+76.3
Fresh	−.3	−1.6	+30.6	+82.2	+83.4
Canned	−.2	−1.6	+4.7	+41.8	+41.5
Dried	+.1	+3.9	+13.8	+63.9	+80.7
Beverages	+.1	−.4	+.5	+36.9	+31.1
Fats and oils	−.2	−2.3	+2.3	+53.8	+46.2
Sugar and sweets	−.1	−1.1	−.4	+32.7	+32.3

[1] The number of cities included in the index was changed from 51 to 56 in March 1943, with the necessary adjustments for maintaining comparability. At the same time the number of foods in the index was increased from 54 to 61.

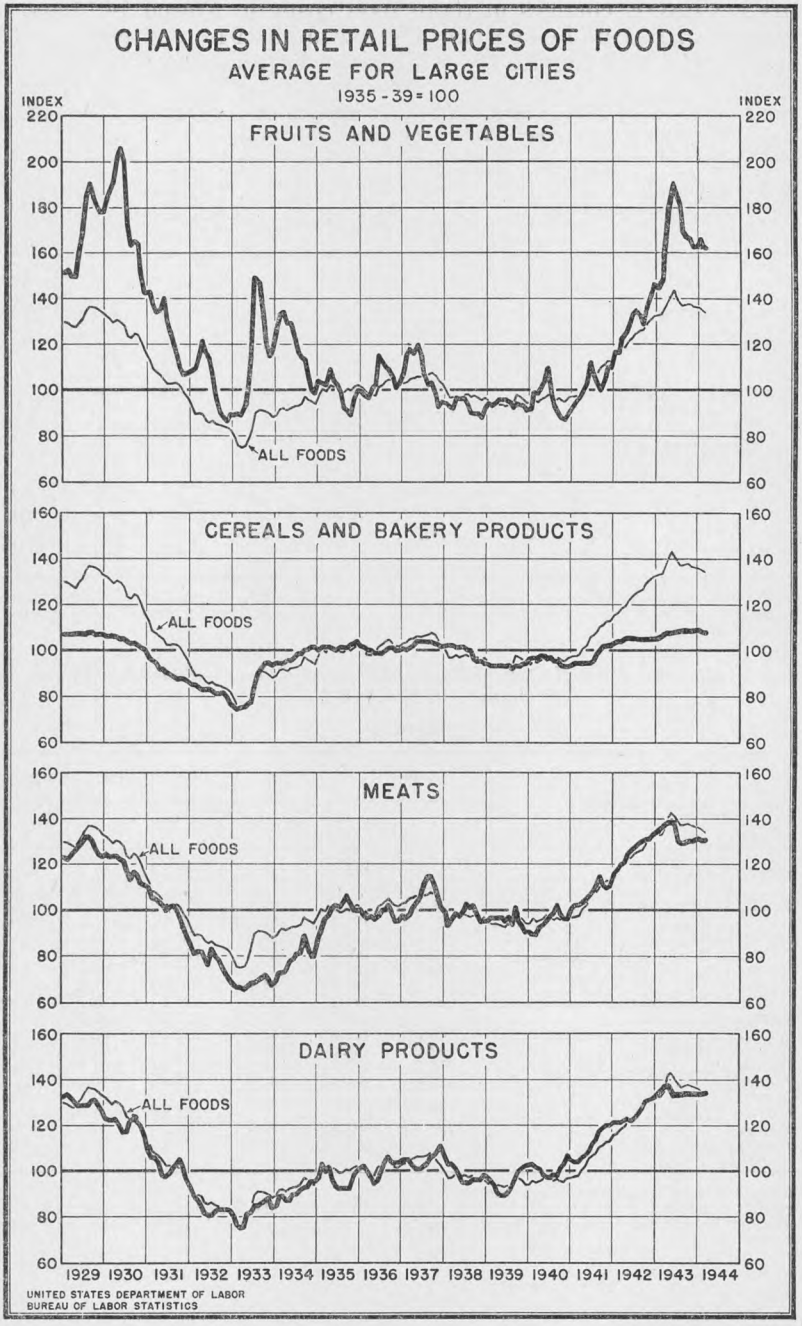
TABLE 2.—*Indexes of Retail Costs of Food in 56*[1] *Large Cities Combined,*[2] *by Commodity Groups, on Specified Dates*

[1935-39=100]

Commodity group	1944		1943	1942	1941	1939
	Mar. 14[3]	Feb. 15	Mar. 16	Sept. 15	Jan. 14	Aug. 15
All foods	134.1	134.5	137.4	126.6	97.8	93.5
Cereals and bakery products	108.0	108.1	107.0	105.4	94.9	93.4
Meats	130.6	130.5	137.3	130.6	101.1	95.7
Beef and veal	119.1	119.3	129.6	126.0	109.4	99.6
Pork	112.3	112.5	126.4	124.0	86.1	88.0
Lamb	134.1	133.9	137.4	133.7	98.7	98.8
Chickens	150.2	149.9	144.9	133.7	97.2	94.6
Fish, fresh and canned	220.2	217.1	203.9	168.2	118.7	99.6
Dairy products	133.6	133.5	137.0	127.7	105.1	93.1
Eggs	135.5	[4] 142.5	142.4	155.2	97.4	90.7
Fruits and vegetables	162.9	163.0	164.9	129.7	93.3	92.4
Fresh	170.2	[4] 170.7	172.9	130.3	93.4	92.8
Canned	129.6	129.8	131.7	123.8	91.4	91.6
Dried	163.2	163.1	157.0	143.4	99.6	90.3
Beverages	124.4	124.3	124.9	123.8	90.9	94.9
Fats and oils	123.5	123.8	126.4	120.7	80.3	84.5
Sugar and sweets	126.5	126.6	127.9	127.0	95.3	95.6

[1] Indexes based on 51 cities combined prior to March 1943.
[2] Aggregate costs of 61 foods (54 foods prior to March 1943) in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.
[3] Preliminary.
[4] Revised.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis



itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

gitized for FRASER
ps://fraser.stlouisfed.org
ederal Reserve Bank of St. Louis

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,[1] March 1944 Compared with Earlier Months*

Article		1944		1943	1941	1939
		Mar. 14[2]	Feb. 15	Mar. 16	Jan. 14	Aug. 15
Cereals and bakery products:						
Cereals:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Flour, wheat	10 pounds	65.2	65.1	60.0	41.4	35.8
Macaroni	pound	15.7	15.5	14.6	13.8	14.0
Wheat cereal[3]	28 ounces	23.3	23.3	24.1	23.5	24.2
Corn flakes	8 ounces	6.5	6.5	7.0	7.1	7.0
Corn meal	pound	5.9	5.9	5.4	4.2	4.0
Rice[3]	do	12.8	12.8	12.8	7.9	7.5
Rolled oats	do	8.7	8.7	8.9	7.1	7.1
Flour, pancake[3]	20 ounces	12.0	11.9	10.5	(4)	(4)
Bakery products:						
Bread, white	pound	8.8	8.8	8.8	7.8	7.8
Bread, whole-wheat	do	9.7	9.7	9.7	8.7	8.8
Bread, rye	do	9.9	10.0	9.8	9.0	9.2
Vanilla cookies	do	28.6	28.9	28.8	25.1	(5)
Soda crackers	do	18.8	18.8	17.6	15.0	14.8
Meats:						
Beef:						
Round steak	do	41.9	42.0	45.6	38.6	36.4
Rib roast	do	33.9	33.9	36.0	31.5	28.9
Chuck roast	do	29.2	29.3	31.4	25.2	22.5
Stew meat[3]	do	31.7	31.8	35.6	(4)	(4)
Liver	do	37.5	37.5	37.5	(4)	(4)
Hamburger	do	28.6	28.6	33.2	(4)	(4)
Veal:						
Cutlets	do	45.7	46.0	55.5	45.2	42.5
Roast, boned and rolled[3]	do	35.4	35.6	36.6	(4)	(4)
Pork:						
Chops	do	37.4	37.4	43.5	29.1	30.9
Bacon, sliced	do	41.2	41.2	43.3	30.1	30.4
Ham, sliced	do	51.4	51.5	61.0	45.1	46.4
Ham, whole	do	35.4	35.5	39.1	26.2	27.4
Salt pork	do	22.5	22.5	24.1	16.7	15.4
Liver[3]	do	22.2	22.2	24.0	(4)	(4)
Sausage[3]	do	38.5	38.5	38.3	(4)	(4)
Bologna, big[3]	do	34.5	34.5	33.5	(4)	(4)
Lamb:						
Leg	do	40.1	40.1	39.5	27.8	27.6
Rib chops	do	45.4	45.3	48.4	35.0	36.7
Poultry: Roasting chickens	do	44.9	44.7	46.3	31.1	30.9
Fish:						
Fish (fresh, frozen)	do	(5)	(5)	(5)	(5)	(5)
Salmon, pink	16-oz. can	24.2	24.0	23.1	15.7	12.8
Salmon, red[3]	do	43.1	42.6	40.9	26.4	23.1
Dairy products:						
Butter	pound	50.2	50.2	56.2	38.0	30.7
Cheese	do	35.9	35.9	38.2	27.0	24.7
Milk, fresh (delivered)	quart	15.6	15.6	15.6	13.0	12.0
Milk, fresh (store)	do	14.5	14.4	14.3	11.9	11.0
Milk, evaporated	14½-oz can	10.0	10.0	10.2	7.1	6.7
Eggs:						
Eggs, fresh	dozen	47.8	50.3	50.3	34.9	32.0
Fruits and vegetables:						
Fresh fruits:						
Apples	pound	11.6	11.2	8.9	5.2	4.4
Bananas	do	11.3	11.5	10.7	6.6	6.1
Oranges	dozen	41.9	37.6	39.4	27.3	31.5
Grapefruit[3]	each	7.5	6.9	6.8	(6)	(6)
Fresh vegetables:						
Beans, green	pound	18.9	23.4	26.7	14.0	7.2
Cabbage	do	5.1	5.8	9.3	3.4	3.9
Carrots	bunch	8.6	9.0	9.2	6.0	4.6
Lettuce	head	10.5	11.3	14.2	8.4	8.4
Onions	pound	8.2	8.1	7.1	3.6	3.6
Potatoes	15 pounds	63.6	64.9	69.6	29.2	34.4
Spinach	pound	10.3	10.5	12.9	7.3	7.8
Sweetpotatoes	do	11.0	10.8	9.7	5.0	5.5
Beets[3]	bunch	8.8	9.0	11.9	(4)	(4)
Canned fruits:						
Peaches	No. 2½ can	27.1	27.2	26.3	16.5	17.1
Pineapple	do	27.5	27.6	29.3	20.9	21.0
Grapefruit juice	No. 2 can	14.4	14.4	13.8	(6)	(6)
Canned vegetables:						
Beans, green	No. 2 can	13.4	13.8	15.2	10.0	10.0
Corn	do	14.5	14.5	14.2	10.7	10.4
Peas	do	13.5	13.9	15.5	13.2	13.6
Tomatoes	do	12.0	12.1	12.8	8.4	8.6
Soup, vegetable[3]	11-oz. can	13.4	13.3	13.0	(4)	(4)

See footnotes at end of table.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,*[1] *March 1944, Compared with Earlier Months*—Continued

Article		1944		1943	1941	1939
		Mar. 14[2]	Feb. 15	Mar. 16	Jan. 14	Aug. 15
Fruits and vegetables—Continued.		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Dried fruits: Prunes	pound	16.7	16.6	16.7	9.6	8.8
Dried vegetables:						
Navy beans	do	10.6	10.6	9.8	6.5	5.8
Soup, dehydrated, chicken noodle[3]	ounce	3.7	3.7	3.8	(4)	(4)
Beverages:						
Coffee	pound	29.9	29.8	30.1	20.7	22.3
Tea	¼ pound	23.8	23.6	21.2	17.6	17.2
Cocoa[3]	½ pound	9.9	9.9	9.1	9.1	8.6
Fats and oils:						
Lard	pound	18.8	18.8	19.3	9.3	9.9
Shortening other than lard—						
In cartons	do	20.0	20.1	20.0	11.3	11.7
In other containers	do	24.8	24.8	24.4	18.3	20.2
Salad dressing	pint	25.6	25.5	25.2	20.1	(5)
Oleomargarine	pound	24.1	24.1	23.3	15.6	16.5
Peanut butter	do	28.6	28.8	32.0	17.9	17.9
Oil, cooking or salad[3]	pint	30.6	30.6	30.2	(4)	(4)
Sugar and sweets:						
Sugar	pound	6.8	6.8	6.9	5.1	5.2
Corn sirup	24 ounces	15.8	15.8	15.4	13.6	13.7
Molasses[3]	18 ounces	15.9	16.0	15.6	13.4	13.6
Apple butter[3]	16 ounces	13.2	[7] 12.9	13.7	(4)	(4)

[1] Data are based on 51 cities combined prior to January 1943.
[2] Preliminary.
[3] Not included in index.
[4] First priced, February 1943.
[5] Composite price not computed.
[6] First priced, October 1941.
[7] Revised.
[8] Not priced.

TABLE 4.—*Indexes of Average Retail Costs of All Foods, by Cities,*[1] *on Specified Dates*

[1935–39=100]

City	1944		1943	1941	1939
	Mar. 14[2]	Feb. 15	Mar. 16	Jan. 14	Aug. 15
United States	134.1	134.5	137.4	97.8	93.5
New England:					
Boston	128.6	128.7	134.1	95.2	93.5
Bridgeport	132.6	133.4	137.6	96.5	93.2
Fall River	128.7	129.6	138.0	97.5	95.4
Manchester	132.0	131.4	137.8	96.6	94.9
New Haven	133.0	134.7	136.1	95.7	93.7
Portland, Maine	131.6	132.0	134.4	95.3	95.9
Providence	131.8	131.2	135.3	96.3	93.7
Middle Atlantic:					
Buffalo	133.3	134.0	141.2	100.2	94.5
Newark	137.6	138.0	139.1	98.8	95.6
New York	135.7	135.4	138.0	99.5	95.8
Philadelphia	131.9	133.3	133.5	95.0	93.0
Pittsburgh	132.9	133.1	137.2	98.0	92.5
Rochester	128.2	129.8	137.6	99.9	92.3
Scranton	132.4	133.1	136.9	97.5	92.1
East North Central:					
Chicago	131.6	131.3	135.9	98.2	92.3
Cincinnati	132.9	133.7	135.1	96.5	90.4
Cleveland	140.3	140.6	139.5	99.2	93.6
Columbus, Ohio	126.9	127.3	130.2	93.4	88.1
Detroit	130.8	130.9	135.7	97.0	90.6
Indianapolis	131.0	131.9	134.8	98.2	90.7
Milwaukee	131.9	131.0	134.2	95.9	91.1
Peoria	138.0	137.6	140.8	99.0	93.4
Springfield, Ill.	138.9	139.2	141.3	96.2	94.1

See footnotes at end of table

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 4.—*Indexes of Average Retail Costs of All Foods, by Cities,*[1] *on Specified Dates*—Continued

[1935-39=100]

City	1944		1943	1941	1939
	Mar. 14[2]	Meb. 15	Mar. 16	Jan. 14	Aug. 1
West North Central:					
Cedar Rapids[3]	136.6	137.2	136.3	95.9	----------
Kansas City	129.8	129.8	133.7	92.4	91.5
Minneapolis	128.7	128.9	133.0	99.0	95.0
Omaha	131.3	131.9	132.4	97.9	92.3
St. Louis	135.9	136.0	138.9	99.2	93.8
St. Paul	127.1	127.6	132.1	98.6	94.3
Wichita[3]	145.4	146.3	144.6	97.2	----------
South Atlantic:					
Atlanta	133.0	135.9	137.7	94.3	92.5
Baltimore	139.3	140.2	144.0	97.9	94.7
Charleston, S. C	131.5	133.2	133.7	95.9	95.1
Jacksonville	139.6	143.3	146.0	98.8	95.8
Norfolk[4]	143.7	145.0	144.5	95.8	93.6
Richmond	131.8	133.0	135.8	93.7	92.2
Savannah	147.2	149.5	145.1	100.5	96.7
Washington, D. C	131.7	133.6	136.9	97.7	94.1
Winston-Salem[3]	133.4	134.7	134.5	93.7	----------
East South Central:					
Birmingham	136.2	137.8	134.8	96.0	90.7
Jackson[3]	142.1	144.0	153.5	105.3	----------
Knoxville[3]	151.7	152.7	149.7	97.1	----------
Louisville	129.7	131.2	132.6	95.5	92.1
Memphis	141.0	142.6	144.8	94.2	89.7
Mobile	142.7	144.2	145.6	97.9	95.5
West South Central:					
Dallas	131.6	133.8	134.3	92.6	91.7
Houston	134.9	135.9	142.7	102.6	97.8
Little Rock	133.2	135.3	137.4	95.6	94.0
New Orleans	147.2	148.4	153.2	101.9	97.6
Mountain:					
Butte	133.0	133.4	133.5	98.7	94.1
Denver	135.7	135.7	137.2	94.8	92.7
Salt Lake City	138.9	138.2	141.1	97.5	94.6
Pacific:					
Los Angeles	140.9	140.5	142.8	101.8	94.6
Portland, Oreg	143.3	142.8	148.5	101.7	96.1
San Francisco	142.2	141.6	143.7	99.6	93.8
Seattle	140.5	140.6	144.7	101.0	94.5

[1] Aggregate costs of 61 foods in each city (54 foods prior to March 1943), weighted to represent total purchases of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.

[2] Preliminary.

[3] Indexes based on June 1940=100.

[4] Includes Portsmouth and Newport News.

TABLE 5.—*Indexes of Retail Food Costs in 56 Large Cities Combined,*[1] *1913 to March 1944*

Year	All-foods index	Year	All-foods index	Year and month	All-foods index
1913	79.9	1929	132.5	1943:	
1914	81.8	1930	126.0	January	133.0
1915	80.9	1931	103.9	February	133.6
1916	90.8	1932	86.5	March	137.4
1917	116.9	1933	84.1	April	140.6
1918	134.4	1934	93.7	May	143.0
1919	149.8	1935	100.4	June	141.9
1920	168.8	1936	101.3	July	139.0
				August	137.2
1921	128.3			September	137.4
1922	119.9	1937	105.3	October	138.2
1923	124.0	1938	97.8	November	137.3
1924	122.8	1939	95.2	December	137.1
1925	132.9	1940	96.6	1944:	
1926	137.4	1941	105.5	January	136.1
1927	132.3	1942	123.9	February	134.5
1928	130.8	1943	138.0	March	134.1

[1] Indexes based on 51 cities combined prior to March 1943.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Wholesale Prices

Wholesale Prices in March 1944

SEASONAL advances in prices for certain fruits and vegetables, continued increases in livestock and poultry markets, and OPA action in raising ceiling prices for yellow pine lumber and for bituminous coal in some areas caused commodity prices in primary markets [1] to average 0.2 percent higher in March than in February 1944. Commodity prices at the wholesale level have remained relatively stable during the past year. At 103.8 percent of the 1926 average, the Bureau of Labor Statistics all-commodity index of nearly 900 price series is less than one-half of 1 percent higher than in March 1943. Since the outbreak of the war, prices for these commodities have risen over 38 percent.

Led by an advance of 1.9 percent for livestock and poultry, average prices for farm products in primary markets rose 0.9 percent during the month to the highest point since July 1943. Higher ceilings for lumber largely accounted for an increase of 0.5 percent in average prices for building materials. Foods rose 0.1 percent as a result of seasonally higher prices for apples, oranges, onions, and sweetpotatoes. Prices for textile products, housefurnishing goods, and miscellaneous commodities also rose 0.1 percent; while fuel and lighting materials declined 0.1 percent, reflecting lower production costs because of the elimination of the 7-day week in anthracite mining at the end of February.

Increases of 3.4 percent for hogs, nearly 3 percent for cows, almost 2 percent for cotton, and higher quotations for fruits and vegetables, and for wheat and rye largely accounted for the rise of about 1 percent in farm products prices. Eggs were seasonally lower, and the markets also were weaker for hay, lemons, and potatoes.

With an increase of 2.2 percent in prices for fruits and vegetables, the foods group index rose 0.1 percent in March. Minor increases were also reported in prices for corn meal, oatmeal, cheese at San Francisco, fresh pork, and peanut oil. Quotations were lower for fresh milk at Chicago, and for flour, white potatoes, and eggs.

In the hides and leather products group a slight reduction in prices for men's dress shoes was offset by higher prices for goatskins, and the group index remained unchanged at 116.9 percent of the 1926 average.

[1] The Bureau of Labor Statistics wholesale price data for the most part represents prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.

583621—44——12

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

The increase allowed in February by OPA to manufacturers of bleached sheeting in order to stimulate production continued to be reflected in the Bureau's index for cotton goods, which rose 0.2 percent during the month. This advance brought average prices for textile products as a whole up 0.1 percent.

The elimination of the 7-day workweek at the end of February brought average f. o. b. mine prices of anthracite down 2.2 percent in March. Bituminous coal advanced fractionally as OPA allowed higher prices to operators in some areas to cover increased costs, and kerosene prices rose 0.5 percent.

In the metals and metal products group, a further decline of 1.0 percent in prices for quicksilver counterbalanced higher prices for farm wagons with the result that the group index remained unchanged at 103.7 percent of the 1926 level.

Average prices for building materials rose 0.5 percent in March to the highest point in more than 20 years. OPA action in raising ceiling prices for certain types of yellow pine lumber, together with increased prices for brick in some areas and for butyl acetate, rosin, and shellac, were responsible for the increase. Lower prices were reported for gum and spruce lumber, maple flooring, and turpentine.

Prices for the chemicals and allied products items priced by the Bureau were steady during the month.

Housefurnishing goods advanced 0.1 percent as a result of higher prices for bed linen. No changes were reported in prices for furniture.

The index for the miscellaneous commodities group advanced 0.1 percent because of higher prices for wood pulp, which reflected OPA action in granting higher prices to producers to encourage output.

During the 12-month period March 1943 to March 1944, the effectiveness of OPA control over industrial commodity markets was reflected by the stability of the Bureau's indexes for these products. The largest group increase during the year was 3.4 percent, for both the fuel and lighting materials and the building materials groups. These increases resulted from upward adjustments in ceiling prices from time to time for coal, coke, and lumber. Housefurnishing goods averaged 1.7 percent higher than in March of last year, primarily because of a 5-percent increase granted to furniture manufacturers early this year. Higher prices for cattle feed and for paper and pulp accounted for an increase of 2.3 percent in the index for the miscellaneous commodities group over the corresponding month of last year.

From March 1943 to March 1944 average prices for textile products advanced 0.5 percent, largely because of minor adjustments in ceilings on cotton goods and higher quotations for burlap and twine. Higher prices for fertilizer materials and mixed fertilizers were mainly responsible for an increase of 0.4 percent in average prices for chemicals and allied products. An increase of over 15 percent for grains brought average prices for farm products up 0.7 percent over the March 1943 level. Prices for livestock and poultry, on the other hand, declined more than 7 percent. Although prices for fresh fruits and vegetables and for certain cereal products were substantially higher than in March of last year, sharp declines in markets for dairy products and meats brought average prices for foods in primary markets down 2.6 percent.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Hides and leather products dropped 0.8 percent owing to lower quotations for skins, and metals and metal products declined 0.1 percent because of a sharp reduction in prices for quicksilver.

By March 1944 prices for nearly all types of commodities had risen sharply over their relatively low levels of August 1939. The largest increase—over 102 percent—was recorded in prices for farm products. Grains were more than 151 percent higher than in August 1939, and livestock and poultry prices advanced 90 percent over their pre-war levels. Average prices for foods in primary markets were more than 55 percent higher than before the war, with increases of 111 percent for fruits and vegetables, 62 percent for dairy products, about 44 percent for meats, and 32 percent for cereal products. During the period August 1939 to March 1944, average prices for textile products rose 44 percent and for chemicals and allied products, more than 35 percent. Hides and leather products, building materials, and miscellaneous commodities advanced over 25 percent; housefurnishing goods, 20 percent; fuel and lighting materials, 14 percent; and metals and metal products, 11 percent.

Largely as a result of the pronounced rise in prices for agricultural commodities, the index for raw materials was 70 percent higher in March 1944 than in August 1939, while the indexes for semimanufactured articles, manufactured products, "all commodities other than farm products," and "all commodities other than farm products and foods" rose approximately 25 percent.

Percentage comparisons of the March 1944 level of wholesale prices with February 1944, March 1943, and August 1939, with corresponding index numbers, are given in table 1.

TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, March 1944, Compared with February 1944, March 1943, and August 1939*

[1926=100]

Group and subgroup	March 1944	February 1944	Percent of change	March 1943	Percent of change	August 1939	Percent of increase
All commodities	103.8	103.6	+0.2	103.4	+0.4	75.0	38.4
Farm products	123.6	122.5	+.9	122.8	+.7	61.0	102.6
Grains	129.5	129.3	+.2	112.2	+15.4	51.5	151.5
Livestock and poultry	125.6	123.3	+1.9	135.7	−7.4	66.0	90.3
Other farm products	119.9	119.3	+.5	117.1	+2.4	60.1	99.5
Foods	104.6	104.5	+.1	107.4	−2.6	67.2	55.7
Dairy products	110.5	110.7	−.2	113.2	−2.4	67.9	62.7
Cereal products	95.1	95.1	0	93.5	+1.7	71.9	32.3
Fruits and vegetables	123.3	120.7	+2.2	115.6	+6.7	58.5	110.8
Meats	106.0	106.0	0	115.5	−8.2	73.7	43.8
Other foods	92.7	93.5	−.9	96.3	−3.7	60.3	53.7
Hides and leather products	116.9	116.9	0	117.8	−.8	92.7	26.1
Shoes	126.3	126.4	−.1	126.4	−.1	100.8	25.3
Hides and skins	111.2	111.0	+.2	116.0	−4.1	77.2	44.0
Leather	101.3	101.3	0	101.3	0	84.0	20.6
Other leather products	115.2	115.2	0	115.2	0	97.1	18.6
Textile products	97.8	97.7	+.1	97.3	+.5	67.8	44.2
Clothing	107.0	107.0	0	107.0	0	81.5	31.3
Cotton goods	113.6	113.4	+.2	112.6	+.9	65.5	73.4
Hosiery and underwear	70.5	70.5	0	70.5	0	61.5	14.6
Rayon	30.3	30.3	0	30.3	0	28.5	6.3
Silk	(1)	(1)	-------	(1)	-------	44.3	-------
Woolen and worsted goods	112.5	112.5	0	112.4	+.1	75.5	49.0
Other textile products	100.5	100.5	0	97.5	+3.1	63.7	57.8

[1] Data not available.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, March 1944, Compared with February 1944, March 1943, and August 1939*—Con.
[1926=100]

Group and subgroup	March 1944	February 1944	Percent of change	March 1943	Percent of change	August 1939	Percent of increase
Fuel and lighting materials	83.0	83.1	−0.1	80.3	+3.4	72.6	14.3
Anthracite	95.6	97.8	−2.2	89.8	+6.5	72.1	32.6
Bituminous coal	120.1	119.9	+.2	115.2	+4.3	96.0	25.1
Coke	130.7	130.7	0	122.4	+6.8	104.2	25.4
Electricity	(1)	(1)	----	60.2	----	75.8	----
Gas	(1)	77.2	----	75.6	----	86.7	----
Petroleum and products	64.0	64.0	0	61.5	+4.1	51.7	23.8
Metals and metal products	103.7	103.7	0	103.8	−.1	93.2	11.3
Agricultural implements	97.1	97.0	+.1	96.9	+.2	93.5	3.9
Farm machinery	98.2	98.1	+.1	98.0	+.2	94.7	3.7
Iron and steel	97.1	97.1	0	97.2	−.1	95.1	2.1
Motor vehicles	112.8	112.8	0	112.8	0	92.5	21.9
Nonferrous metals	85.8	85.8	0	86.0	−.2	74.6	15.0
Plumbing and heating	91.8	91.8	0	90.4	+1.5	79.3	15.8
Building materials	114.2	113.6	+.5	110.4	+3.4	89.6	27.5
Brick and tile	100.3	100.1	+.2	98.7	+1.6	90.5	10.8
Cement	93.6	93.6	0	94.2	−.6	91.3	2.5
Lumber	146.3	144.5	+1.2	134.6	+8.7	90.1	62.4
Paint and paint materials	104.4	103.9	+.5	102.2	+2.2	82.1	27.2
Plumbing and heating	91.8	91.8	0	90.4	+1.5	79.3	15.8
Structural steel	107.3	107.3	0	107.3	0	107.3	0
Other building materials	102.8	102.8	0	102.0	+.8	89.5	14.9
Chemicals and allied products	100.4	100.4	0	100.0	+.4	74.2	35.3
Chemicals	96.3	96.3	0	96.4	−.1	83.8	14.9
Drugs and pharmaceuticals	165.2	165.2	0	165.0	+.1	77.1	114.3
Fertilizer materials	81.4	81.4	0	79.0	+3.0	65.5	24.3
Mixed fertilizers	86.3	86.3	0	85.8	+.6	73.1	18.1
Oils and fats	102.0	102.0	0	101.5	+.5	40.6	51.2
Housefurnishing goods	104.3	104.2	+.1	102.6	+1.7	85.6	21.8
Furnishings	107.2	107.1	+.1	107.3	−.1	90.0	19.1
Furniture	101.4	101.4	0	97.7	+3.8	81.1	25.0
Miscellaneous	93.5	93.4	+.1	91.4	+2.3	73.3	27.6
Automobile tires and tubes	73.0	73.0	0	73.0	0	60.5	20.7
Cattle feed	159.6	159.6	0	148.2	+7.7	68.4	133.3
Paper and pulp	107.2	106.6	+.6	102.7	+4.4	80.0	34.0
Rubber, crude	46.2	46.2	0	46.3	−.2	34.9	32.4
Other miscellaneous	96.7	96.7	0	94.9	+1.9	81.3	18.9
Raw materials	113.4	112.8	+.5	112.0	+1.3	66.5	70.5
Seminmanufactured articles	93.7	93.4	+.3	93.0	+.8	74.5	25.8
Manufactured products	100.5	100.4	+.1	100.5	0	79.1	27.1
All commodities other than farm products	99.3	99.3	0	99.0	+.3	77.9	27.5
All commodities other than farm products and foods	98.1	98.0	+.1	96.5	+1.7	80.1	22.5

[1] Data not available.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Index Numbers by Commodity Groups, 1926 to March 1944

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1943, and by months from March 1943 to March 1944, are shown in table 2.

TABLE 2.—*Index Numbers of Wholesale Prices by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.6	94.3	82.0	87.3
1942	105.9	99.6	117.7	96.9	78.5	103.8	110.2	97.1	102.4	89.7	98.8
1943	122.6	106.6	117.5	97.4	80.8	103.8	111.4	100.3	102.7	92.2	103.1
1943											
March	122.8	107.4	117.8	97.3	80.3	103.8	110.4	100.0	102.6	91.4	103.4
April	123.9	108.4	117.8	97.4	80.6	103.8	110.3	100.1	102.6	91.6	103.7
May	125.7	110.5	117.8	97.4	80.8	103.8	110.5	100.2	102.7	91.9	104.1
June	126.2	109.6	117.8	97.4	81.0	103.8	110.6	100.0	102.8	91.8	103.8
July	125.0	107.2	117.8	97.4	81.0	103.7	110.7	100.1	102.6	92.3	103.2
August	123.5	105.8	117.8	97.4	80.9	103.7	112.2	100.2	102.6	92.6	103.1
September	123.1	105.0	117.8	97.5	81.0	103.7	112.5	100.3	102.6	93.0	103.1
October	122.2	105.1	117.8	97.6	81.0	103.7	112.7	100.4	102.6	93.1	103.0
November	121.4	105.8	116.5	97.7	81.2	103.8	113.1	100.3	102.8	93.2	102.9
December	121.8	105.6	117.0	97.7	82.1	103.8	113.4	100.4	102.8	93.3	103.2
1944											
January	121.8	104.9	117.2	97.7	82.3	103.7	113.5	100.4	104.5	93.2	103.3
February	122.5	104.5	116.9	97.7	83.1	103.7	113.6	100.4	104.2	93.4	103.6
March	123.6	104.6	116.9	97.8	83.0	103.7	114.2	100.4	104.3	93.5	103.8

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 8 and 9 of Wholesale Prices, July–December and Year 1942 (Bulletin No. 736).

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Index Numbers of Wholesale Prices by Special Groups of Commodities*

[1926=100]

Year and month	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926	100.0	100.0	100.0	100.0	100.0
1929	97.5	93.9	94.5	93.3	91.6
1932	55.1	59.3	70.3	68.3	70.2
1933	56.5	65.4	70.5	69.0	71.2
1936	79.9	75.9	82.0	80.7	79.6
1937	84.8	85.3	87.2	86.2	85.3
1938	72.0	75.4	82.2	80.6	81.7
1939	70.2	77.0	80.4	79.5	81.3
1940	71.9	79.1	81.6	80.8	83.0
1941	83.5	86.9	89.1	88.3	89.0
1942	100.6	92.6	98.6	97.0	95.5
1943	112.1	92.9	100.1	98.7	96.9
1943					
March	112.0	93.0	100.5	99.0	96.5
April	112.8	93.1	100.6	99.1	96.6
May	114.0	93.0	100.7	99.2	96.7
June	114.3	92.8	100.1	98.7	96.8
July	113.6	92.8	99.6	98.3	96.9
August	112.7	92.9	99.7	98.5	97.1
September	112.4	92.9	99.9	98.6	97.2
October	111.9	92.9	100.0	98.7	97.3
November	111.3	92.9	100.2	98.8	97.4
December	112.1	93.1	100.2	99.0	97.6
1944					
January	112.2	93.2	100.2	99.1	97.8
February	112.8	93.4	100.4	99.3	98.0
March	113.4	93.7	100.5	99.3	98.1

Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during February and March 1944 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—*Weekly Index Numbers of Wholesale Prices by Commodity Groups, February and March 1944*

[1926=100]

Commodity group	Mar. 25	Mar. 18	Mar. 11	Mar. 4	Feb. 26	Feb. 19	Feb. 12	Feb. 5
All commodities	103.7	103.6	103.4	103.4	103.6	103.3	103.1	103.1
Farm products	124.6	124.5	123.4	123.2	124.2	122.8	121.9	122.1
Foods	104.5	104.6	104.6	104.5	104.6	104.1	104.0	104.2
Hides and leather products	117.5	117.6	117.6	117.6	117.5	117.7	117.8	117.7
Textile products	97.3	97.3	97.3	97.3	97.2	79.2	97.2	97.2
Fuel and lighting materials	83.6	83.6	83.6	83.7	83.7	83.7	83.5	83.2
Metals and metal products	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8
Building materials	114.6	113.8	113.7	113.7	113.7	113.7	113.7	113.5
Chemicals and allied products	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4
Housefurnishing goods	105.9	105.9	105.9	105.9	106.2	106.2	104.4	104.4
Miscellaneous	93.3	93.3	93.3	93.3	93.3	93.3	93.0	93.0
Raw materials	114.0	113.9	113.3	113.2	113.7	113.0	112.4	112.4
Semimanufactured articles	93.5	93.5	93.5	93.5	93.5	93.5	93.2	93.2
Manufactured products	100.7	100.6	100.6	100.6	100.6	100.6	100.6	100.5
All commodities other than farm products	99.2	99.2	99.2	99.2	99.2	99.2	99.1	99.0
All commodities other than farm products and foods	98.3	98.2	98.2	98.3	98.3	98.2	98.1	98.0

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Labor Turnover

Labor Turnover in Manufacturing, Mining, and Public Utilities, February 1944

THE average rate of accession (new hirings) declined to 53 per thousand in February 1944. This accession rate is significantly below the separation rate of 65 per thousand. The decline in the accession rate, coupled with the relatively high separation rate, reflects further declines in employment.

For every thousand workers employed in manufacturing in February, 45 quit their jobs, 8 were laid off, 6 were discharged, 5 left to enter the armed forces, and 1 left for other reasons. The quit rate, while still high relative to that prevailing before the war, is lower than it was during most of 1943. In February, for the first time in several years, quits were fewer than they had been a year earlier.

The highest quit rate, 84 per thousand, was reported by the food group. "Returning to the farm" was most frequently advanced as the reason for quits in this group.

Although discharges are usually considered as involuntary separations, many employers reported that workers are deliberately becoming absentees or committing acts which will lead to their discharges. This permits them to take more attractive jobs without the difficulty of obtaining a release.

The quit rates for women are still considerably higher than for men in each of the groups and industries for which turnover data for women are compared with those for men. The data for women indicate even more strikingly than do the data for men that separations other than quits are becoming increasingly important. One striking exception is the tank industry in which separations other than quits amounted to 56 per thousand for men as compared with 22 for women.

The separation rates in both of the coal-mining industries and in each of the metal-mining industries, with the exception of miscellaneous metal mining, were below the rate for all manufacturing.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Manufacturing Industries* [1]

Class of turnover and year	January	February	March	April	May	June	July	August	September	October	November	December
Total separation:												
1944	6.69	[2] 6.47										
1943	7.11	7.04	7.69	7.54	6.57	7.07	7.56	8.18	8.16	7.02	6.37	6.55
1939	3.19	2.61	3.18	3.46	3.48	3.31	3.36	3.01	2.79	2.91	2.95	3.46
Quit:												
1944	4.60	[2] 4.51										
1943	4.45	4.65	5.36	5.41	4.81	5.20	5.61	6.30	6.29	5.19	4.46	4.38
1939	0.85	.64	.82	.76	.68	.73	.70	.82	1.07	.93	.83	.69
Discharge:												
1944	.69	[2] .64										
1943	.52	.50	.57	.53	.55	.61	.68	.67	.62	.64	.63	.60
1939	.10	.10	.13	.10	.13	.12	.12	.14	.14	.17	.15	.12
Lay-off: [3]												
1944	.79	[2] .76										
1943	.74	.54	.52	.64	.45	.50	.50	.46	.53	.51	.69	.99
1939	2.24	1.87	2.23	2.60	2.67	2.46	2.54	2.05	1.58	1.81	1.97	2.65
Military:												
1944	.53	[2] .49										
1943	1.26	1.23	1.12	.87	.69	.69	.69	.67	.64	.61	.52	.50
Miscellaneous: [4]												
1944	.08	[2] .07										
1943	.14	.12	.12	.09	.07	.07	.08	.08	.08	.07	.07	.08
Accession:												
1944	6.47	[2] 5.34										
1943	8.28	7.87	8.32	7.43	7.18	8.40	7.83	7.62	7.73	7.17	6.62	5.19
1939	4.09	3.06	3.34	2.93	3.29	3.92	4.16	5.06	6.17	5.89	4.10	2.84

[1] Month-to-month employment changes as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports as the former are based on data for the entire month, while the latter refer, for the most part, to a 1-week period ending nearest the middle of the month. In addition, labor turnover data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to wage earners. The labor turnover sample is not as extensive as that of the employment and pay-roll survey: proportionately fewer small plants are included; printing and publishing, and certain seasonal industries, such as canning and preserving, are not covered.

[2] Preliminary.

[3] Including temporary, indeterminate, and permanent lay-offs

[4] Data for 1939 included with quits.

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries, February 1944*

Industry	Total separation		Quit		Discharge	Lay-off	Military and miscellaneous	Total accession	
	Feb.[1]	Jan.	Feb.[1]	Jan.	Feb.[1]	Feb.[1]	Feb.[1]	Feb.[1]	Jan.
Manufacturing									
Iron and steel and their products	4.45	4.67	3.06	3.15	0.42	0.40	0.57	3.94	4.62
Blast furnaces, steel works, and rolling mills	3.07	3.29	2.22	2.23	.16	.15	.54	2.69	3.08
Gray-iron castings	6.50	7.34	4.70	5.31	.76	.48	.56	6.75	8.17
Malleable-iron castings	5.08	5.09	4.07	3.93	.50	.06	.45	4.78	6.07
Steel castings	6.54	6.66	5.03	4.81	.68	.23	.60	6.25	7.01
Cast-iron pipe and fittings	4.21	4.23	2.94	2.60	.31	.12	.84	3.69	3.98
Tin cans and other tinware	10.22	9.43	7.79	7.36	1.21	.73	.49	14.90	14.57
Wire products	2.26	3.23	1.46	1.80	.18	.13	.49	2.55	3.71
Cutlery and edge tools	5.52	5.32	4.48	3.71	.40	.10	.54	6.42	6.35
Tools (except edge tools, machine tools, files, and saws)	4.79	6.03	3.56	4.35	.49	.16	.58	4.83	5.75
Hardware	5.49	3.99	3.31	3.05	.49	1.15	.54	4.43	5.01
Plumbers' supplies	3.36	3.68	2.46	2.60	.14	.04	.72	2.14	2.50
Stoves, oil burners, and heating equipment	7.61	7.45	4.32	4.82	.77	1.92	.60	7.87	10.82
Steam and hot-water heating apparatus and steam fittings	4.58	4.64	3.27	3.06	.51	.18	.62	4.33	4.35
Stamped and enameled ware and galvanizing	7.17	7.53	5.28	5.68	.69	.75	.45	7.30	9.03
Fabricated structural metal products	7.54	7.54	4.99	5.07	1.53	.36	.66	8.35	9.21
Bolts, nuts, washers, and rivets	5.25	5.80	3.46	3.54	.62	.60	.57	3.89	4.64
Forgings, iron and steel	4.74	5.42	3.26	3.46	.57	.31	.60	4.13	4.79
Firearms, .60 caliber and under [2]	7.19	6.72	3.27	3.64	.78	2.33	.81	------	------

See footnotes at end of table.

Digitized for FRASER
https://fraser.stlouisfed.org
Federal Reserve Bank of St. Louis

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries, February 1944*—Continued

Industry	Total separation		Quit		Discharge	Layoff	Military and miscellaneous	Total accession	
	Feb.[2]	Jan.[1]	Feb.[1]	Jan.[1]	Feb.[1]	Feb.[1]	Feb.[1]	Feb.[1]	Jan.[1]
Machinery, except electrical	4.87	5.14	3.03	3.25	0.60	0.58	0.66	4.09	4.66
Engines and turbines [2]	4.58	4.87	2.75	3.06	.72	.45	.66	------	------
Agricultural machinery and tractors	4.91	4.55	3.57	3.22	.42	.24	.68	5.98	6.46
Machine tools	4.48	4.98	2.37	2.67	.43	.90	.78	2.29	2.33
Machine-tool accessories	5.56	6.02	2.86	3.38	.71	1.37	.62	3.54	3.49
Metalworking machinery and equipment, not elsewhere classified	4.37	5.51	2.67	2.87	.51	.62	.57	2.56	2.77
Textile machinery	2.48	3.04	2.06	2.26	.21	0	.21	5.01	4.18
General industrial machinery, except pumps	5.15	5.27	3.42	3.63	.70	.36	.67	4.39	5.28
Pumps and pumping equipment	5.81	5.60	3.12	3.64	.63	1.60	.46	4.22	5.55
Automobiles	7.00	6.56	3.96	3.42	.85	1.53	.66	5.45	6.59
Motor vehicles, bodies, and trailers	8.51	7.02	3.97	3.28	.54	3.39	.61	4.35	5.75
Motor-vehicle parts and accessories	6.09	6.25	3.95	3.50	1.03	.42	.69	6.11	7.13
Nonferrous metals and their products	6.59	7.40	4.59	4.78	.70	.66	.64	5.09	6.00
Primary smelting and refining, except aluminum and magnesium [2]	3.81	3.93	2.70	2.63	.27	.15	.69	------	------
Aluminum and magnesium smelting and refining [2]	10.05	11.92	6.85	6.95	.99	1.21	1.00	------	------
Rolling and drawing of copper and copper alloys	4.40	4.13	3.44	3.20	.43	.13	.40	3.04	4.53
Aluminum and magnesium products	6.87	7.92	4.60	5.11	.74	.87	.66	4.82	6.07
Lighting equipment	5.59	4.91	4.17	3.35	.47	.56	.39	4.79	4.52
Nonferrous metal foundries, except aluminum and magnesium [2]	6.96	6.63	5.11	4.76	.81	.43	.61	------	------
Lumber and timber basic products	7.79	7.32	5.70	5.22	.39	1.18	.52	6.22	7.43
Sawmills	7.56	6.97	5.56	5.18	.32	1.08	.60	6.04	7.13
Planing and plywood mills	6.73	6.60	4.51	4.03	.59	1.24	.39	4.74	6.01
Furniture and finished lumber products	9.18	10.25	7.09	7.65	.81	.78	.50	8.02	9.66
Furniture, including mattresses and bedsprings	9.87	11.09	7.79	8.24	.88	.70	.50	8.37	10.06
Stone, clay, and glass products	5.40	6.61	3.57	3.70	.40	.80	.63	3.97	5.16
Glass and glass products	5.44	5.49	3.48	3.54	.41	.78	.77	5.01	5.80
Cement	5.19	14.28	2.25	2.47	.24	2.22	.48	1.99	3.20
Brick, tile, and terra cotta	6.09	6.27	4.48	4.60	.48	.49	.64	3.99	5.99
Pottery and related products	5.12	4.88	4.09	4.03	.34	.14	.55	5.53	6.02
Electrical machinery	4.82	4.71	3.35	3.40	.60	.45	.42	4.38	5.06
Electrical equipment for industrial use	4.24	4.13	2.77	2.73	.41	.65	.41	3.05	3.60
Radios, radio equipment, and phonographs [2]	5.35	5.38	3.93	4.14	.84	.20	.38	------	------
Communication equipment, except radios [2]	3.49	3.99	2.83	3.11	.27	.02	.37	------	------
Ordnance	7.52	6.64	4.17	3.85	.95	1.86	.54	6.85	7.84
Guns, howitzers, mortars, and related equipment [2]	5.87	5.20	3.01	3.22	.65	1.59	.62	------	------
Ammunition, except for small arms [2]	8.38	7.42	5.33	4.73	1.31	1.19	.55	------	------
Tanks [2]	8.70	6.96	3.50	2.97	.67	4.14	.39	------	------
Sighting and fire-control equipment [2]	4.34	5.51	2.51	2.52	.51	.70	.62	------	------
Transportation equipment, except automobiles	6.59	7.29	4.39	4.80	1.02	.54	.64	5.53	6.56
Aircraft	5.57	6.23	3.94	4.33	.58	.47	.58	4.18	5.32
Aircraft parts	4.65	4.88	3.07	3.15	.57	.51	.50	5.01	5.89
Shipbuilding and repairs	8.48	9.41	5.50	6.10	1.63	.60	.75	7.00	8.01
Textile-mill products	6.12	6.40	4.98	5.09	.38	.31	.45	5.17	6.38
Cotton	7.07	7.16	5.89	5.90	.42	.27	.49	6.02	7.50
Silk and rayon goods	6.48	6.09	5.37	5.03	.42	.25	.44	6.18	6.13
Woolen and worsted, except dyeing and finishing	3.88	4.25	2.94	3.12	.25	.34	.35	3.22	4.19
Hosiery, full-fashioned	4.76	4.98	3.81	4.10	.37	.16	.42	4.20	5.03
Hosiery, seamless	6.69	7.09	5.79	5.94	.27	.35	.28	5.46	6.32
Knitted underwear	6.53	6.83	5.13	5.55	.33	.83	.24	4.29	5.80
Dyeing and finishing textiles, including woolen and worsted	4.85	5.02	3.31	3.56	.63	.34	.57	3.60	5.71

See footnotes at end of table.

ized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries, February 1944*—Continued

Industry	Total separation		Quit		Discharge	Layoff	Military and miscellaneous	Total accession	
	Feb.[1]	Jan.[1]	Feb.[1]	Jan.[1]	Feb.[1]	Feb.[1]	Feb.[1]	Feb[1]	Jan.
Apparel and other finished textile products	6.03	6.25	5.22	5.35	0.24	0.40	0.17	5.63	6.93
Men's and boys' suits, coats, and overcoats	4.83	4.62	3.96	3.99	.09	.64	.14	4.48	5.70
Men's and boys' furnishings, work clothing, and allied garments	5.93	6.17	5.31	5.48	.30	.13	.19	5.51	6.14
Women's clothing, except corsets	5.72	6.69	5.24	6.15	.16	.30	.02	5.63	8.52
Leather and leather products	4.49	5.58	3.54	4.47	.25	.25	.45	4.50	6.30
Leather	3.25	3.81	2.41	2.80	.26	.14	.44	3.80	4.09
Boots and shoes	4.72	5.79	3.78	4.71	.24	.25	.45	4.65	6.68
Food and kindred products	10.85	10.19	8.43	7.93	.71	.99	.72	8.69	10.95
Meat products	13.53	11.76	10.35	9.00	.93	1.37	.88	9.48	12.11
Grain-mill products	9.24	9.23	6.15	6.56	.64	1.55	.90	7.75	9.72
Paper and allied products	6.08	6.70	4.79	5.12	.44	.34	.51	5.56	6.88
Paper and pulp	5.44	6.03	4.27	4.61	.37	.26	.54	4.86	6.33
Paper boxes	8.00	8.88	6.15	6.77	.68	.64	.53	6.89	8.76
Chemicals and allied products	8.26	7.98	4.01	3.72	.63	3.06	.56	4.12	5.49
Paints, varnishes, and colors	5.34	5.54	3.53	3.62	.91	.51	.39	4.58	5.71
Rayon and allied products	3.56	3.79	2.66	2.77	.39	.24	.27	3.40	3.39
Industrial chemicals, except explosives	4.42	4.15	3.04	2.80	.59	.24	.55	3.86	4.53
Explosives [2]	7.01	9.87	3.27	2.91	.33	2.92	.49	------	------
Small-arms ammunition [2]	16.11	14.22	5.55	4.83	.75	9.05	.76	------	------
Products of petroleum and coal	2.57	2.96	1.82	2.02	.31	.09	.35	3.23	4.02
Petroleum refining	2.36	2.73	1.67	1.83	.26	.10	.33	3.07	3.83
Rubber products	5.56	6.19	4.56	5.02	.37	.15	.48	5.72	7.13
Rubber tires and inner tubes	4.64	4.99	3.70	4.04	.32	.09	.53	4.74	5.47
Rubber footwear and related products	5.78	6.31	5.08	5.26	.30	.03	.37	6.15	7.98
Miscellaneous rubber industries	6.53	7.26	5.43	5.87	.44	.23	.43	6.75	8.51
Tobacco manufactures	7.67	8.57	6.23	6.39	.39	.76	.29	5.15	7.73
Miscellaneous industries	4.34	4.30	2.72	2.49	.47	.61	.54	3.48	3.95
Nonmanufacturing									
Metal mining	5.22	5.06	3.55	3.34	.38	.61	.68	3.88	4.44
Iron-ore	3.33	2.55	1.54	1.41	.16	.88	.75	2.19	2.36
Copper-ore	5.91	5.68	4.06	3.94	.33	.74	.78	4.06	5.53
Lead- and zinc-ore	5.12	5.11	4.12	3.69	.40	.10	.50	4.02	5.09
Metal mining, not elsewhere classified, including aluminum-ore	7.42	9.69	5.03	6.02	.91	.78	.70	6.10	5.79
Coal mining:									
Anthracite mining	1.54	1.83	1.13	1.30	.07	.12	.22	1.65	1.82
Bituminous-coal mining	3.15	3.25	2.36	2.42	.17	.08	.54	2.56	3.23
Public utilities:									
Telephone	2.70	3.14	2.26	2.64	.15	.10	.19	2.90	3.41
Telegraph	2.72	2.90	2.31	2.48	.14	.10	.17	3.38	3.57

[1] Preliminary figures.
[2] Publication of accession rates is restricted in these specific war industries.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Monthly Labor-Turnover Rates (Per 100 Employees)*[1] *for Men and Women in Selected Groups and Industries Engaged in War Production, February 1944*[2]

Industry	Total separation		Quit		Total accession	
	Men	Women	Men	Women	Men	Women
Iron and steel and their products	4.18	7.15	2.74	5.44	3.52	7.88
Blast furnaces, steel works, and rolling mills	2.87	5.58	1.94	4.81	2.39	8.07
Gray-iron castings	6.45	7.01	4.62	5.71	6.31	12.62
Malleable-iron castings	4.85	7.10	3.84	6.06	4.63	6.06
Steel castings	6.43	7.81	4.96	5.88	6.06	8.55
Cast-iron pipe and fittings	4.22	4.20	2.90	3.45	3.24	9.75
Firearms, 60 caliber and under	6.37	8.83	2.47	4.84	2.10	4.92
Machinery, except electrical	4.41	6.58	2.54	4.82	3.46	6.50
Engines and turbines	4.20	5.97	2.20	4.31	3.37	7.69
Machine tools	4.16	6.17	2.02	4.18	1.70	5.39
Machine-tool accessories	5.24	6.58	2.51	3.87	3.07	5.09
Metalworking machinery and equipment, not elsewhere classified	3.87	7.28	2.19	5.34	2.05	5.41
General industrial machinery, except pumps	4.54	6.94	2.78	5.34	3.77	6.24
Pumps and pumping equipment	4.85	10.50	2.76	4.88	3.95	5.56
Nonferrous metals and their products	6.31	7.68	4.30	5.73	4.68	6.67
Primary smelting and refining, except aluminum and magnesium	3.57	7.67	2.53	5.38	2.55	7.34
Aluminum and magnesium smelting and refining	10.02	10.32	6.78	7.49	6.12	8.31
Rolling and drawing of copper and copper alloys	4.07	5.59	2.94	5.21	2.91	3.50
Aluminum and magnesium products	6.50	8.44	4.41	5.38	4.49	6.21
Nonferrous metal foundries, except aluminum and magnesium	6.59	7.85	4.48	6.66	6.77	8.84
Electrical machinery	3.44	6.24	2.17	4.67	3.38	5.59
Electrical equipment for industrial use	3.01	6.28	1.81	4.34	2.24	4.33
Radios, radio equipment, and phonographs	4.36	6.03	2.65	4.83	5.25	6.66
Communication equipment, except radios	2.60	4.24	1.87	3.63	4.11	5.26
Ordnance	6.80	8.86	3.39	5.77	5.38	9.88
Guns, howitzers, mortars, and related equipment	4.62	8.82	2.28	4.83	3.90	7.53
Ammunition, except for small arms	7.68	9.31	4.57	6.31	6.66	10.84
Tanks	8.86	7.47	3.27	5.29	5.92	12.89
Sighting and fire-control equipment	3.38	6.48	1.73	4.23	2.35	4.99
Transportation equipment, except automobiles	6.22	7.85	3.86	6.00	5.09	7.17
Aircraft	4.89	7.25	3.07	5.86	3.62	5.66
Aircraft parts	3.90	6.48	2.44	4.70	3.93	7.11
Shipbuilding and repairs	8.34	10.92	5.15	7.96	6.80	10.94
Chemicals and allied products	7.02	11.00	3.40	5.35	3.78	4.85
Industrial chemicals, except explosives	4.13	5.76	2.87	3.83	3.33	6.28
Explosives	5.50	9.63	2.63	4.37	1.92	4.34
Small-arms ammunition	14.99	17.48	4.54	6.78	3.61	3.26

[1] These figures are presented to show comparative turnover rates and should not be used to estimate employment.

[2] February data are preliminary.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Building Operations

Building Construction in 1943[1]

Summary

BUILDING construction started in urban areas during 1943 was valued at $1,289,000,000, or 52 percent less than the total of $2,698,000,000 in 1942.

Federally financed projects comprised 60 percent of total valuations in 1942 but only 45 percent in 1943, owing almost entirely to a sharp decline in Federal nonresidential building. Factories alone accounted for $624,000,000 of the $1,046,000,000 drop in Federal valuations between 1942 and 1943.

The valuation of all nonresidential buildings, privately as well as Federally financed, declined 69 percent between the two years. Governmental restrictions on the use of critical materials curtailed new residential activity early in 1942, while nonresidential activity continued at a high level until much later, reaching its 1942–43 peak in July 1942. Consequently the decline in the volume of new residential valuations, 36 percent, between 1942 and 1943 was proportionately much smaller than for nonresidential valuations. Additions, alterations, and repairs fell off much less than did new construction, 14 percent, with residential additions, alterations, and repairs gaining about 10 percent and the nonresidential decreasing 29 percent.

Scope of Report

Data from building-permit records are collected by the Bureau of Labor Statistics directly from local building officials in every State except Illinois, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania, where State departments of labor collect and forward the data to the Bureau. Notifications of contracts awarded for Federal and State projects, for which building permits are not ordinarily required, are submitted directly by the agency awarding the contract.

Figures on building construction shown in this report cover the urban area of the United States, which, by Census definition, includes all incorporated places with a population of 2,500 or more in 1940 and, by special rule, a small number of unincorporated civil divisions. The volume of privately financed urban construction discussed in this report was estimated from building-permit data received from cities containing between 80 and 85 percent of the urban population of the

[1] A more complete discussion of urban building construction in 1942 and 1943 as well as a résumé of recent developments in the industry will appear in a forthcoming bulletin, entitled "Building Construction, 1942 and 1943."

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

country, and these estimates were combined with reports on contracts awarded for building construction by Federal and State agencies.

The valuation figures were compiled from estimates of construction costs made by prospective private builders when applying for permits to build and the value of contracts awarded by Federal or State Governments. No land costs are included. Unless otherwise indicated, only building construction within urban areas is included in the tabulations.

Comparison by Type of Building

Permits issued and contracts awarded for new buildings as against additions, alterations, and repairs, represented 81 percent of the total valuation of all urban building construction started in 1943 as compared to 90 percent in 1942. In the latter year, nonresidential construction accounted for 62 percent of the new building total, principally as a result of the Federally financed industrial-facilities construction program which was at its peak at that time and the action taken by the War Production Board early in 1942 drastically curtailing the volume of privately financed residential construction. By the end of the year, the greater part of the industrial-facilities program was under way. Consequently, in 1943 well over half of the new building valuation was for residential buildings. Details on the valuations by type of structure are shown in the table on page 1098.

New residential buildings.—One-family dwellings accounted for approximately three-fourths of the total valuations for new residential buildings in both 1942 and 1943; multifamily-type structures made up most of the remainder. Limitations on critical building materials were reflected in proportionately greater declines in valuations for privately financed 1-family dwellings than for 2-family or multifamily structures and in reduced average valuations for both privately and Federally financed dwelling units [2].

New nonresidential buildings.—Nonresidential buildings accounted for 36 percent of the valuation of all urban building construction in 1943 as against 56 percent in 1942. The valuation of nonresidential buildings financed with Federal funds declined 72 percent from 1942, while the privately financed dropped only 52 percent. Though three-fourths of the new nonresidential total for 1943 was Federally financed, this was a very different picture from that in 1942 when the value of the Federal nonresidential building was almost 6 times that of the non-Federal.

Factory building valuations in 1943 exceeded by far the total for any other type of nonresidential building, aggregating $284,000,000 or 61 percent of the 1943 new nonresidential total. Factory valuations in 1943, however, were 70 percent less than in 1942 when the industrial-facilities construction program was at its height and factories accounted for 64 percent of the new nonresidential total, or $962,000,000.

In spite of an 81-percent decline between 1942 and 1943, public buildings were second in total valuation to factory buildings in both years. Virtually all of the buildings in this category were Federally financed and a substantial proportion were constructed for temporary, rather than for permanent use. This was largely true, not only of public buildings, but of all Federally financed construction, except factories.

[2] For a detailed discussion of new residential construction, see Monthly Labor Review, March 1944 (p 536): New Dwelling Units in Nonfarm Areas, 1942 and 1943.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Valuation for institutional buildings totaled $39,000,000 in 1943, or only 17 percent less than the $47,000,000 for 1942. This decline was less than for any of the other principal types of nonresidential buildings, chiefly as a result of the hospital program of the Federal Works Agency.

Stores and warehouses, fourth in rank according to valuations in 1943, were valued at $33,000,000, 22 percent less than in 1942. Public works and utilities aggregated slightly less than $13,000,000 in 1943, or less than a tenth of the total in 1942 when this type of construction ranked third among new nonresidential buildings. Increased recognition of the importance of recreation facilities and community centers in crowded war-production areas was reflected in the 50-percent gain in valuations for amusement and recreation buildings, the only major type of nonresidential construction showing greater valuation in 1943 than in 1942.

Additions, alterations, and repairs.—In marked contrast to the sharp declines in new construction, the valuation in 1943 of all additions, alterations, and repairs taken together was only 14 percent below the 1942 level. Separating residential additions, alterations, and repairs from the nonresidential, however, it is significant that there was a rise of 10 percent in valuation in the former between the two years, as contrasted with a 29-percent decrease in the latter. To some extent this reflects, on the one hand, increased emphasis by the National Housing Agency on using existing structures for housing migrant war workers, and, on the other, a reduction in large nonresidential additions in 1943.

Valuation of Various Types of Buildings for Which Permits Were Issued or Contracts Awarded in Urban Areas, by Source of Funds, 1942 and 1943

Type of building	Total			Other than Federal		Federal	
	Valuation (in thousands of dollars)		Percent of change	Valuation (in thousands of dollars)		Valuation (in thousands of dollars)	
	1943	1942		1943	1942	1943	1942
All types of buildings	1,289,176	2,697,856	−52.2	703,691	1,066,092	585,485	1,631,764
New buildings	1,049,990	2,419,384	−56.6	481,822	824,741	568,168	1,594,643
Residential buildings	586,531	908,696	−35.5	375,169	601,743	211,362	306,953
1-family dwellings	446,023	677,831	−34.2	260,155	478,665	185,868	199,166
2-family dwellings [1]	45,560	49,998	−8.9	45,560	42,629	0	7,369
Multifamily dwellings [2]	82,132	160,013	−48.7	68,546	76,411	13,586	83,602
Nonhousekeeping buildings	12,816	20,854	−38.5	908	4,038	11,908	16,816
Nonresidential buildings	463,459	1,510,688	−69.3	106,653	222,998	356,806	1,287,690
Amusement buildings	8,280	5,516	+50.1	1,468	4,921	6,812	595
Churches	1,808	6,020	−70.0	1,740	5,620	68	400
Factories and workshops	283,845	961,616	−70.5	45,970	99,603	237,875	862,013
Public garages	957	2,361	−59.5	957	2,361	0	0
Private garages	7,790	16,498	−52.8	7,775	16,498	15	0
Service stations	817	1,871	−56.3	817	1,871	0	0
Institutions	39,351	47,113	−16.5	4,112	8,753	35,239	38,360
Office buildings	2,959	11,256	−73.7	2,440	11,003	519	253
Public buildings	48,654	254,042	−80.8	1,415	2,732	47,239	251,310
Public works and utilities	12,939	132,607	−90.2	10,679	14,298	2,260	118,309
Schools and libraries	13,822	20,549	−32.7	2,642	9,692	11,180	10,857
Sheds	4,421	4,631	−4.5	4,415	4,615	6	16
Stables and barns	487	58	+739.7	478	58	9	0
Stores and warehouses	33,276	42,715	−22.1	17,693	37,163	15,583	5,552
All other	4,053	3,835	+5.7	4,052	3,810	1	25
Additions, alterations and repairs	239,186	278,472	−14.1	221,869	241,351	17,317	37,121
On residential buildings	117,632	106,867	+10.1	115,627	105,996	2,005	871
Housekeeping dwellings	114,511	103,693	+10.4	112,972	103,611	1,539	82
Nonhousekeeping buildings	3,121	3,174	−1.7	2,655	2,385	466	789
On nonresidential buildings	121,554	171,605	−29.2	106,242	135,355	15,312	36,250

[1] Includes 1- and 2-family dwellings with stores.

[2] Includes multifamily dwellings with stores.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Building Construction in Urban Areas, March 1944

ONE-FIFTH more building construction was started in urban areas of the United States in March than during the previous month. Federal contract awards increased 26 percent and permits issued for private construction rose 18 percent. All classes of building construction shared in the increase from February to March, with the dollar volume of new residential building rising 31 percent; new nonresidential, 8 percent; and additions, alterations, and repairs, 23 percent.

The total volume of all work started during the first quarter of 1944 was $254,000,000, or 25 percent less than the $337,000,000 valuation reported for the same 3 months of 1943. A 54-percent increase in private building was more than compensated by a 64-percent decrease in Federal building. Total additions, alterations, and repairs continued to rise in importance, showing a 58-percent increase for the first quarter of 1944 over the same period a year ago, while new residential building was 37 percent less and new nonresidential valuations fell 35 percent.

Comparison of March 1944 with February 1944 and March 1943

The volume of building construction in urban areas in February and March 1944 and March 1943 is summarized in table 1.

TABLE 1.—*Summary of Building Construction in All Urban Areas, March 1944*

Class of construction	Number of buildings			Valuation		
	March 1944	Percent of change from—		March 1944 (in thousands)	Percent of change from—	
		February 1944	March 1943		February 1944	March 1943
All building construction	50,176	+39.1	+4.3	$91,136	+20.5	−12.1
New residential	11,146	+43.5	−28.5	37,002	+31.3	−27.4
New nonresidential	5,433	+48.3	−15.1	29,913	+7.6	−20.2
Additions, alterations, and repairs	33,597	+36.4	+28.5	24,221	+23.4	+59.5

The number of new dwelling units in urban areas for which building permits were issued or Federal contracts awarded during March 1944 and their estimates are presented in table 2.

TABLE 2.—*Number and Valuation of New Dwelling Units in All Urban Areas, by Type of Dwelling, March 1944*

Source of funds and type of dwelling	Number of dwelling units			Valuation		
	March 1944	Percent of change from—		March 1944 (in thousands)	Percent of change from—	
		February 1944	March 1943		February 1944	March 1943
All dwellings	12,349	+36.5	−32.1	$36,608	+30.4	−26.1
Privately financed	9,022	+14.8	−3.0	29,052	+15.7	+6.4
1-family	6,922	+12.4	+4.9	22,117	+13.2	+8.6
2-family [1]	1,165	+184.8	+9.3	4,258	+231.6	+51.8
Multifamily [2]	935	−27.5	−42.7	2,677	−37.8	−35.4
Federally financed	3,327	+179.6	−62.5	7,556	+156.2	−66.0

[1] Includes 1- and 2-family dwellings with stores.

[2] Includes multifamily dwellings with stores.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Comparison of First 3 Months of 1943 and 1944

Permit valuations and contract values reported in the first 3 months of 1944 are compared with similar data for 1943 in table 3.

TABLE 3.—*Valuation of Building Construction in All Urban Areas, by Class of Construction, First 3 Months of 1943 and 1944*

Class of construction	Valuation (in thousands of dollars)					
	Total construction: First 3 months			Federal construction: First 3 months		
	1944	1943	Percent of change	1944	1943	Percent of change
All construction	254,101	337,183	−24.6	81,612	225,380	−63.8
New residential	97,921	154,902	−36.8	17,343	92,594	−81.3
New nonresidential	92,330	141,808	−34.9	60,241	127,045	−52.6
Additions, alterations, and repairs	63,850	40,473	+57.8	4,028	5,741	−29.8

The number and valuation of new dwelling units for which permits were issued and Federal contracts awarded during the first 3 months of 1944 are compared with similiar data for 1943 in table 4.

TABLE 4.—*Number and Valuation of New Dwelling Units in All Urban Areas, by Source of Funds and Type of Dwelling, First 3 Months of 1943 and 1944*

Source of funds and type of dwelling	Number of dwelling units			Valuation (in thousands)		
	First 3 months of—		Percent of change	First 3 months of—		Percent of change
	1944	1943		1944	1943	
All dwellings	32,577	61,808	−47.3	$97,199	$152,187	−36.1
Privately financed	25,104	21,284	+17.9	80,203	62,135	+29.1
1-family	19,340	14,843	+30.3	61,724	45,588	+35.4
2-family [1]	2,551	2,552	(3)	8,616	6,820	+26.3
Multifamily [2]	3,213	3,889	−17.4	9,863	9,727	+1.4
Federally financed	7,473	40,524	−81.6	16,996	90,052	−81.1

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.
[3] Less than a tenth of 1 percent decrease.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Construction from Public Funds, March 1944

The value of contracts awarded and force-account work started during February and March 1944 and March 1943 on all construction projects and shipbuilding financed wholly or partially from Federal funds and reported to the Bureau of Labor Statistics is shown in table 5. This table includes all other types of construction as well as building construction, both inside and outside urban areas of the United States.

TABLE 5.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects Financed from Federal Funds, March 1944*

Source of Federal funds	Value of contracts awarded and force-account work started (in thousands)		
	March 1944 [1]	February 1944 [2]	March 1943 [2]
Total	$84,534	$164,114	$328,760
War public works	2,462	4,664	2,992
Regular Federal appropriations	72,115	154,645	289,743
Federal Public Housing Authority	9,957	4,805	36,025

[1] Preliminary; subject to revision.
[2] Revised.

Coverage and Method

Figures on building construction in this report cover the entire urban area of the United States, which, by Census definition, includes all incorporated places with a 1940 population of 2,500 or more, and, by special rule, a small number of unincorporated civil divisions. Valuation figures, the basis for statements concerning volume, are derived from the estimates of construction costs made by prospective private builders when applying for permits to build and the value of contracts awarded by Federal and State governments. No land costs are included. Unless otherwise indicated, only building construction within the corporate limits of cities in urban areas is included in the tabulations.

Reports of building permits were received in March 1944 from cities containing between 80 and 85 percent of the urban population of the country and provide the basis for estimating the total number of buildings and dwelling units and the valuation of private urban building construction. Similar data for Federally financed urban building construction are compiled directly from notifications of construction contracts awarded, as furnished by Federal agencies.

The contracts awarded for Federally financed building construction in urban areas were valued at $27,600,000 in March 1944, $21,847,000 in February 1944, and $58,030,000 in March 1943.

583621—44——13

tized for FRASER
s://fraser.stlouisfed.org
leral Reserve Bank of St. Louis

Trend of Employment, Earnings, and Hours

Summary of Reports for March 1944

FURTHER cut-backs in many munitions industries and no indication of any conversion to civilian-goods manufacture reduced the number of factory workers in March to 200,000 below February. The declines in factory employment which began in November have more than offset the increases of the preceding 8 months, so that the level of employment is 300,000 below last year.

The decline in manufacturing employment, coupled with declines in all but one of the other industry divisions, resulted in a drop of over a million in total nonagricultural employment over the year to a level of 36,946,000. The largest drops were in the construction and manufacturing industry sections. During 12-month period, 2,800,000 joined the armed forces.

Industrial and Business Employment

In spite of the curtailments in many of the war industries during the 4 months ending in March 1944, employment in the durable group was still 21,000 above that of March 1943. The nondurable group which includes, along with the civilian-goods groups, such groups as chemicals and rubber, declined by 349,000 during the year. The largest decline was in the textile-mill products group and was due to labor shortage and to the difficulty of retaining employees at relatively low wages. The textile and apparel groups together employed 200,000 fewer wage earners than in March 1943. The drop of 117,000 employees in the chemicals group reflects large cut-backs in the small-arms ammunition industry.

Employment declined in all but 3 of the 20 major manufacturing groups between February and March. The largest decline, 46,000, was in the transportation-equipment group. Employment in the automobile group declined 14,000. The transportation equipment and automoblie groups together employed slightly less than 3 million wage earners in March, or about 160,000 below the November 1943 level. These two groups include the plants which produce aircraft, aircraft engines, and ships.

Sizable employment declines were also reported by the chemicals, iron and steel, and machinery groups by reason of further reductions in production in such industries as small-arms ammunition, explosives, machine tools, and machine-tool accessories.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 1.—*Estimated Number of Wage Earners and Indexes of Wage-Earner Employment in Manufacturing Industries, by Major Industry Group* [1]

Industry group	Estimated number of wage earners (thousands)				Wage earner indexes (1939=100)	
	Mar.[2] 1944	Feb. 1944	Jan. 1944	Mar. 1943	Mar.[2] 1944	Feb. 1944
All manufacturing	13,399	13,593	13,667	13,727	163.6	165.9
Durable goods	8,120	8,238	8,296	8,099	224.9	228.1
Nondurable goods	5,279	5,355	5,371	5,628	115.2	116.9
Iron and steel and their products	1,691	1,714	1,721	1,726	170.5	172.9
Electrical machinery	753	752	748	693	290.5	290.4
Machinery, except electrical	1,216	1,236	1,248	1,233	230.1	233.9
Transportation equipment, except automobiles	2,211	2,257	2,276	2,187	1393.0	1422.2
Automobiles	724	738	751	649	179.9	183.4
Nonferrous metals and their products	407	413	417	410	177.6	180.0
Lumber and timber basic products	430	434	436	479	102.3	103.3
Furniture and finished lumber products	350	352	355	364	106.6	107.3
Stone, clay, and glass products	338	342	344	358	115.3	116.6
Textile-mill products and other fiber manufactures	1,151	1,164	1,164	1,270	100.6	101.8
Apparel and other finished textile products	808	810	808	903	102.3	102.7
Leather and leather products	313	312	310	354	90.2	89.8
Food	940	952	959	921	110.0	111.4
Tobacco manufactures	84	87	88	93	89.6	93.6
Paper and allied products	310	312	314	313	116.7	117.6
Printing, publishing, and allied industries	337	338	338	334	102.8	102.9
Chemicals and allied products	617	658	666	734	214.2	228.2
Products of petroleum and coal	128	127	125	122	121.4	119.8
Rubber products	202	203	202	186	166.8	167.4
Miscellaneous industries	389	392	397	398	159.0	160.3

[1] The estimates and indexes presented in this table have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency.
[2] Preliminary.

Public Employment

Of the total of 3,257,000 employees in the Federal executive service in March 1944, 429,000 (or 13 percent), were outside continental United States. War agencies, including the War and Navy Departments and the emergency war agencies, employed 413,000 of the employees outside continental United States, while other agencies, mainly the State Department, and the Interior, Agriculture, and Commerce Departments, Federal Security Agency, and Federal Works Agency, employed 16,000. Approximately half the 15,000 increase in Federal employees in March 1944 was inside the continental limits of the United States—in the Navy, Interior, and Post Office Departments. While the total number of Federal employees rose 174,000 from March 1943 to March 1944, the number located outside the continent rose 195,000. There was, thus, a decline of 21,000 in the number of workers on the continent.

The number of employees on construction and shipbuilding and repair projects financed wholly or partially from Federal funds declined 63,000 in March 1944 to a total of 1,746,000. The construction of nonresidential buildings and aviation facilities showed a decline of 28,000, shipbuilding and repair a decline of 20,000, war-production facilities (RFC) 11,000, and housing 2,000. The employment level a year ago on all these projects was 2,470,000, or 724,000 higher than in March 1944.

For the regular Federal services, data for the legislative and judicial services and for force-account employees in the executive service are reported to the Bureau of Labor Statistics; data for other executive-service employees are reported through the Civil Service Com-

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

mission. The Bureau of Labor Statistics receives monthly reports on employment and pay rolls for the various construction and shipbuilding and repair projects financed wholly or partially from Federal funds, directly from the shipyards and construction contractors and subcontractors.

A summary of employment and pay-roll data for the regular Federal services and for construction and shipbuilding and repair projects financed wholly or partially from Federal funds is given in table 2. It should be noted that data for employees located outside continental United States are included in the figures for the regular Federal services but are excluded from those for construction and shipbuilding and repair projects. Federal workers who receive either $1 a year or no compensation whatever for their services are excluded from the figures.

TABLE 2.—*Employment and Pay Rolls in Regular Federal Services and on Projects Financed Wholly or Partially from Federal Funds*

[Subject to revision]

Service or program	Employment			Pay rolls		
	March 1944	February 1944	March 1943	March 1944	February 1944	March 1943
Regular Federal services:						
Executive [1]	3,257,017	3,242,100	3,082,713	$630,341,000	$627,475,000	$569,091,000
War agencies [2]	2,437,051	2,425,344	2,275,904	464,575,000	462,360,000	408,336,000
Continental United States	2,024,363	2,019,818	2,056,463	(3)	(3)	(3)
Outside continental United States [4]	412,688	405,526	219,441	(3)	(3)	(3)
Other agencies	819,966	816,756	806,809	165,766,000	165,115,000	160,755,000
Continental United States	803,415	800,157	792,021	(3)	(3)	(3)
Outside continental United States [4]	16,551	16,599	14,788	(3)	(3)	(3)
Judicial	2,672	2,668	2,597	759,886	772,815	727,548
Legislative	6,152	6,115	6,154	1,491,206	1,485,891	1,415,145
Construction and shipbuilding and repair projects: [5]						
Financed from regular Federal appropriations	1,636,400	1,684,900	2,175,500	415,342,000	441,467,000	465,035,000
Construction projects	149,700	177,800	729,200	27,742,000	32,882,000	127,660,000
War	113,900	139,500	663,500	20,731,000	25,398,000	116,163,000
Other	35,800	38,300	65,700	7,011,000	7,484,000	11,497,000
Shipbuilding and repair [6]	1,486,700	1,507,100	1,446,300	387,600,000	408,585,000	337,375,000
Public housing	32,500	35,700	73,300	6,506,000	7,147,000	11,162,000
War public works	15,500	15,500	11,800	2,196,000	2,203,000	1,674,000
Financed by RFC	62,000	73,000	209,500	14,650,000	17,235,000	40,081,000
War	62,000	73,000	209,000	14,650,000	17,235,000	39,977,000
Other	0	0	500	0	0	104,000

[1] Includes employees in United States navy yards and on force-account construction who are also included under construction projects. Data for March 1943 are not strictly comparable with the series starting July 1943 because of the inclusion of employees on terminal leave in the earlier figure. Pay rolls for February and March 1944 are estimated.

[2] Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, Office for Emergency Management, Office of Censorship, Office of Price Administration, Office of Strategic Services, and the Petroleum Administration for War.

[3] Breakdown not available.

[4] Includes Alaska and the Panama Canal Zone.

[5] Continental United States only.

[6] Includes ship construction and repair in United States navy yards and the Federally financed part thereof in private shipyards; employment data are for wage earners and exclude office and administrative staff.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Detailed Reports for Industrial and Business Employment, February 1944

Estimates of Nonagricultural Employment

ESTIMATES of civil employees in nonagricultural establishments by major groups are given in table 1. The estimates are based on reports of employers to the Bureau of Labor Statistics, on data made available by the Bureau of Employment Security and the Bureau of Old-Age and Survivors Insurance of the Federal Security Agency, and on information supplied by other Government agencies, such as the Interstate Commerce Commission, the Civil Service Commission, and the Bureau of the Census. They do not include military personnel, emergency employment (such as WPA, NYA, and CCC), proprietors, self-employed persons, unpaid family workers, or domestics.

Estimates of employees in nonagricultural establishments, by States, are given each month in the Bureau of Labor Statistics mimeographed release on employment and pay rolls.

TABLE 1.—*Estimated Number of Employees in Nonagricultural Establishments, by Industry Division*

Industry division	Estimated number of employees (in thousands)			
	February 1944	January 1944	December 1943	February 1943
Total estimated employment [1]	37,123	37,257	38,485	37,958
Manufacturing	15,738	15,827	16,078	15,851
Mining	812	811	815	867
Contract construction and Federal force-account construction	641	685	773	1,386
Transportation and public utilities	3,663	3,640	3,661	3,456
Trade	6,197	6,255	6,832	6,291
Finance, service, and miscellaneous	4,259	4,248	4,271	4,270
Federal, State, and local government, excluding Federal force-account construction	5,813	5,791	6,055	5,837

[1] Estimates exclude proprietors of unincorporated businesses, self-employed persons, domestics employed in private homes, and personnel in the armed forces.

Industrial and Business Employment

Monthly reports on employment and pay rolls are available for 154 manufacturing industries and for 15 nonmanufacturing industries, including water transportation and class I steam railroads. The reports for the first two of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on water transportation are based on estimates prepared by the Maritime Commission, and those on class I steam railroads are compiled by the Interstate Commerce Commission.

The employment, pay roll, hours, and earnings figures for manufacturing, mining, laundries, and dyeing and cleaning cover wage earners only; but the figures for public utilities, brokerage, insurance, and hotels relate to all employees except corporation officers and executives, while for trade they relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover wage earners and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from approximately

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

25 percent for wholesale and retail trade, dyeing and cleaning, and insurance, to approximately 80 percent for public utilities and 90 percent for mining.

The general manufacturing indexes are computed from reports supplied by representative establishments in the 154 manufacturing industries surveyed. These reports cover more than 65 percent of the total wage earners in all manufacturing industries of the country and about 80 percent of the wage earners in the 154 industries covered.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and the amount of pay rolls for the pay period ending nearest the 15th of the month.

INDEXES OF EMPLOYMENT AND PAY ROLLS

Employment and pay-roll indexes, for both manufacturing and nonmanufacturing industries, for December 1943, and January and February 1944, and for February 1943, are presented in tables 3 and 5.

The figures relating to all manufacturing industries combined, to the durable- and nondurable-goods divisions, and to the major industry groups, have been adjusted to conform to levels indicated by final data for 1941 and preliminary data for the second quarter of 1942 released by the Bureau of Employment Security of the Federal Security Agency. The Bureau of Employment Security data referred to are (a) employment totals reported by employers under State unemployment-compensation programs, and (b) estimates of the number of employees not reported under the programs of some of these States, which do not cover small establishments. The latter estimates were obtained from tabulations prepared by the Bureau of Old-Age and Survivors Insurance, which obtains reports from all employers, regardless of size of establishment.

Not all industries in each major industry group are represented in the tables, since minor industries are not canvassed by the Bureau, and others cannot be shown because of their close relationship to the war program. Furthermore, no attempt has been made to allocate among the separate industries the adjustments to unemployment-compensation data. Hence, the estimates for individual industries within a group will not in general add to the total estimate for that group.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries* [1]

Industry [2]	Estimated number of wage earners (in thousands)			
	February 1944	January 1944	December 1943	February 1943
All manufacturing	13,593	13,667	13,878	13,633
Durable goods	8,238	8,296	8,403	7,998
Nondurable goods	5,355	5,371	5,475	5,635
Durable goods				
Iron and steel and their products	1,714	1,721	1,736	1,715
Blast furnaces, steel works and rolling mills	495.5	497.8	502.9	523.9
Gray-iron and semisteel castings	77.1	77.2	78.4	85.4
Malleable-iron castings	25.8	25.8	25.9	27.2
Steel castings	80.0	80.3	80.2	84.0
Cast-iron pipe and fittings	15.3	15.4	15.5	18.5
Tin cans and other tinware	35.1	33.6	33.6	29.1
Wire drawn from purchased rods	35.2	35.7	35.5	36.1
Wirework	33.9	34.0	34.4	31.8
Cutlery and edge tools	22.9	22.7	22.7	21.3
Tools (except edge tools, machine tools, files, and saws)	28.6	28.7	28.4	27.8
Hardware	47.8	47.5	47.8	43.3
Plumbers' supplies	23.7	23.5	23.4	22.6
Stoves, oil burners, and heating equipment, not elsewhere classified	62.6	62.8	62.5	52.2
Steam and hot-water heating apparatus and steam fittings	58.9	59.7	60.1	58.5
Stamped and enameled ware and galvanizing	90.3	91.3	93.4	82.8
Fabricated structural and ornamental metalwork	74.9	74.6	74.4	70.3
Metal doors, sash, frames, molding, and trim	13.6	13.7	13.8	11.9
Bolts, nuts, washers, and rivets	28.4	29.0	30.0	28.1
Forgings, iron and steel	40.5	40.7	40.5	39.8
Wrought pipe, welded and heavy riveted	26.3	26.2	26.0	24.2
Screw-machine products and wood screws	48.3	48.4	49.1	50.2
Steel barrels, kegs, and drums	7.7	8.2	8.7	6.8
Electrical machinery	752	748	751	676
Electrical equipment [3]	466.3	465.2	468.8	445.7
Machinery, except electrical	1,236	1,248	1,257	1,220
Machinery and machine-shop products	492.8	498.5	499.5	476.4
Tractors	60.1	59.1	58.3	48.5
Agricultural machinery, excluding tractors	45.0	44.1	42.8	33.3
Machine tools	86.2	88.9	92.0	121.4
Machine-tool accessories [3]	75.8	78.4	80.6	92.3
Textile machinery	28.4	28.5	29.0	28.7
Pumps and pumping equipment	83.3	82.6	82.3	72.5
Typewriters	12.4	12.4	12.6	11.5
Cash registers, adding and calculating machines	34.9	35.6	36.2	33.4
Washing machines, wringers, and driers, domestic	14.6	14.8	15.0	11.9
Sewing machines, domestic and industrial	9.5	10.0	10.6	11.0
Refrigerators and refrigeration equipment [4]	56.5	59.0	58.8	51.0
Transportation equipment, except automobiles	2,257	2,276	2,318	2,132
Locomotives [3]	35.8	36.4	36.7	33.2
Cars, electric- and steam-railroad [3]	60.3	60.5	59.6	59.7
Aircraft and parts, excluding aircraft engines [3]	708.4	719.5	730.7	686.5
Shipbuilding and boat building [3]	1,040.2	1,048.9	1,078.6	1,003.1
Motorcycles, bicycles, and parts	10.1	10.3	10.4	10.0
Automobiles	738	751	759	642
Nonferrous metals and their products	413	417	420	412
Smelting, and refining, primary, of nonferrous metals [5]	57.3	58.8	59.9	52.5
Alloying and rolling and drawing of nonferrous metals, except aluminum [3]	74.0	74.6	74.8	76.6
Clocks and watches	25.3	25.5	25.5	26.1
Jewelry (precious metals) and jewelers' findings	14.5	14.7	15.0	16.7
Silverware and plated ware	11.1	11.5	11.8	11.5
Lighting equipment	26.3	26.2	26.1	22.5
Aluminum manufacturers [3]	83.9	85.7	87.4	73.9
Sheet-metal work, not elsewhere classified	31.9	30.4	29.4	29.4
Lumber and timber basic products	434	436	454	478
Sawmills and logging camps	235.3	235.5	246.2	260.4
Planing and plywood mills	76.2	77.5	79.1	82.8
Furniture and finished lumber products	352	355	357	364
Mattresses and bedsprings	17.0	17.7	18.5	17.4
Furniture	165.8	167.0	166.8	169.6
Wooden boxes, other than cigar	28.3	28.4	28.8	31.3
Caskets and other morticians' goods	112.5	12.2	12.0	12.3
Wood preserving	9.9	9.9	10.2	10.6
Wood, turned and shaped	21.9	22.1	22.8	22.4

See footnotes at end of table.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Continued

Industry [2]	Estimated number of wage earners (in thousands)			
	February 1944	January 1944	December 1943	February 1943
Durable goods—Continued				
Stone, clay, and glass products	342	344	351	359
Glass and glassware	92.1	91.9	92.1	84.6
Glass products made from purchased glass	10.7	10.8	11.1	12.1
Cement	17.7	18.9	20.9	25.8
Brick, tile, and terra cotta	45.2	45.8	46.6	53.5
Pottery and related products	41.9	40.9	42.1	44.6
Gypsum	4.6	4.6	4.6	4.3
Wallboard, plaster (except gypsum), and mineral wool	9.9	10.7	10.7	11.4
Lime	8.7	8.9	9.0	9.6
Marble, granite, slate, and other products	12.5	12.2	12.5	12.2
Abrasives	22.6	23.3	23.9	22.0
Asbestos products	22.1	22.0	22.0	21.8
Nondurable goods				
Textile-mill products and other fiber manufactures	1,164	1,164	1,188	1,275
Cotton manufactures, except smallwares	460.6	459.3	473.2	504.8
Cotton smallwares	14.6	14.7	15.3	17.0
Silk and rayon goods	93.8	93.4	94.9	97.9
Woolen and worsted manufactures, except dyeing and finishing	158.9	15.82	160.4	175.3
Hosiery	110.8	111.5	113.2	122.6
Knitted cloth	11.5	11.4	11.6	12.0
Knitted outerwear and knitted gloves	30.8	30.7	31.7	32.0
Knitted underwear	38.2	38.7	39.4	44.5
Dyeing and finishing textiles, including woolen and worsted	64.5	65.3	65.0	72.4
Carpets and rugs, wool	20.9	20.8	20.9	24.0
Hats, fur-felt	9.9	9.8	9.9	10.0
Jute goods, except felts	3.5	3.5	3.6	4.1
Cordage and twine	16.7	16.6	16.8	16.7
Apparel and other finished textile products	810	808	815	897
Men's clothing, not elsewhere classified	217.6	216.5	218.0	239.8
Shirts, collars, and nightwear	54.8	54.8	55.8	62.7
Underwear and neckwear, men's	12.7	12.3	12.6	12.8
Work shirts	16.9	16.9	17.3	18.7
Women's clothing, not elsewhere classified	228.7	228.7	229.9	252.0
Corsets and allied garments	15.9	16.1	16.3	17.2
Millinery	20.9	19.3	18.2	22.8
Handkerchiefs	3.3	3.4	3.5	3.9
Curtains, draperies, and bedspreads	14.2	15.0	16.1	18.2
Housefurnishings, other than curtains, etc	12.0	12.7	13.4	16.6
Textile bags	15.8	15.4	15.3	16.4
Leather and leather products	312	310	313	359
Leather	41.2	40.9	41.1	49.2
Boot and shoe cut stock and findings	16.3	16.4	16.5	18.7
Boots and shoes	176.0	175.0	176.0	200.8
Leather gloves and mittens	13.6	13.4	13.8	14.9
Trunks and suitcases	11.9	11.8	12.4	14.5
Food	952	959	990	936
Slaughtering and meat packing	168.2	172.3	170.6	176.8
Butter	20.4	19.6	19.8	19.8
Condensed and evaporated milk	12.5	12.1	12.1	11.9
Ice cream	13.3	13.0	13.4	12.8
Flour	29.6	30.0	29.7	28.1
Feeds, prepared	21.6	21.8	21.8	20.9
Cereal preparations	9.6	9.6	9.5	9.8
Baking	257.8	258.6	262.8	252.0
Sugar refining, cane	14.2	14.2	14.2	12.7
Sugar, beet	3.8	5.4	13.9	5.0
Confectionery	59.1	59.0	60.8	58.2
Beverages, nonalcoholic	26.1	25.9	26.6	23.8
Malt liquors	47.1	47.1	46.9	41.4
Canning and preserving	93.4	94.5	108.6	90.0
Tobacco manufactures	87	88	90	94
Cigarettes	35.2	35.7	35.8	33.1
Cigars	38.4	37.9	39.7	46.0
Tobacco (chewing and smoking) and snuff	8.2	8.7	8.6	8.6

See footnotes at end of table.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Continued

Industry[2]	Estimated number of wage earners (in thousands)			
	February 1944	January 1944	December 1943	February 1943
Nondurable goods—Continued				
Paper and allied products	312	314	316	313
Paper and pulp	148.4	149.4	150.0	150.3
Paper goods, other	47.5	47.4	47.5	49.7
Envelopes	10.2	10.2	10.3	10.3
Paper bags	13.6	13.2	13.1	12.3
Paper boxes	83.1	84.0	85.5	80.6
Printing, publishing, and allied industries	338	338	342	338
Newspapers and periodicals	109.9	110.5	113.0	113.2
Printing, book and job	136.5	136.5	137.1	135.0
Lithographing	24.8	24.9	25.3	25.3
Bookbinding	30.3	30.1	30.4	28.6
Chemicals and allied products	658	666	692	726
Paints, varnishes, and colors	29.9	29.6	29.9	29.1
Drugs, medicines, and insecticides	51.1	50.2	48.6	42.8
Perfumes and cosmetics	11.4	11.3	11.8	10.5
Soap	13.6	13.5	13.6	13.6
Rayon and allied products	52.2	52.1	53.0	51.2
Chemicals, not elsewhere classified [4]	121.4	122.3	123.3	112.2
Compressed and liquefied gases	6.2	6.1	6.2	6.4
Cottonseed oil	18.9	20.2	21.7	19.5
Fertilizers	26.5	23.5	22.1	26.5
Products of petroleum and coal	127	125	126	122
Petroleum refining	84.0	82.8	82.6	77.3
Coke and byproducts	23.2	23.3	23.5	25.6
Paving materials	1.4	1.5	1.7	1.3
Roofing materials	9.9	9.8	9.8	9.5
Rubber products	203	202	201	185
Rubber tires and inner tubes	94.1	94.2	93.5	81.6
Rubber boots and shoes	21.4	21.3	21.7	22.2
Rubber goods, other	77.1	76.7	76.2	72.0
Miscellaneous industries	392	397	402	390
Photographic apparatus	29.7	30.0	30.0	27.1
Pianos, organs, and parts	9.7	10.0	10.0	9.4
Games, toys and dolls	16.0	15.9	16.4	14.7
Buttons	10.5	10.3	10.3	11.6
Fire extinguishers [3]	6.7	7.2	7.4	7.7

[1] Estimates for the major industry groups have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries and does not publish wage earners in war industries, the sum of the individual industry estimates will not agree with totals shown for the major industry groups.

[2] Unpublished information concerning the following war industries may be obtained by authorized agencies upon requests: Aircraft engines; ammunition; communication equipment; engines and turbines; explosives and safety fuses; firearms; fireworks; optical instruments and ophthalmic goods; professional and scientific instruments and fire-control equipment; and radios and phonographs.

[3] Comparable data for earlier months available upon request.

[4] Revisions have been made as follows in the data published for earlier months:

Refrigerators and refrigeration equipment.—October and November 1943 wage earners to 57.7 and 58.7.
Chemicals, not elsewhere classified.—October and November 1943 wage earners to 122.2 and 123.0.

[5] Revised series, not comparable with previously published data. Data for earlier months back to January 1939 available upon request.

itized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]

[1939 average=100]

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943
All manufacturing	165.9	166.8	169.4	166.4	327.6	327.9	328.3	297.5
Durable goods	228.1	229.7	232.7	221.5	460.1	462.3	461.2	410.6
Nondurable goods	116.9	117.2	119.5	123.0	198.0	196.5	198.4	186.9
Durable goods								
Iron and steel and their products	172.9	173.6	175.1	173.0	318.4	317.9	316.7	291.2
Blast furnaces, steel works, and rolling mills	127.6	128.2	129.5	134.9	225.2	223.6	222.5	211.8
Gray-iron and semi-steel castings	132.0	132.1	134.2	146.1	259.1	257.8	254.2	260.3
Malleable-iron castings	143.3	142.8	143.4	150.9	295.7	291.2	289.9	266.2
Steel castings	266.0	266.7	266.6	279.1	487.4	488.1	482.8	475.8
Cast-iron pipe and fittings	92.6	93.3	93.6	112.1	165.6	167.2	170.4	183.3
Tin cans and other tinware	110.6	105.8	105.8	91.5	185.5	179.5	175.1	137.6
Wire drawn from purchased rods	160.2	162.6	161.8	164.2	264.5	270.9	259.9	252.6
Wirework	111.5	111.9	113.2	104.7	222.4	226.6	221.4	185.4
Cutlery and edge tools	148.6	147.3	147.2	138.3	316.1	301.9	298.0	265.4
Tools (except edge tools, machine tools, files, and saws)	186.9	187.2	185.3	181.6	355.9	351.1	346.2	323.7
Hardware	134.0	133.2	134.2	121.6	266.2	270.3	265.7	226.5
Plumbers' supplies	96.3	95.4	95.1	91.5	172.1	164.8	166.8	147.3
Stoves, oil burners, and heating equipment, not elsewhere classified	135.6	136.1	135.6	113.1	252.9	252.8	246.3	184.1
Steam- and hot-water heating apparatus and steam fittings	194.3	197.0	198.4	192.9	366.2	350.3	369.2	336.2
Stamped and enameled ware and galvanizing	162.6	164.3	168.1	149.0	328.9	322.0	331.6	262.9
Fabricated structural and ornamental metalwork	210.9	210.2	209.4	197.9	414.6	411.1	396.9	343.1
Metal doors, sash, frames, molding, and trim	175.3	176.5	177.9	153.2	319.3	325.8	334.5	256.0
Bolts, nuts, washers, and rivets	198.4	202.6	209.8	196.1	393.3	395.0	400.4	344.7
Forgings, iron and steel	263.2	264.6	263.6	258.9	527.5	523.6	520.5	495.0
Wrought pipe, welded and heavy riveted	314.8	312.5	310.6	288.9	571.0	570.5	564.7	579.0
Screw-machine products and wood screws	285.3	286.3	289.8	296.8	561.7	563.9	562.2	532.8
Steel barrels, kegs, and drums	126.7	134.9	142.6	112.6	240.3	265.7	288.2	202.6
Electrical machinery	290.4	288.7	289.8	260.8	512.7	509.7	500.0	441.6
Electrical equipment [3]	257.9	257.3	259.3	246.5	465.7	464.8	459.2	427.3
Machinery, except electrical	233.9	236.2	238.0	230.8	440.5	447.8	440.5	410.0
Machinery and machine-shop products	243.6	246.4	246.9	235.5	454.0	461.3	449.9	413.4
Tractors	192.2	188.9	186.5	155.0	301.2	298.2	289.2	238.8
Agricultural machinery, excluding tractors	161.8	158.5	154.0	119.7	322.3	309.4	294.9	215.4
Machine tools	235.3	242.8	251.1	331.4	404.1	419.8	425.6	557.7
Machine-tool accessories [3]	301.3	311.7	320.3	366.9	518.7	533.9	536.3	596.2
Textile machinery	129.7	130.2	132.2	131.1	236.5	235.8	239.0	225.7
Pumps and pumping equipment	343.7	341.0	339.5	299.2	734.7	736.8	709.2	601.8
Typewriters	76.5	76.2	77.8	71.1	154.3	155.9	159.2	131.7
Cash registers, adding and calculating machines	177.4	180.8	183.8	169.9	351.2	371.0	366.7	306.8
Washing machines, wringers and driers, domestic	195.2	197.8	201.6	159.8	343.7	343.7	347.0	269.9
Sewing machines, domestic and industrial	121.0	127.7	135.0	140.7	260.6	274.0	287.3	277.1
Refrigerators and refrigeration equipment [4]	160.6	167.9	167.2	145.1	286.8	306.6	301.8	236.5
Transportation equipment, except automobiles	1422.2	1434.2	1460.5	1343.1	2854.5	2859.9	2901.1	2486.5
Locomotives [3]	552.7	562.8	567.7	512.8	1253.9	1289.2	1330.6	1053.1
Cars, electric- and steam-railroad [3]	246.0	246.5	243.0	243.3	488.7	480.2	476.1	449.7
Aircraft and parts, excluding aircraft engines [3]	1785.4	1813.5	1841.7	1730.2	3381.1	3438.9	3323.5	2856.0
Shipbuilding and boatbuilding [3]	1502.3	1514.8	1557.7	1448.6	3033.5	3011.8	3231.9	2766.6
Motorcycles, bicycles and parts	144.6	148.2	149.0	143.6	249.4	273.3	261.4	249.3
Automobiles	183.4	186.7	188.6	159.5	339.9	351.1	334.4	282.2
Nonferrous metals and their products	180.0	181.8	183.3	179.6	335.7	337.8	335.4	308.6
Smelting and refining, primary, of nonferrous metals [5]	207.3	212.8	216.9	189.9	371.0	377.8	385.2	302.1
Alloying and rolling and drawing of nonferrous metals except aluminum [3]	190.6	192.1	192.8	197.3	355.2	359.1	349.3	342.7
Clocks and watches	124.6	125.8	125.5	128.7	252.9	249.8	243.5	240.3
Jewelry (precious metals) and jewelers' findings	100.3	102.0	104.1	115.4	160.2	160.2	163.5	169.8
Silverware and plated ware	91.2	94.5	97.4	94.9	161.1	169.0	174.7	154.9
Lighting equipment	128.4	128.0	127.7	110.0	229.3	226.3	223.1	187.3
Aluminum manufactures [3]	356.1	364.0	371.4	314.0	641.0	656.5	659.4	533.1
Sheet-metal work, not elsewhere classified	169.9	162.1	156.8	156.9	328.6	308.6	294.5	263.8

See footnotes at end of table.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]—Continued

[1939 average=100]

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943
Durable goods—Continued								
Lumber and timber basic products	103.3	103.8	107.9	113.8	182.0	175.9	188.6	173.7
Sawmills and logging camps	81.7	81.8	85.5	90.4	146.1	139.0	151.2	138.7
Planing and plywood mills	104.9	106.7	108.9	114.0	172.1	173.6	178.9	166.5
Furniture and finished lumber products	107.3	108.2	108.9	111.0	187.9	186.3	188.9	171.8
Mattresses and bedsprings	92.6	96.6	100.8	95.0	145.8	158.0	164.6	136.5
Furniture	104.1	104.9	104.8	106.6	184.1	181.3	183.2	165.6
Wooden boxes, other than cigar	111.8	112.1	113.4	123.3	204.4	202.5	207.7	195.8
Caskets and other morticians' goods	100.1	98.3	96.4	99.0	169.0	162.5	157.8	147.6
Wood preserving	88.1	87.7	91.0	94.1	165.7	157.6	166.3	161.7
Wood, turned and shaped	99.7	100.5	103.7	102.1	170.7	171.2	173.5	163.4
Stone, clay and glass products	116.6	117.3	119.7	122.4	188.9	187.7	192.2	179.2
Glass and glassware	131.9	131.6	131.9	121.1	208.0	207.4	206.9	173.6
Glass products made from purchased glass	107.3	108.0	110.7	120.8	171.9	170.2	176.0	164.4
Cement	74.1	79.2	87.7	108.5	106.2	110.2	127.4	138.7
Brick, tile, and terra cotta	79.7	80.7	82.1	94.3	123.6	119.7	125.6	135.9
Pottery and related products	126.5	123.4	127.3	134.8	186.2	175.2	184.7	186.4
Gypsum	93.2	92.5	93.8	86.7	157.1	160.5	158.5	131.3
Wallboard, plaster (except gypsum), and mineral wool	121.5	132.0	132.5	140.6	218.8	233.0	228.9	215.4
Lime	92.1	93.6	95.4	101.6	170.4	169.7	171.2	160.1
Marble, granite, slate, and other products	67.7	66.0	67.3	66.1	96.6	93.3	97.7	76.9
Abrasives	292.8	301.5	309.5	284.8	475.4	492.2	487.5	453.2
Asbestos products	138.9	138.2	138.7	137.3	267.1	267.7	268.1	237.4
Nondurable goods								
Textile-mill products and other fiber manufactures	101.8	101.7	103.9	111.5	174.3	171.9	175.9	181.1
Cotton manufactures, except smallwares	116.3	116.0	119.5	127.5	202.2	199.1	207.2	217.2
Cotton smallwares	109.3	110.2	114.6	127.8	187.9	190.6	196.5	214.4
Silk and rayon goods	78.3	78.0	79.2	81.7	138.8	135.6	138.7	132.2
Woolen and worsted manufactures, except dyeing and finishing	106.5	106.0	107.5	117.4	199.4	197.2	198.0	207.2
Hosiery	69.6	70.1	71.2	77.1	109.3	107.0	110.1	108.4
Knitted cloth	105.2	104.5	106.1	110.3	177.2	174.7	178.5	168.7
Knitted outerwear and knitted gloves	109.4	109.2	112.7	113.7	194.4	189.6	193.9	178.7
Knitted underwear	99.1	100.3	102.3	115.5	175.6	172.8	177.1	183.7
Dyeing and finishing textiles, including woolen and worsted	96.5	97.7	97.2	108.2	153.9	154.8	154.3	163.8
Carpets and rugs, wool	81.5	81.3	81.8	93.8	137.0	135.3	133.9	148.4
Hats, fur-felt	67.9	67.2	68.3	69.0	123.4	122.2	123.4	115.9
Jute goods, except felts	97.1	98.5	99.7	115.1	180.9	182.0	184.7	198.9
Cordage and twine	137.7	136.9	139.2	137.9	246.0	240.0	241.4	223.6
Apparel and other finished textile products	102.7	102.3	103.2	113.7	175.4	167.5	163.5	167.5
Men's clothing, not elsewhere classified	99.5	99.0	99.7	109.7	163.2	156.5	156.7	159.2
Shirts, collars, and nightwear	77.8	77.7	79.2	89.0	133.1	129.1	133.8	133.5
Underwear and neckwear, men's	78.8	76.2	78.3	79.6	153.5	141.3	143.8	128.6
Work shirts	125.8	125.4	128.4	139.4	232.4	220.2	218.9	225.8
Women's clothing, not elsewhere classified	84.2	84.2	84.6	92.8	148.3	141.4	133.2	137.2
Corsets and allied garments	84.6	85.5	86.7	91.5	144.9	139.9	140.3	133.2
Millinery	86.0	79.5	75.1	94.0	141.0	113.8	99.7	135.9
Handkerchiefs	67.5	70.5	71.7	80.8	119.0	112.8	120.5	124.1
Curtains, draperies, and bedspreads	83.7	88.4	95.4	107.5	155.1	163.8	169.9	163.6
Housefurnishings, other than curtains, etc	113.3	119.9	126.2	156.0	203.3	219.8	229.7	249.9
Textile bags	132.2	128.2	127.6	136.9	207.4	202.2	195.3	196.1
Leather and leather products	89.8	89.3	90.2	103.3	151.9	147.3	147.2	157.4
Leather	87.3	86.5	87.0	104.2	146.2	141.0	140.6	153.8
Boot and shoe cut stock and findings	86.6	87.1	87.7	99.4	138.9	136.8	134.5	142.2
Boots and shoes	80.7	80.3	80.7	92.1	137.8	134.0	133.4	143.1
Leather gloves and mittens	135.7	134.0	137.9	149.3	227.6	222.5	223.3	215.2
Trunks and suitcases	142.9	141.9	149.4	174.7	235.0	221.0	239.3	241.4
Food	111.4	112.3	115.9	109.5	176.6	179.9	182.9	150.7
Slaughtering and meat packing	139.6	143.0	141.6	146.8	226.6	243.2	238.7	185.1
Butter	113.6	109.3	110.5	110.2	171.4	162.9	164.7	145.6
Condensed and evaporated milk	129.3	124.5	124.8	123.0	198.4	188.7	185.1	171.4
Ice cream	85.0	82.8	85.1	81.5	116.1	111.5	113.5	103.8
Flour	119.5	120.9	119.7	113.3	191.1	200.0	196.4	169.3
Feeds, prepared	140.4	141.2	141.3	135.9	228.8	230.2	225.8	207.1
Cereal preparations	128.8	128.9	127.2	131.9	217.8	224.5	215.8	198.4

See footnotes at end of table.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]—Continued

[1939 average=100]

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943
Nondurable goods—Continued								
Food—Continued.								
Baking	111.8	112.1	113.9	109.2	161.1	160.6	163.2	141.5
Sugar refining, cane	100.6	100.3	100.0	89.5	155.6	156.4	157.6	115.6
Sugar, beet	36.0	51.5	133.2	47.9	56.8	75.9	174.9	69.5
Confectionery	118.8	118.7	122.3	117.1	187.4	187.9	190.4	163.5
Beverages, nonalcoholic	122.9	122.0	125.3	111.8	151.7	151.9	156.1	126.3
Malt liquors	130.6	130.5	130.1	114.9	181.8	178.2	178.5	144.0
Canning and preserving	69.4	70.3	80.8	67.0	133.2	132.3	149.0	112.8
Tobacco manufactures	93.6	94.2	96.4	100.2	154.9	158.2	161.1	138.5
Cigarettes	128.5	130.1	130.4	120.6	179.6	190.1	190.3	145.7
Cigars	75.4	74.5	78.0	90.4	142.1	138.1	143.2	136.4
Tobacco (chewing and smoking) and snuff	89.6	94.9	94.2	94.2	128.4	138.4	139.9	129.2
Paper and allied products	117.6	118.2	119.1	117.8	185.1	183.3	183.7	171.3
Paper and pulp	108.0	108.7	109.1	109.3	176.3	173.2	174.6	164.8
Paper goods, other	126.2	126.0	126.2	132.0	189.7	188.3	185.4	178.2
Envelopes	117.1	117.7	119.0	118.3	176.5	175.1	172.7	164.6
Paper bags	122.6	118.9	118.2	111.1	199.0	195.6	191.2	164.6
Paper boxes	120.1	121.4	123.6	116.5	183.1	184.6	185.7	166.6
Printing, publishing, and allied industries	102.9	103.1	104.4	103.0	133.6	133.5	134.9	121.6
Newspapers and periodicals	92.6	93.1	95.2	95.4	113.4	112.7	116.0	107.3
Printing, book and job	108.1	108.1	108.5	106.9	143.6	144.2	143.9	129.1
Lithographing	95.4	95.7	97.3	97.1	130.3	130.3	130.9	113.7
Bookbinding	117.6	116.7	118.0	111.0	189.3	190.1	187.7	163.3
Chemicals and allied products	228.2	230.9	240.1	251.9	390.4	396.1	405.5	400.9
Paints, varnishes and colors	106.2	105.3	106.2	103.5	162.2	159.5	159.0	140.2
Drugs, medicines and insecticides	186.6	183.0	177.5	156.0	273.9	267.6	259.3	212.2
Perfumes and cosmetics	110.0	108.7	114.0	101.3	145.0	146.8	155.5	131.6
Soap	100.1	99.6	100.4	100.0	162.4	159.8	160.8	142.9
Rayon and allied products	108.1	108.0	109.7	106.1	169.3	168.6	167.6	150.5
Chemicals, not elsewhere classified [4]	174.5	175.8	177.2	161.3	296.1	297.7	294.0	250.0
Compressed and liquefied gases	155.3	153.7	156.5	161.5	273.7	264.1	270.6	249.6
Cottonseed oil	124.1	133.1	142.8	128.4	240.1	250.2	274.9	198.4
Fertilizers	141.3	125.1	118.0	141.1	274.1	248.3	227.3	229.0
Products of petroleum and coal	119.8	118.4	118.9	115.2	201.6	196.9	197.3	164.9
Petroleum refining	115.3	113.6	113.4	106.1	192.2	185.0	186.4	151.3
Coke and byproducts	106.9	107.6	108.3	118.0	181.9	185.8	180.6	170.4
Paving materials	58.4	59.7	68.5	55.2	104.7	105.6	121.9	81.4
Roofing materials	123.2	121.5	122.3	118.0	208.9	210.3	211.5	181.5
Rubber products	167.4	167.1	166.4	152.8	293.7	288.4	285.5	238.3
Rubber tires and inner tubes	173.8	174.1	172.7	150.7	295.6	288.9	286.8	228.9
Rubber boots and shoes	144.3	143.6	146.2	149.6	252.9	248.9	245.9	240.8
Rubber goods, other	149.0	148.1	147.3	139.1	262.3	260.1	255.3	219.9
Miscellaneous industries	160.3	162.2	164.2	159.5	300.8	296.9	300.8	270.6
Photographic apparatus	172.0	173.6	174.0	156.7	278.5	277.3	273.0	241.2
Pianos, organs and parts	127.5	131.1	131.8	122.9	244.5	246.2	244.1	226.1
Games, toys and dolls	85.6	85.3	87.9	78.5	161.2	156.9	150.3	133.6
Buttons	95.5	94.3	93.7	105.4	180.5	178.0	173.7	172.0
Fire extinguishers [3]	676.8	719.0	742.1	774.3	1238.5	1245.0	1340.1	1257.9

[1] Indexes for the major industry groups have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency. Indexes for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data.

[2] Unpublished information concerning the following war industries may be obtained by authorized agencies upon request: Aircraft engines; ammunition; communication equipment; engines and turbines; explosives and safety fuses; firearms; fireworks; optical instruments and ophthalmic goods; professional and scientific instruments and fire-control equipment; and radios and phonographs.

[3] Comparable indexes for earlier months available upon request.

[4] Revisions have been made as follows in the data published for earlier months:

Refrigerators and refrigeration equipment.—October and November 1943 employment indexes to 164.1 and 166.9; November 1943 pay-roll index to 298.3.

Chemicals, not elsewhere classified.—October and November 1943 employment indexes to 175.7 and 176.8; pay-roll indexes to 294.1 and 296.6.

[5] Revised series, not comparable with previously published data. Data for earlier months back to January 1939 available upon request.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 4.—*Estimated Number of Wage Earners in Selected Nonmanufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	February 1944	January 1944	December 1943	February 1943
Anthracite mining	69.8	69.1	69.6	74.1
Bituminous-coal mining	370	370	373	409
Metal mining	88.6	89.4	90.9	101
Iron	28.8	28.9	29.7	31.7
Copper	30.1	30.6	30.8	33.4
Lead and zinc	18.7	18.7	18.8	19.7
Gold and silver	6.4	6.4	6.4	8.6
Miscellaneous metal mining	4.6	4.8	5.2	7.4
Electric light and power [1]	204	205	205	215
Street railways and busses [1]	232	230	230	222
Hotels (year-round) [1]	352	350	352	337
Power laundries	250	248	248	268
Cleaning and dyeing	77.1	75.1	76.8	76.4
Class I steam railroads [2]	1,384	1,359	1,351	1,313

[1] Data include salaried personnel.
[2] Source: Interstate Commerce Commission. Data include salaried personnel.

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries*

[1939 average=100]

Industry	Employment indexes				Pay-roll indexes			
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1943
Coal mining:								
Anthracite	84.2	83.4	84.0	89.5	190.2	146.0	156.6	154.9
Bituminous	99.8	99.8	100.6	110.4	231.0	228.9	231.3	196.2
Metal mining	100.5	101.4	103.1	114.4	157.0	157.4	160.8	166.3
Iron	143.0	143.5	147.8	157.9	222.4	218.9	221.3	229.6
Copper	126.2	128.6	129.4	139.8	207.4	209.9	216.5	213.7
Lead and zinc	120.6	120.3	120.8	127.4	214.9	214.4	216.0	209.7
Gold and silver	26.0	26.0	25.7	34.8	33.0	33.8	33.2	43.0
Miscellaneous	114.9	121.9	130.1	184.7	176.9	187.1	205.3	283.9
Quarrying and nonmetallic mining	82.7	83.5	89.7	96.7	140.5	140.3	153.9	150.3
Crude-petroleum production [1]	81.2	81.1	80.9	82.0	126.9	126.2	123.8	106.4
Public utilities:								
Telephone and telegraph	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Electric light and power	83.6	83.8	84.1	88.1	113.9	112.9	111.9	106.7
Street railways and busses	119.9	118.7	118.7	114.8	166.5	161.9	161.4	150.6
Wholesale trade	95.6	95.0	95.9	97.6	132.9	131.3	132.2	124.3
Retail trade [3]	96.0	97.5	112.6	97.3	121.4	122.5	135.4	114.3
Food [3]	106.6	106.8	108.7	106.5	133.0	132.7	133.7	124.6
General merchandise	106.2	110.0	156.5	108.2	129.6	133.3	174.4	125.5
Apparel	102.4	105.2	127.7	103.0	129.5	134.1	159.1	123.8
Furniture and housefurnishings [3]	63.5	64.6	69.8	69.3	85.3	85.7	93.9	83.4
Automotive	65.8	65.9	66.3	61.1	93.2	91.7	91.8	78.4
Lumber and building materials	88.3	88.7	92.2	89.1	122.5	122.6	124.5	111.8
Hotels (year-round) [4]	109.3	108.5	109.0	104.4	152.6	148.8	149.7	130.6
Power laundries	110.5	109.9	109.9	118.5	154.4	155.0	151.8	145.4
Cleaning and dyeing	114.2	111.2	113.8	113.2	167.9	163.5	163.4	143.8
Class I steam railroads [5]	140.2	137.7	136.9	132.9	(6)	(6)	(6)	(6)
Water transportation [7]	205.7	198.9	190.8	110.2	472.6	448.7	427.1	257.8

[1] Does not include well drilling or rig building.
[2] Data are not available because of the merger of Western Union and Postal Telegraph.
[3] Revisions have been made as follows in data published for earlier months:
Retail trade, total—Pay-roll index, September 1943 to 120.2, October 1943 to 123.6.
Retail food group.—Employment index, August 1943 to 102.8, September 1943 to 104.5. Pay-roll index, August 1943 to 132.0, September 1943 to 129.5, October 1943 to 131.5.
Retail furniture group.—August 1943 employment index to 66.0, pay-roll index to 86.7.
[4] Cash payments only; additional value of board, room, and tips, not included.
[5] Source: Interstate Commerce Commission.
[6] Not available.
[7] Based on estimates prepared by the U. S. Maritime Commission covering employment on steam and motor merchant vessels of 1,000 gross tons or over in deep-sea trade only.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

AVERAGE EARNINGS AND HOURS

Average weekly earnings and hours and average hourly earnings for December 1943 and January and February 1944, where available, are given in table 6 for both manufacturing and nonmanufacturing industries. The average weekly earnings for individual industries are computed by dividing the weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As not all reporting establishments supply information on man-hours, the average hours worked per week and average hourly earnings shown in that table are necessarily based on data furnished by a slightly smaller number of reporting firms. Because of variation in the size and composition of the reporting sample, the average hours per week, average hourly earnings, and average weekly earnings shown may not be strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and hours over the period shown. The average weekly hours and hourly earnings for the manufacturing groups are weighted arithmetic means of the averages for the individual industries, estimated employment being used as weights for weekly hours and estimated aggregate hours as weights for hourly earnings. The average weekly earnings for these groups are computed by multiplying the average weekly hours by the corresponding average hourly earnings.

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943
							Cents	*Cents*	*Cents*
All manufacturing	$45.54	$45.25	$44.58	45.4	45.2	44.8	100.3	100.2	99.5
Durable goods	51.48	51.32	50.50	46.8	46.7	46.2	110.0	110.0	109.3
Nondurable goods	36.33	35.91	35.61	43.2	42.9	42.8	84.1	83.7	83.2
Durable goods									
Iron and steel and their products	50.35	50.14	49.34	47.1	46.9	46.5	106.9	106.9	106.1
Blast furnaces, steel works, and rolling mills	53.11	52.49	51.42	46.2	45.6	45.0	115.0	115.1	114.4
Gray-iron and semisteel castings	50.95	50.64	49.18	48.4	48.1	47.4	105.6	105.5	103.8
Malleable-iron castings	51.31	50.70	50.38	49.2	48.9	48.7	104.3	103.6	103.4
Steel castings	51.17	51.05	50.47	46.8	46.1	46.5	109.4	110.7	108.6
Cast-iron pipe and fittings	38.08	38.17	38.76	43.9	44.0	44.9	86.8	87.2	86.3
Tin cans and other tinware	39.66	40.06	39.03	45.1	45.3	44.7	88.1	88.5	87.3
Wirework	50.16	50.66	48.96	48.2	48.5	47.7	104.1	104.6	102.7
Cutlery and edge tools	45.15	43.49	42.95	46.8	46.7	46.3	96.6	93.0	92.8
Tools (except edge tools, machine tools, files, and saws)	45.98	45.26	45.30	47.8	47.5	47.4	96.3	95.5	95.6
Hardware	43.73	44.80	43.93	46.8	48.4	47.5	93.4	92.6	92.4
Plumbers' supplies	46.74	45.16	45.70	47.5	46.4	46.8	98.8	97.8	97.6
Stoves, oil burners, and heating equipment, not elsewhere classified	46.91	46.70	45.54	47.7	47.5	46.9	98.4	98.2	97.2
Steam and hot-water heating apparatus and steam fittings	48.56	45.79	47.98	48.2	46.7	47.9	100.7	98.0	100.2
Stamped and enameled ware and galvanizing	47.06	45.66	45.85	46.6	45.6	45.7	100.9	100.2	100.2
Fabricated structural and ornamental metalwork	55.33	55.07	53.37	49.5	49.3	48.6	111.8	111.8	109.7
Metal doors, sash, frames, molding, and trim	49.35	50.07	51.01	48.0	48.5	48.9	103.3	103.3	104.4
Bolts, nuts, washers, and rivets	49.87	49.07	48.22	48.9	48.2	47.8	101.9	101.7	100.9

See footnotes at end of table.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943
Durable goods—Continued									
							Cents	*Cents*	*Cents*
Iron and steel and their products—Con.									
Forgings, iron and steel	$59.79	$58.73	$58.64	48.6	48.2	48.3	123.1	122.6	121.4
Screw-machine products and wood screws	50.49	50.69	49.64	49.8	50.0	49.5	101.4	101.3	100.3
Steel barrels, kegs, and drums	41.69	42.66	43.88	42.6	42.5	44.2	97.9	100.3	99.2
Firearms	61.91	61.29	59.64	48.3	48.3	47.7	128.2	127.0	125.1
Electrical machinery	47.18	47.09	45.97	46.9	46.9	46.2	100.6	100.4	99.5
Electrical equipment	49.54	49.68	48.65	47.2	47.3	46.7	105.4	105.1	104.3
Radios and phonographs	41.22	41.44	40.20	46.5	46.5	45.7	88.6	89.1	88.0
Communication equipment	43.93	43.19	41.86	45.8	45.7	45.0	95.4	93.9	92.5
Machinery, except electrical	54.74	55.07	53.84	49.4	49.7	48.9	110.8	110.8	110.1
Machinery and machine-shop products	53.91	54.23	52.87	49.3	49.6	48.7	109.1	109.3	108.4
Engines and turbines	60.14	61.16	59.85	50.1	50.7	49.7	120.7	121.0	121.0
Tractors	52.53	52.93	51.99	47.0	47.3	46.6	111.8	111.8	111.7
Agricultural machinery, excluding tractors	52.90	51.95	51.01	48.1	47.1	46.6	110.0	110.3	109.5
Machine tools	55.72	55.93	54.90	50.1	50.7	49.8	111.1	110.4	110.2
Machine-tool accessories	59.01	58.86	57.55	50.6	50.5	50.0	117.4	117.1	115.3
Textile machinery	47.55	47.26	47.12	49.6	49.4	49.5	95.9	95.8	95.6
Typewriters	48.54	49.20	49.22	48.6	49.0	48.5	99.8	100.5	101.4
Cash registers, adding and calculating machines	59.97	62.10	60.35	49.8	51.4	50.6	121.0	121.8	120.4
Washing machines, wringers and driers, domestic	46.30	45.69	45.38	45.9	45.9	45.7	100.9	99.5	99.3
Sewing machines, domestic and industrial	58.16	57.95	57.47	52.9	52.4	52.3	110.7	111.1	110.5
Refrigerators and refrigeration equipment [2]	51.33	52.51	51.39	47.3	48.4	47.7	108.5	108.4	107.6
Transportation equipment, except automobiles	58.44	57.95	57.75	46.9	46.7	46.5	124.6	124.1	124.2
Locomotives	64.37	64.98	66.48	49.8	50.4	50.8	129.2	129.0	130.8
Cars, electric- and steam-railroad	52.39	51.34	51.64	46.7	46.3	46.6	112.2	111.0	110.8
Aircraft and parts, excluding aircraft engines	54.04	54.04	51.45	47.4	47.5	45.8	114.0	113.9	112.4
Aircraft engines	61.81	62.55	57.74	47.5	48.2	45.4	130.0	129.8	127.2
Shipbuilding and boatbuilding	60.78	59.69	62.23	46.3	45.7	47.1	131.4	130.7	132.1
Motorcycles, bicycles, and parts	47.71	51.03	48.52	46.3	48.8	47.1	103.2	104.6	102.9
Automobiles	58.09	58.94	55.49	46.4	47.0	44.5	125.2	125.4	124.7
Nonferrous metals and their products	48.95	48.79	47.87	47.2	47.0	46.3	103.7	103.8	103.4
Smelting and refining, primary, of nonferrous metals	47.68	47.46	47.16	45.7	45.3	45.2	104.3	104.9	104.4
Alloying and rolling and drawing of nonferrous metals, except aluminum	53.46	53.67	51.86	48.3	48.6	46.9	110.8	110.6	110.5
Clocks and watches	42.54	41.61	40.54	46.8	46.2	45.6	91.0	90.1	89.1
Jewelry (precious metals) and jewelers' findings	41.30	40.61	40.28	44.8	44.7	44.7	91.5	89.9	89.4
Silverware and plated ware	46.06	46.64	46.78	46.4	47.0	47.0	99.6	99.4	99.7
Lighting equipment	46.93	46.19	45.63	46.0	45.8	45.2	101.3	100.9	101.0
Aluminum manufactures [3]	49.54	49.77	49.08	46.9	47.1	46.5	105.6	105.8	105.5
Lumber and timber basic products	33.00	31.81	32.78	42.8	41.2	42.8	77.1	77.2	76.6
Sawmills and logging camps	31.88	30.38	31.59	42.1	40.1	42.1	75.7	75.7	75.1
Planing and plywood mills	35.97	35.91	36.22	44.9	44.4	45.0	81.0	81.3	80.9
Furniture and finished lumber products	34.85	34.32	34.56	44.0	43.5	44.2	79.2	78.9	78.2
Furniture	35.89	35.09	35.64	44.4	43.6	44.5	81.2	80.7	80.3
Caskets and other morticians' goods	39.13	38.51	37.97	46.3	45.9	45.9	84.9	84.4	83.0
Wood preserving	30.13	28.79	29.33	40.3	38.8	40.1	74.5	74.1	73.1
Stone, clay and glass products	37.97	37.57	37.63	43.2	42.6	43.0	87.9	88.2	87.5
Glass and glassware	39.32	39.63	39.28	42.3	42.1	42.1	93.1	93.3	92.7
Glass products made from purchased glass	33.77	33.23	33.52	44.2	43.8	44.1	76.4	75.8	75.9
Cement	38.50	37.36	38.96	43.1	41.9	43.9	89.3	89.2	88.8
Brick, tile, and terra cotta	31.89	30.38	31.35	40.8	39.1	40.8	76.7	76.6	76.2
Pottery and related products [2]	34.38	33.16	33.65	40.7	39.6	40.1	85.3	85.6	85.2
Gypsum	43.69	44.96	43.76	47.8	49.0	48.3	91.4	91.7	90.6
Lime	36.66	35.92	35.89	48.3	47.0	46.9	75.7	76.6	76.6
Marble, granite, slate, and other products	37.32	36.96	38.31	42.3	41.6	43.5	88.0	89.1	88.0
Abrasives	45.69	45.96	44.32	46.8	47.1	46.0	97.5	97.5	96.3
Asbestos products	46.10	46.32	46.39	48.0	48.1	48.1	96.1	96.3	96.3

See footnotes at end of table.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943
Nondurable goods									
							Cents	*Cents*	*Cents*
Textile-mill products and other fiber manufactures	$28.67	$28.23	$28.27	41.8	41.4	41.7	68.6	68.2	67.8
Cotton manufactures, except smallwares	24.98	24.66	24.83	41.7	41.3	41.7	59.9	59.7	59.6
Cotton smallwares	32.05	32.09	31.90	42.8	42.8	42.7	74.5	75.0	74.7
Silk and rayon goods	28.37	27.75	27.90	42.2	41.7	42.3	67.2	66.6	66.0
Woolen and worsted manufactures, except dyeing and finishing	35.05	34.85	34.48	42.2	42.1	41.8	83.1	82.7	82.4
Hosiery	28.79	27.95	28.23	39.2	38.4	39.2	73.4	72.9	72.1
Knitted cloth	31.82	31.59	31.79	43.3	43.2	43.1	72.7	72.1	73.3
Knitted outerwear	29.80	29.12	28.70	40.2	39.8	39.7	73.4	72.3	71.4
Knitted underwear	26.21	25.81	25.65	40.9	40.7	40.9	63.3	62.7	61.9
Dyeing and finishing textiles, including woolen and worsted	33.22	33.03	33.09	44.6	44.6	44.7	74.4	74.1	74.0
Carpets and rugs, wool	38.74	38.39	37.61	43.8	43.5	42.7	88.8	88.5	88.5
Hats, fur-felt	41.77	41.76	41.42	41.7	41.2	41.1	100.7	101.1	100.8
Jute goods, except felts	33.18	32.94	32.99	44.8	44.5	44.5	74.2	74.0	74.1
Cordage and twine	31.81	30.98	30.82	45.1	44.4	44.6	70.5	69.7	69.0
Apparel and other finished textile products	30.19	28.99	28.01	38.8	38.2	37.7	77.8	75.9	74.3
Men's clothing, not elsewhere classified	30.87	29.78	29.71	38.9	38.2	38.1	79.0	77.6	77.6
Shirts, collars, and nightwear	23.51	22.91	23.19	37.4	37.1	37.8	62.9	61.8	61.3
Underwear and neckwear, men's	26.45	25.17	24.93	38.7	37.2	37.4	68.4	67.7	66.7
Work shirts	20.41	19.40	18.84	39.7	38.3	37.6	51.1	50.4	49.9
Women's clothing, not elsewhere classified	36.95	35.24	33.10	38.0	37.5	36.4	95.3	92.3	89.3
Corsets and allied garments	29.69	28.37	28.10	41.3	40.8	39.9	72.0	69.7	70.6
Millinery	39.90	34.85	32.31	35.6	33.0	31.4	92.8	89.2	86.6
Handkerchiefs	22.97	20.87	21.92	38.6	35.7	37.6	59.5	58.5	58.2
Curtains, draperies, and bedspreads	24.86	24.99	24.04	39.0	39.5	38.3	63.8	63.2	62.2
Housefurnishings, other than curtains, etc.	31.63	32.30	32.02	41.9	42.5	42.0	76.2	76.5	76.8
Textile bags	27.51	27.64	26.71	41.4	41.6	41.0	66.6	66.4	65.6
Leather and leather products	32.17	31.39	31.07	41.3	40.5	40.2	77.9	77.5	77.3
Leather	41.53	40.40	40.08	44.8	43.9	43.8	92.7	91.9	91.5
Boot and shoe cut stock and findings	32.45	31.66	30.91	42.6	41.9	41.2	77.7	76.6	75.6
Boots and shoes	30.15	29.50	29.18	40.5	39.7	39.3	74.1	74.0	73.8
Leather gloves and mittens	28.81	28.69	27.95	39.0	38.5	38.2	74.7	75.1	73.6
Trunks and suitcases	33.73	32.51	33.45	41.5	40.8	40.7	80.3	78.2	79.5
Food	38.08	38.43	37.95	45.5	45.8	45.5	83.7	83.9	83.4
Slaughtering and meat packing	44.76	46.86	46.54	49.4	51.5	51.2	90.9	91.3	91.3
Butter	33.36	32.88	33.14	47.5	46.7	47.4	69.6	69.9	70.1
Condensed and evaporated milk	35.02	34.57	33.83	48.6	47.8	47.5	72.0	72.3	71.2
Ice cream	37.66	36.98	36.76	46.1	46.1	45.7	77.7	77.1	77.1
Flour	40.20	41.80	41.39	49.1	50.2	49.7	82.1	83.4	83.4
Cereal preparations	43.15	44.49	43.34	45.9	46.9	45.9	93.9	94.8	94.5
Baking	36.91	36.61	36.67	45.0	44.8	44.9	82.2	81.9	81.8
Sugar refining, cane	37.05	37.35	37.74	45.0	45.6	45.8	82.7	81.9	82.5
Sugar, beet	39.27	36.75	32.76	40.0	38.8	40.0	98.1	94.6	81.8
Confectionery	29.26	29.40	28.88	41.8	41.9	41.8	70.4	70.5	69.6
Beverages, nonalcoholic	32.94	33.19	33.15	42.8	43.1	43.2	76.6	77.2	77.3
Malt liquors	49.06	48.18	48.40	45.1	44.8	44.7	109.0	107.7	108.1
Canning and preserving	30.98	30.19	29.69	40.6	40.2	39.5	76.2	75.8	75.8
Tobacco manufactures	27.95	28.46	28.29	41.1	42.1	42.1	68.0	67.6	67.2
Cigarettes	29.53	30.97	31.05	40.4	42.2	42.9	73.2	73.4	72.4
Cigars	26.91	26.59	26.29	42.2	42.5	41.7	64.1	62.7	63.1
Tobacco (chewing and smoking) and snuff	25.22	25.68	26.13	39.4	39.9	40.8	64.1	64.4	64.1
Paper and allied products	37.71	37.24	37.01	45.6	45.2	45.3	82.7	82.4	81.7
Paper and pulp	41.19	40.24	40.37	47.4	46.4	46.7	86.9	86.6	86.3
Envelopes	36.19	35.73	34.86	45.0	44.8	44.0	80.4	79.8	79.2
Paper bags	33.31	33.76	33.00	44.2	44.8	44.4	74.6	75.2	74.6
Paper boxes	33.86	33.59	33.06	43.7	43.7	43.7	77.2	76.9	75.8
Printing, publishing, and allied industries	42.16	42.02	41.98	40.5	40.4	40.4	104.1	104.0	103.9
Newspapers and periodicals	46.76	46.44	46.76	37.9	37.4	37.5	122.0	121.6	122.4
Printing, book and job	39.90	40.07	39.84	41.3	41.6	41.6	96.1	96.3	95.5
Lithographing	44.66	44.28	43.75	44.1	43.9	44.0	100.7	101.0	100.1
Chemicals and allied products	42.82	42.87	42.21	45.8	45.7	45.1	93.5	93.8	93.6
Paints, varnishes, and colors	44.57	44.54	43.58	46.7	46.7	46.2	95.6	94.9	94.5
Drugs, medicines, and insecticides	34.92	34.67	34.58	44.4	44.1	43.9	79.1	78.9	78.8
Soap	46.24	45.71	45.60	47.2	46.9	46.6	98.0	97.6	98.0

See footnotes at end of table.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943	Feb. 1944	Jan. 1944	Dec. 1943
Nondurable goods—Continued									
Chemicals and allied products—Continued.							*Cents*	*Cents*	*Cents*
Rayon and allied products	$38.01	$37.68	$37.07	42.5	42.2	41.8	89.4	89.4	88.6
Chemicals, not elsewhere classified	50.57	50.46	49.42	46.5	46.4	45.9	108.9	108.7	107.6
Explosives and safety fuses	46.90	47.45	46.98	46.4	46.4	45.6	101.2	102.4	103.1
Ammunition, small-arms	44.06	45.17	43.15	46.2	46.8	45.0	95.4	96.6	96.0
Fireworks	42.19	40.64	40.24	45.4	44.1	43.8	93.0	92.2	92.0
Cottonseed oil	26.44	25.71	26.32	51.9	51.7	53.2	51.0	49.6	49.3
Fertilizers	26.84	27.73	26.97	43.5	43.3	42.0	61.7	64.0	64.3
Products of petroleum and coal	53.99	52.99	53.04	46.5	45.6	46.0	116.1	116.2	115.3
Petroleum refining	57.32	55.80	56.30	46.5	45.1	46.0	123.5	123.7	122.5
Coke and byproducts	46.60	47.35	45.87	46.0	46.2	45.3	101.1	102.5	101.3
Roofing materials	43.66	44.57	44.58	47.6	48.4	48.2	91.8	92.1	92.5
Rubber products	49.04	48.18	47.94	45.7	45.2	44.8	107.3	106.6	107.0
Rubber tires and inner tubes	57.21	55.79	55.84	46.3	45.7	45.2	124.0	122.4	123.8
Rubber boots and shoes	39.55	39.11	37.95	44.9	44.1	43.6	88.2	88.6	87.1
Rubber goods, other	41.12	41.17	40.74	45.2	44.9	44.6	91.8	91.8	91.5
Miscellaneous industries	43.43	42.69	42.18	46.3	46.0	45.6	93.8	92.8	92.5
Professional and scientific instruments and fire-control equipment	55.08	53.75	53.88	50.5	50.3	50.3	109.1	106.9	107.3
Photographic apparatus	48.39	47.82	46.99	46.5	46.1	45.4	104.2	103.7	103.4
Pianos, organs, and parts	46.95	45.58	44.97	46.7	46.8	46.5	100.2	97.6	96.9
NONMANUFACTURING									
Coal mining:									
Anthracite	$58.12	$45.05	$47.90	46.5	38.9	41.4	124.5	116.0	115.3
Bituminous	52.99	52.52	52.72	45.2	44.0	44.7	117.8	119.6	118.8
Metal mining	43.98	43.71	44.01	44.3	43.9	44.2	99.2	99.3	99.2
Quarrying and nonmetallic mining	36.37	35.97	36.85	44.2	43.8	45.5	82.3	82.2	81.5
Crude-petroleum production	52.67	52.40	51.46	45.2	44.4	44.9	114.4	116.0	112.
Public utilities:									
Telephone and telegraph	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
Electric light and power	47.10	46.78	46.48	42.6	41.9	42.9	108.6	109.7	107.8
Street railways and busses	46.88	45.98	45.45	49.5	49.6	49.6	92.1	90.4	90.5
Wholesale trade	41.36	41.20	41.04	42.6	42.4	42.8	97.3	97.2	95.9
Retail trade [2]	26.34	26.16	24.40	41.0	40.2	39.4	67.6	68.0	66.5
Food [2]	29.80	29.60	29.49	40.1	39.9	40.3	67.9	67.5	67.0
General merchandise	21.34	21.26	19.54	37.4	36.8	35.5	56.8	56.9	53.8
Apparel	27.07	27.22	26.54	37.0	36.9	36.2	75.1	75.6	74.4
Furniture and housefurnishings [2]	36.34	35.71	36.42	42.0	42.7	43.8	87.0	86.7	83.9
Automotive	40.09	39.27	39.06	48.9	48.8	47.6	75.4	75.8	79.8
Lumber and building materials [2]	36.43	36.28	35.43	43.4	43.3	42.5	86.9	86.0	84.8
Hotels (year-round) [5]	21.73	21.34	21.36	44.6	44.6	44.6	48.5	48.0	48.0
Power laundries	26.03	26.29	25.67	43.7	44.1	44.1	59.8	59.6	58.3
Cleaning and dyeing	29.87	29.72	28.90	43.4	44.0	43.3	70.5	69.7	68.5
Brokerage	51.98	51.27	50.87	[6]	[6]	[6]	[6]	[6]	[6]
Insurance	44.39	44.65	44.45	[6]	[6]	[6]	[6]	[6]	[6]
Private building construction	48.77	49.83	49.38	37.6	38.5	38.1	129.7	129.5	129.5

[1] These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked during any part of 1 pay period ending nearest the 15th of the month. As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a smaller sample than are weekly earnings. Data for the current and immediately preceding months are subject to revision.

[2] Revisions have been made as follows in the data published for earlier months:

Refrigerators and refrigeration equipment.—October 1943 average weekly earnings to $51.01.
Pottery and related products.—September 1943 average weekly hours to 40.5; October 1943 average hourly earnings to 84.6 cents.
Retail trade, total.—October 1943 average hourly earnings to 69.1 cents.
Retail food group.—Average hourly earnings, August 1943 to 67.7 cents, October 68.6 cents.
Retail furniture group.—October 1943 average weekly hours to 43.8; average hourly earnings to 83.2 cents; November 1943 average hourly earnings to 83.6.
Retail lumber group.—October 1943 average hourly earnings to 84.7 cents.

[3] The aluminum series have been revised. Comparable data for January 1939 to December 1943 available upon request.

[4] Data are not available because of the merger of Western Union and Postal Telegraph.

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

[6] Not available.

itized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Civilian Labor Force, March 1944

A SEASONAL upswing of 210,000 persons over the February level brought the civilian labor force to a total of 51,360,000 in March 1944, according to the Bureau of the Census Monthly Report on the Labor Force. (See table, p. 1120.) Employment showed an increase similar to the expansion in the civilian labor force, while unemployment remained virtually unchanged at the level of approximately 900,000. Agricultural employment increased by 260,000—200,000 men and 60,000 women—as more persons were needed on farms to help with spring planting. At the same time, the impact of the draft continued to reduce the number of men engaged in nonagricultural activities, a decline of 200,000 in male workers being partially offset by an increase of 170,000 in women workers.

In March 1944 the civilian labor force was about 900,000 below the level of March a year ago. The number of men in civilian pursuits had declined by only 1,500,000, despite an increase of 2,800,000 in the armed forces over the year. At the same time the number of women in the civilian labor force—although considerably below the levels reached last year during the summer and fall farm seasons and the Christmas trade season—was 600,000 above year-ago levels. Employment of women in nonagricultural industries was 800,000 above last March, but there were declines in the number of women employed on farms of 150,000 and in the number of unemployed women of 50,000. According to the Census Bureau, it is too early to tell whether or not the seasonal increase later this year will bring the number of women employed on farms to the record level of 1943.

Nature of Census Revisions

The figures in the accompanying table are from the Census Bureau's revised series of preliminary labor force, employment, and unemployment estimates for the period March 1940 to March 1944. For the years 1940–42 only selected months are shown in the table. The June issue of the Monthly Labor Review, however, will carry a table showing the complete series of revised estimates. The following notes on the revisions are quoted from Census release MRLF–No. 22, April 26, 1944, to which technical readers should refer for a more complete statement on the nature of the revisions.

> Several important changes are involved in this revision of the former series of estimates. At one end, the original series has been brought into agreement with the results provided by the new and more adequate sample * * *. At the other end, the various series have been tied to new benchmark figures recently available from the 1940 Census of Population, which have been adjusted for the underenumeration of workers on WPA and other emergency work programs and the exclusion of persons on the NYA student work program.[1] As a result of these

[1] The adjustments of the 1940 Census data are presented in Population Special Report, Series P–44, No. 6. For a brief discussion of the methods used, see Sixteenth Census, Population, Comparative Occupation Statistics for the United States, 1870–1940, ch. IV.

gitized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

changes, the new figures differ significantly from the old series at a number of points and also embody a moderate revision of the preliminary adjusted series for the period, December 1941 through October 1943, presented in MRLF–No. 19, February 2, 1944 [and in the issues of the Monthly Labor Review for February, March, and April 1944]. The most important departures from the original series are mentioned briefly in the following paragraphs.

The original sample * * * was designed primarily to measure unemployment * * *. In the summer of 1943, funds were obtained for the introduction of a new sample designed to reflect more accurately changes in agricultural and nonagricultural employment, as well as unemployment and total labor force. Full operations under the new sample plan began in October 1943.

* * * the old sample tended to overrepresent the rural population because it was not designed to reflect wartime population shifts. The new sample was so designed as to be free of this difficulty and accordingly yields a substantially lower estimate of agricultural employment. As a result of the adjustment of the old series to the level shown by the new sample, the rise in the old agricultural employment series has been replaced in the new series by a decline, a movement that is much more consistent with the large-scale migration into urban centers. * * *

A higher level of nonagricultural employment accompanies the lower level of agricultural employment shown in the revised series. The amount of the spread between the old and new series for nonagricultural employment becomes progressively greater from 1940 to 1943. The new series is more nearly consistent than the old one with the estimates of nonagricultural employees published by the Bureau of Labor Statistics. The two series are not identical * * * [primarily] because the Census figures include self-employed persons, domestic servants, and unpaid family workers [whereas these groups are not covered by the BLS estimates] * * *.

The changes in the estimates of unemployment result primarily from the adjustment of the original series to bring them into conformity with a revised benchmark based on the 1940 Population Census * * *. The sample series before adjustment to the Census benchmark * * * indicated a level of unemployment and total labor force approximately one million above * * * [the 1940 Census] figure. It is fairly clear that this difference is not due primarily to sampling variation, but rather to the differences in the response given by similarly situated individuals to two different sets of enumerators, despite the use of the same definitions and instructions. It is believed probable that the sample series includes considerable numbers of persons classified as seeking work and hence as in the labor force who were classified by Population Census enumerators as outside the labor force. Many of those who were classified differently in the two series were in groups difficult to classify under any circumstances, and for some purposes it may be important not to overlook the higher figures on unemployment for March 1940 that are indicated by the sample estimates before final adjustment to the Census benchmark.[2]

* * * It is believed that the new sample will provide a more satisfactory measurement of the seasonal movement in agricultural employment than the old, and that this may give a basis for further revision of the seasonal pattern of agricultural employment for the years 1940 to 1943. The new estimates have been approved by the interagency committee [including representatives of the Bureau of Agricultural Economics and the Bureau of Labor Statistics, under the sponsorship of the Division of Statistical Standards, Bureau of the Budget] as preliminary revisions subject to such later revision as may seem justified by the seasonal indications from the new sample and * * * detailed studies of agricultural employment [now being conducted].

[2] The estimates without final adjustment to the Census benchmark are as follows: Total unemployed, 8,998,000; male, 6,694,000; female, 2,304,000. These differ from the originally published figures because of the corrections introduced for emergency workers and the various procedures used to obtain a composite series from 1940 to date.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Preliminary Estimates of Civilian Labor Force, by Employment Status and by Sex, March 1940 to March 1944 [1]

[Source: U. S. Department of Commerce, Bureau of the Census

Week ending—	Estimated number (millions of persons 14 years of age and over) [2]														
	Civilian labor force			Total employment			Agricultural employment			Nonagricultural employment			Unemployment [3]		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1940															
Mar. 30	53.02	40.01	13.01	45.06	33.82	11.24	8.51	8.00	0.51	36.55	25.82	10.73	7.96	6.19	1.77
1941															
Feb. 8	52.20	39.84	12.36	45.83	35.05	10.78	7.47	7.20	.27	38.36	27.85	10.51	6.37	4.79	1.58
Mar. 8	51.95	39.66	12.29	46.00	35.12	10.88	7.62	7.36	.26	38.38	27.76	10.62	5.95	4.54	1.41
1942															
Feb. 14	53.21	39 86	13.35	49.56	37.18	12.38	7.50	7.04	.46	42.06	30.14	11.92	3.65	2.68	.97
Mar. 14	53.46	39.89	13.57	50.23	37.57	12.66	7.69	7.17	.52	42.54	30.40	12.14	3.23	2.32	.91
1943															
Jan. 9	52.72	36.85	15.87	51.35	36.04	15.31	7.11	6.43	.68	44.24	29.61	14.63	1.37	.81	.56
Feb. 13	52.54	36.41	16.13	51.21	35.64	15.57	7.08	6.40	.68	44.13	29.24	14.89	1.33	.77	.56
Mar. 13	52.29	36.02	16.27	51.23	35.41	15.82	7.23	6.50	.73	44.00	28.91	15.09	1.06	.61	.45
Apr. 10	52.54	35.99	16.55	51.59	35.47	16.12	7.87	6.79	1.08	43.72	28.68	15.04	.95	.52	.43
May 8	53.55	36.26	17.29	52.63	35.73	16.90	8.91	7.21	1.70	43.72	28 52	15.20	.92	.53	.39
June 12	55.22	36.88	18.34	54.00	36.22	17.78	9.82	7.61	2.21	44.18	28.61	15.57	1.22	.66	.56
July 10	56.04	37.38	18.66	54.75	36.67	18.08	9.70	7.62	2.08	45.05	29.05	16.00	1.29	.71	.58
Aug. 14	55.44	36.99	18.45	54.37	36.44	17.93	9.64	7.55	2.09	44.73	28.89	15.84	1.07	.55	.52
Sept. 11	53.91	35.70	18.21	52.95	35.21	17.74	9.05	6.94	2.11	43.90	28.27	15.63	.96	.49	.47
Oct. 9	53.08	35.31	17.77	52.17	34.82	17.35	8.40	6.75	1.65	43.77	28.07	15.70	.91	.49	.42
Nov. 13	52.55	35.08	17.47	51.68	34.64	17.04	7.70	6.51	1.19	43.98	28.13	15.85	.87	.44	.43
Dec. 11	51.90	34.78	17.12	51.01	34.22	16.79	6.82	6.14	.68	44.19	28.08	16.11	.89	.56	.33
1944															
Jan. 8	51.43	34.64	16.79	50.35	33.99	16.36	6.60	6.02	.58	43.75	27.97	15.78	1.08	.65	.43
Feb. 12	51.15	34.52	16.63	50.26	34.01	16.25	6.65	6.13	.52	43.61	27.88	15.73	.89	.51	.38
Mar. 11	51.36	34.48	16.88	50.49	34.01	16.48	6.91	6.33	.58	43.58	27.68	15.90	.87	.47	.40

[1] Estimates for period prior to November 1943 revised Apr. 24, 1944.
[2] All data exclude persons in institutions.
[3] Includes persons on public emergency projects prior to July 1943.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Recent Publications of Labor Interest

MAY 1944

Cooperative Movement

Cooperative organizations and post-war relief. Montreal, International Labor Office, 1944. 173 pp., maps. $1.

Describes the cooperative movement and its development throughout the world, by types of associations, and both locally and internationally, and shows why the movement is especially fitted for an important place in post-war reconstruction.

Handbook on major regional farm supply purchasing cooperatives, 1941 and 1942. By Joseph G. Knapp. Kansas City 8, Mo., U. S. Farm Credit Administration, 1943. 61 pp., map, charts; mimeographed. (Cooperative Research and Service Division miscellaneous report, No 67.)

Contains data on each of 17 regional cooperatives purchasing farm supplies and with an annual business exceeding $3,000,000. Most of these organizations are of the federated wholesale type (their members being local retail cooperatives), but several do both a retail and a wholesale business through their own retail outlets, dealing direct with individual members.

How to organize a cooperative buying club: A practical handbook on the organization and operation of new cooperatives in the Eastern States under present conditions. New York, Eastern Cooperative League, 1943. 30 pp., diagrams.

Almanaque de la cooperación, 1944. Buenos Aires, Federación Argentina de Cooperativas de Consumo, [1943?]. 208 pp.

Gives information on the various types of cooperatives in Argentina (including the large housing association, El Hogar Obrero) through 1943, and social and economic data on various aspects of Argentine life.

Survey of cooperative institutions in the Balkan States. New York, Cooperative League of the U. S. A., Committee on International Cooperative Reconstruction, 1943. 6 pp., maps.

Presents data on cooperatives of various types in Bulgaria, Greece, Rumania, and Yugoslavia, with maps showing distribution of cooperatives in Bulgaria and Yugoslavia.

La verdad sobre el cooperativismo en México. By Alfredo F. Gutiérrez. México, D. F., Ediciones Financiera y Comercial, 1943. 94 pp.

This collection of articles, originally published in "El Universal" (Mexico City), discusses various phases of the cooperative movement in Mexico, including the causes of failure of consumers cooperatives of Government workers, and suggests measures for making the cooperative movement successful.

Employment and Unemployment

Factors determining post-war job transfers and unemployment. Washington 25, U. S. Bureau of Labor Statistics, 1944. 11 pp. (Serial No. R. 1620; reprinted from Monthly Labor Review, February 1944.) Free.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Manpower mobilization for peace. Montreal, International Labor Office, 1943. 78 pp. 25 cents.

Changes that have taken place in the employment situation during the war are discussed in the first part of this pamphlet; the second part deals with some of the employment problems that will be encountered after the war and includes suggestions for their solution. The countries covered are Australia, Canada, Great Britain, New Zealand, Union of South Africa, and the United States.

Post-war employment and the settlement of terminated war contracts. New York 17, Committee for Economic Development (285 Madison Avenue), 1943. 15 pp.

Postwar re-employment—the magnitude of the problem. By Karl T. Schlotterbeck. Washington, Brookings Institution, 1943. 27 pp. (Pamphlet No. 54.) 25 cents.

The author assumes that demobilization will be gradual and that large numbers of wartime workers will withdraw from the labor market. On the basis of these and similar assumptions, the conclusion is drawn that "the outlook for satisfactory employment is distinctly encouraging."

Reconversion and re-employment problems of American corporations. New York 20, National Association of Manufacturers, Research Department, 1943. 48 pp., charts.

British proposals for full employment after the war. Washington 25, U. S. Bureau of Labor Statistics, 1944. 8 pp. (Serial No. R. 1618; reprinted from Monthly Labor Review, February 1944.) Free.

Considerations affecting post-war employment in the North East [England]. [London?], Northern Industrial Group, 1943. 11 pp.

Report by an influential committee of industrialists and trade-union leaders in northeast England, outlining considerations affecting post-war employment in the district and containing recommendations covering the field of industrial expansion and policies for insuring a stable level of employment after the war.

Housing

Federal war housing legislation. Washington, U. S. National Housing Agency, Office of the General Counsel, July 15, 1943. 83 pp.; mimeographed.

Parents' Magazine survey of postwar housing. New York, Parents' Magazine (52 Vanderbilt Ave.), [1943?]. 9 pp.

Answers of architects, builders, etc., to selected questions on price ranges, size of house and rooms, material, and related housing questions.

The seven myths of housing. By Nathan Straus. New York, Alfred A. Knopf, 1944. 314 pp., bibliography, charts, illus. $2.75.

The "seven myths of housing," on all of which the author presents refuting arguments, are listed in the titles of 7 of the 11 chapters of the book: "There are no slums in my town," Public housing does not clear slums, The Government should buy up the slums, Public housing is costly and extravagant, Public housing does not rehouse families from the slums, The slum dweller creates the slums, and Public housing injures private business and threatens to bankrupt the country.

An inquiry into people's homes. Report prepared by Mass-Observation for Advertising Service Guild. London, John Murray, 1943. 228 pp., plans. 10s.

A study of individual British workers' desires in housing as to space, rents, and related questions.

New Zealand's experience with land-value taxation and how that nation is planning for improved public and private housing in the post-war years. By Walter Nash, Minister of New Zealand to the United States. New York, Citizens' Housing Council of New York, 1943. 22 pp.

Industrial Accidents and Workmen's Compensation

Coal-mine accidents in the United States, 1941. By W. W. Adams and L. E. Geyer. Washington, U. S. Department of the Interior, Bureau of Mines, 1944. 131 pp. (Bull. No. 456.) 20 cents, Superintendent of Documents, Washington.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Coke-oven accidents in the United States, calendar year 1942. By W. W. Adams and V. E. Wrenn. Washington, U. S. Department of the Interior, Bureau of Mines, 1944. 21 pp., chart. (Technical paper No. 660.) 10 cents, Superintendent of Documents, Washington.

Quarry accidents in the United States during the calendar year 1941. By W. W. Adams and V. E. Wrenn. Washington, U. S. Department of the Interior, Bureau of Mines, 1943. 89 pp., chart. (Bull. No. 452.) 15 cents, Superintendent of Documents, Washington.

Applied safety engineering. By H. H. Berman and H. W. McCrone. New York, McGraw-Hill Book Co., Inc., 1943. 189 pp. $2.

Emphasis in this book is on the "how" of safety engineering. Basic considerations are reviewed in the first chapter; succeeding chapters tell how to handle various phases of safety work.

Manual general de la seguridad en el trabajo—métodos, normas y aparatos. By Baltasar and Manuel Moas and Juan B. Madrigal, Jr. Habana, Consejo Nacional para la Prevención de Accidentes, [1943?]. 167 pp., diagrams, illus.

Comprehensive safety manual for the use of inspectors and others in the prevention of industrial accidents. Describes and illustrates clothing and personal equipment for protection of the worker, safety devices to be used with machinery, safe methods of handling materials, good lighting and ventilation systems, etc.

Accidentes del trabajo en el trayecto. By Eduardo Rafael Núñez y Núñez. Habana, Jesús Montero, Editor, 1942. 110 pp. (Monografías jurídicas, Vol. 37.)

Brief critique of the legal theory in various countries, especially Spain and Cuba, of the employer's responsibility for his workers, especially to compensate them for industrial accidents, and a detailed examination of Cuban legislation and jurisprudence concerning accidents to workers on their way to and from work

Industrial Hygiene

Dust hazards in Australian foundries. By A. A. Ross and N. H. Shaw. Melbourne, Department of Labor and National Service, Industrial Welfare Division, 1943. 45 pp. (Technical report No. 1.)

Report of a study to determine the dust exposure of workers in various occupations, with discussion of control measures.

The history of miners' diseases—a medical and social interpretation. By George Rosen, M. D. New York, Schuman's, 1943. 490 pp., bibliography, illus. $8.50.

Comprehensive historical study of miners' diseases from prehistoric times to the end of the nineteenth century. The development of the knowledge of miners' diseases is correlated with the advances of the basic medical sciences and with the varying social and economic conditions that have contributed to the rise of occupational disease among miners.

Toxicology and hygiene of industrial solvents. Edited by K. B. Lehmann and F. Flury; translated by Eleanor King and Henry F. Smyth, Jr. Baltimore, Williams & Wilkins Co., 1943. 378 pp. $5.

Industrial dental service. New York, Metropolitan Life Insurance Co., [1944?]. 40 pp., forms, illus. (Industrial health series, No. 3.)

The purposes and scope of dental service in industry, and the functions, organization, personnel, and cost of an industrial dental clinic, are outlined, and descriptions given of the dental services of several companies.

Modern industrial lighting. By G. Bernard Hughes. London, Hutchinson's Scientific and Technical Publications, 1943. 128 pp., diagrams, illus. 15s.

The author discusses in detail the advantages of good illumination and the factors involved in assuring it; the relation of light and safety; and the newest developments both in gas and electric lamps. British statutory regulations on lighting of factories are listed.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

International Labor Conference

Future policy, program, and status of the International Labor Organization. First item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 194 pp. $1.

Recommendations to the United Nations for present and post-war social policy. Second item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 87 pp. 50 cents.

The organization of employment in the transition from war to peace. Third item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 179 pp. $1.

Social security: Principles, and problems arising out of the war—Part 1, Principles; Part 2, Problems arising out of the war. Fourth item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 2 vols., 115 and 82 pp. 60 and 50 cents, respectively.

Minimum standards of social policy in dependent territories. Fifth item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 109 pp. 60 cents.

Reports on the application of conventions. Sixth item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 44 pp.

Report of the Director of the International Labor Office. Seventh item on agenda of International Labor Conference, 26th session. Montreal, International Labor Office, 1944. 89 pp.

The seven reports listed immediately above were prepared for submission to the International Labor Conference held in Philadelphia, Pa., in April and May. The complete set of reports is available from the International Labor Office (Montreal, Quebec, or Washington, D. C.) at a special price of $4.50.

Labor and Social Legislation

A symposium on labor law in wartime. (In Iowa Law Review, Iowa City, January 1944, pp. 145–348. $1.)

This symposium considers such points as State labor legislation, labor control, arbitration of labor disputes, and the work of various Federal wartime labor agencies.

Small loan laws of the United States, fifth edition, September 1, 1943. Jaffrey, N. H., Pollak Foundation for Economic Research, 1943. 26 pp., bibliography, maps. (Pollak pamphlet No. 37.) 10 cents.

Gives principal provisions of the small-loan laws, and shows for each of the 43 States having such laws the rank of its legislation as to whether it is effective, partially effective, or largely or wholly inoperative.

Tratado de legislación del trabajo y previsión social con referencias especiales al derecho argentino y de las demas repúblicas americanas. By Daniel Antokoletz. Buenos Aires, Editorial Guillermo Kraft Ltda., 1941. 2 vols., 468 and 563 pp., bibliographies.

A study of labor and social-security legislation of the American republics, with special emphasis on Argentina. Comprehensive treatment is given Argentine legislation relating to employment contracts, hours and wages, industrial accidents, labor organizations, employment agencies, labor disputes, and social insurance, with comparative notes on the legislation of other countries.

O gerente e a legislação trabalhista, [Brazil]. By J. Pinto Antunes. (In Revista do Trabalho, Rio de Janeiro, May 1943, pp. 11–13.)

Discussion of Brazilian legislative provisions protecting the interests of the manager of an establishment in connection with collective labor agreements, with numerous citations of laws.

El empleado y el obrero ante la legislación peruana. By Javier Vergas. (In Derecho del Trabajo, Buenos Aires, November 1943, pp. 490–494.)

Lists and discusses the principal Peruvian legislation regulating conditions of employment of salaried employees and wage earners, and shows the occupations or trades falling in each category.

Code of labor and industrial laws of the Province of Quebec and Federal laws, with rules and regulations concerning their application, and wartime orders in council affecting labor. Compiled by Gus Francq. Montreal, Mercantile Printing, Ltd., 1943. 471 pp. (In French and English.)

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Constitution of the Union of Soviet Socialist Republics. New York, National Council of American-Soviet Friendship, [1943?]. 40 pp., map. 10 cents.
English text, without commentary, of the Soviet Constitution and amendments adopted by various sessions of the Supreme Soviet up to and including the 8th session in March 1941.

Labor Organizations

Independent unions under the Wagner Act: A manual for attorneys, labor relations advisors and union officials acting for employers, employees, or unions in relation to the National Labor Relations Act, with complete forms. By Samuel M. Salny. Boston, Eugene W. Hildreth, Inc., 1944. 342 pp. $8.50.
On the basis of the National Labor Relations Board's decisions, the author discusses in some detail the nature of independent unions; the disestablishment of company-dominated unions; the relation of employees, employers, and others to independent unions; and the jurisdiction of the National Labor Relations Board and civil courts in handling cases involving such unions.

List of American trade-union journals and labor papers currently received by the Department of Labor Library. Washington 25, U. S. Department of Labor, Library, March 1944. 41 pp.; mimeographed. Free.

Men and coal. By McAlister Coleman. New York, Farrar & Rinehart, Inc., 1943. 350 pp. $3.
This book is only partly a story of the men who dig coal. It is more concerned with the personalities dominating the policies of the United Mine Workers since the inception of the organization, with particular emphasis on the powers concentrated in the hands of its present president, John L. Lewis.

Rebuilding the French labor movement. By Paul Vignaux, educational director of French Christian Trade Unions. (In A. L. C. News Letter, American Labor Conference on International Affairs, New York, February 22, 1944. 5 cents.)

Reconstruction of the German labor movement. By Siegfried Aufhaeuser, former president of German Federation of White Collar Workers' Unions. (In A. L. C. News Letter, American Labor Conference on International Affairs, New York, March 7, 1944. 5 cents.)

Reconstruction of the Polish labor movement. By Wiktor J. Ehrenpreis, secretary of Polish Labor Group. (In A. L. C. News Letter, American Labor Conference on International Affairs, New York, March 21, 1944. 5 cents.)

Organized labor in the Soviet Union. By Edwin S. Smith. New York, National Council of American-Soviet Friendship, Inc., 1943. 47 pp., illus. 10 cents.
Questions and answers concerning membership, structure, functions, and collective-bargaining procedure of Soviet trade-unions; wages, hours, and working conditions; and labor's role during the present war. A partial list (126) of Soviet trade unions is appended.

Medical Care and Sickness Insurance

Group health plans: Some legal and economic aspects. (In Yale Law Journal, New Haven, Conn., December 1943, pp. 162–182. $1.)
Deals with judicial controls on the corporate practice of medicine, legislative controls (under State insurance laws and other State legislation), and professional controls (exercised by the American Medical Association's code of ethics). Judicial decisions on all these phases are cited.

The hospital in modern society. Edited by Arthur C. Bachmeyer and Gerhard Hartman. New York, Commonwealth Fund, 1943. 768 pp., bibliographies. $5.
Collection of 145 articles, adapted from the works of 98 authors, published in periodical literature, transactions, and committee reports, in the hospital and allied fields of medicine, public health, sociology, etc. Books are not represented. There are several articles on personnel relations in the hospital and several on group hospital and health insurance.

Medical service plans. Chicago, American Medical Association, Bureau of Medical Economics, 1943. 72 pp. 50 cents.
Describes some of the main types of the newer organizational arrangements for the distribution of medical care, and discusses certain factors which must be considered in setting up a medical-service plan.

itized for FRASER
s://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Prepayment medical care organizations. By Margaret C. Klem. Washington, Federal Security Agency, Social Security Board, Bureau of Research and Statistics, 1943. 252 pp. (Bureau memorandum No. 55.)

Gives a general summary of the provisions of prepayment medical-care plans, and detailed information, for over 200 individual plans, on area served, coverage, medical personnel, medical services provided, death benefits, charges to the subscriber, and eligibility for enrollment. The study covers industrial plans and those sponsored by governmental agencies, consumer groups, medical and hospital associations, and private-group clinics.

Bases para establecer el seguro de enfermedad y otros seguros sociales en Cuba. By Oswaldo Morales Patiño. (In Trabajo, Ministerio del Trabajo, Habana, June 1943, pp. 841–903.)

A brief account of the evolution of sickness insurance from the latter part of the eighteenth century is followed by a summary report on social-insurance legislation and its operation in 1939 or earlier years in 24 countries throughout the world. The legislation is then summarized topically, by country, as to type of insurance provided, distinctive features of insurance systems, coverage, application to agricultural workers, financial resources, remuneration classes protected, etc.

The reform of the public health services. By Sir Arthur S. MacNalty. London, Oxford University Press, 1943. 75 pp., bibliography. 2s. 6d.

The main reform proposed in this study is the reconstruction of health and medical services in Great Britain on a comprehensive regional plan.

Soviet health care in peace and war. By Rose Maurer. New York, American Russian Institute, 1943. 48 pp., illus. 10 cents.

Description of Soviet health programs for civilians before the war, and of accelerated and amplified health programs for civilians and soldiers during the war.

Post-War Reconstruction

Action for cities: A guide for community planning. Chicago, Public Administration Service, 1943. 77 pp., maps, charts. (Publication Service No. 86.)

The guide was prepared to assist communities in determining their total needs and potentialities, and in working out development policies for economic and social welfare.

Building for peace at home and abroad. By Maxwell S. Stewart. New York, Harper & Bros., 1943. 240 pp., charts. $2.50.

Designed as a summary of major programs worked out by experts for the primary purposes of providing jobs for all and of preventing another world war. Extensive use was made of data prepared by the U. S. National Resources Planning Board, National Planning Association, Committee for Economic Development, Twentieth Century Fund, and Commission to Study the Organization of Peace.

A theoretical basis for foreign relief and rehabilitation operations. By Helen Leland Witmer. Northampton, Mass., Smith College School for Social Work, March 1944. (Smith College studies in social work, Vol. XIV, No. 3, pp. 273–310. 75 cents.)

The writer points out certain mistakes that may be made in approaching the problem of mass relief and rehabilitation and outlines the application of general principles to specific problems.

UNRRA: Gateway to recovery. Washington, National Planning Association, 1944. 84 pp. (Planning pamphlets Nos. 30–31.) 50 cents.

The problem giving rise to UNRRA (United Nations Relief and Rehabilitation Administration) and the nature of the organization devised to meet the problem are described. The agreement creating the agency and some other documentary materials are reprinted, and there are extensive references to sources of information.

Plan for Britain. Collection of essays prepared for the Fabian Society by G. D. H. Cole and others. London, Geo. Routledge & Sons, Ltd., 1943. 127 pp. 6s.

Subjects of the essays include plans for living, work, the key industries, and the land; freedom from idleness; and choosing the planners.

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Prices and Cost of Living

Trend of prices and cost of living in 1943. Washington 25, U. S. Bureau of Labor Statistics, 1944. 25 pp., charts. (Serial No. R. 1621; reprinted from Monthly Labor Review, February 1944.) Free.

Wartime prices: Part I, August 1939 to Pearl Harbor. By John M. Blair and Melville J. Ulmer. Washington 25, U. S. Bureau of Labor Statistics, 1944. 272 pp., charts. (Bull. No. 749.) 35 cents, Superintendent of Documents, Washington.

Study of wholesale prices in primary markets in the United States from August 1939 to December 1941.

Wholesale prices, January-June 1943. Washington 25, U. S. Bureau of Labor Statistics, 1944. 49 pp. (Bull. No. 759.) 10 cents, Superintendent of Documents, Washington.

Rural level of living indexes for counties of the United States, 1940. By Margaret Jarman Hagood. Washington, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1943. 43 pp., charts; mimeographed.

Rural-farm, rural-nonfarm, and composite rural indexes are given by county and State. The rural-farm indexes take account of percentage of occupied dwelling units with fewer than 1.51 persons per room, percentage of dwelling units with radios, percentage of farms with gross income of more than $600, percentage of farms reporting automobiles of 1936 or later models, and median grade of school completed by persons 25 years of age or over. The rural-nonfarm indexes take account of running water and mechanical refrigeration in dwellings in place of gross income and automobiles.

Size of city and the cost of living. By G. Clark Thompson and Mary A. Wertz. (In Conference Board Management Record, National Industrial Conference Board, Inc., New York, November 1943, pp. 438–441; charts.)

Deals with the relationship of the size of city to increases in living costs.

Report of the Wartime Prices and Trade Board, [Canada], April 1, 1943, to December 31, 1943. Ottawa, 1944. 68 pp., charts.

General review of the price situation in Canada and of the Government's policy with respect to price control and regulation of the supply and distribution of commodities. Sections are devoted to each of the chief commodities, such as apparel, foods, fuel, and rentals.

Paraguay: A study of price control, cost of living, and rationing. Washington, U. S. Office of Price Administration, Foreign Information Branch, 1943. Various paging; mimeographed.

Production and Labor Productivity

Federal Reserve index of industrial production, October 1943. Washington, Board of Governors of the Federal Reserve System, 1943. 120 pp., charts.

Reprints of articles from Federal Reserve Bulletins giving accounts of the revisions of the index of production made in 1940, 1941, and 1943. Index numbers are given for separate industries and groups of industries. Descriptive tables, as revised in October 1943, are reprinted, and various explanatory materials are included, as, for example, seasonal adjustment factors for recent years.

National product, war and pre-war. By Simon Kuznets. New York 23, National Bureau of Economic Research, Inc., 1944. 54 pp. (Our economy in war, Occasional paper No. 17.) 50 cents.

The author estimates that the country's rate of production in the first half of 1943 was about 50 percent greater than in 1939. This estimate is derived by the use of special price factors for deflating national income figures under wartime conditions. Much of the report is devoted to a technical account of the methods used in arriving at the figures presented, with an explanation of the differences between these methods and those used for making other estimates of national income and gross national product.

Productivity in electric-energy generation. Washington 25, U. S. Bureau of Labor Statistics, 1944. 7 pp. (Serial No. R. 1613; reprinted from Monthly Labor Review, January 1944.) Free.

tized for FRASER
s://fraser.stlouisfed.org
eral Reserve Bank of St. Louis

Music in war plants. By Wheeler Beckett. Washington, U. S. War Production Board, War Production Drive Headquarters, 1943. 60 pp., diagrams.

Factual report of a survey made to obtain information on the effect of music on worker morale and production in war plants. The report presents data for 76 plants in various industrial classifications, showing extent of use of music, types employed, attitudes of employees, relation of use of music to morale and production, and cost of running a music program.

Rehabilitation and Reemployment of the Handicapped

Operations manual for placement of the physically handicapped. Prepared by the Medical Division and by regional medical officers, U. S. Civil Service Commission. Washington, U. S. Civil Service Commission, 1943. 276 pp. 2d ed. 40 cents, Superintendent of Documents, Washington.

Lists positions suitable for persons with specified handicaps.

Organizing to help the handicapped. By T. Arthur Turner. Elyria, Ohio, National Society for Crippled Children, Inc., 1944. 165 pp. Cloth, $1; paper, 50 cents.

Discusses work of Federal, State, and other agencies in caring for crippled children, and outlines steps for the organization of volunteer bodies desiring to work in this field. There is also a chapter on employment of the adult handicapped.

Principles and practice of rehabilitation. By John Ensele Davis. New York, A. S. Barnes & Co., Inc., 1943. 211 pp., charts. $3.

Describes the various approaches and methods now being used in the retraining of handicapped individuals to effect their mental, social, and economic rehabilitation.

Putting the disabled veteran back to work. By C. D. Selby, M. D., and others. Pittsburgh 13, Pa., Industrial Hygiene Foundation, [1944?]. 24 pp. (Special series, Bull. No. 2.)

Panel discussion by medical and personnel directors of two large manufacturing enterprises, and a representative of the National Selective Service System, on measures to return disabled veterans to gainful employment.

La reeducación profesional de inválidos del trabajo y los problemas de la post-reeducación. By A. Redondo Simón. (In Trabajo y Previsión Social, Secretaría del Trabajo y Previsión Social, México, D. F., November 1943, pp. 49–67.)

The author was associated for years with the schools and shops of the Madrid (Spain) Institute of Vocational Rehabilitation for Persons Disabled at Work. Based on this experience, he discusses the best procedures for the operation of such schools and shops with respect to medical service, guidance, orthopedic and other corrective techniques, support of persons receiving vocational rehabilitation, investigation of employment possibilities for rehabilitated persons, and follow-up work.

Rehabilitation of the disabled serviceman—a selected bibliography. Compiled by Felicia Fuss. New York 10, Russell Sage Foundation, March 1944. 8 pp. (Bull. No. 161.) 10 cents.

Unemployment Insurance

Post-war impact on unemployment insurance. By New York Unemployment Insurance State Advisory Council. New York (Nathan Morrison, acting executive secretary of the Council, 342 Madison Avenue), 1944. Various paging, charts; mimeographed.

Effectiveness of unemployment benefits in maintaining purchasing power [in Ohio]. By Sam Arnold. Columbus, Ohio State University, Bureau of Business Research, 1943. 71 pp., charts. (Research monograph No. 34.) $1.

Unemployment compensation experience of beneficiaries in Columbus, Ohio, 1939–1940. By Rose L. Papier. Columbus, Ohio State University, Bureau of Business Research, 1943. 82 pp., bibliography, charts. (Research monograph No. 33.)

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Unemployment compensation in Oregon: A survey. By Wesley C. Ballaine. Eugene, University of Oregon, Bureau of Business Research, 1944. 35 pp.

The writer briefly reviews the development of unemployment compensation in this country and abroad, and discusses the provisions of the Social Security Act relating to unemployment compensation, with particular reference to the Oregon law.

Annual report on benefit years established under the [Canadian] Unemployment Insurance Act, calendar year 1942. Ottawa, Department of Trade and Commerce, Dominion Bureau of Statistics, 1943. 26 pp. 25 cents, Canadian currency.

First annual statistical report on operations under the benefit provisions of the unemployment-insurance legislation. Shows number of persons insured and number of days for which benefits were paid, by industry group.

Wages, Salaries, and Hours of Labor

Salary and working conditions of police patrolmen in 214 major cities—basic schedule, step-rate increases, emergency bonus payments, November 1943. Washington, United States Conference of Mayors, [1944?]. Folder. (Report No. 235.)

Salaries of Class I steam railway officials who received compensation of $10,000 or more annually in the calendar year 1942. Washington, U. S. Interstate Commerce Commission, Bureau of Transport Economics and Statistics, 1943. 58 pp.; mimeographed. (Statement No. 4364, File No. 21–D–18.)

Includes detailed tables giving salaries and other compensation of separate officials.

Union wage rates of city streetcar and bus operators, July 1, 1943. Washington 25, U. S. Bureau of Labor Statistics, 1944. 9 pp. (Bull. No. 766; reprinted from Monthly Labor Review, February 1944.) 5 cents, Superintendent of Documents, Washington.

The labor crisis. By Sumner H. Slichter. (In Atlantic Monthly, Boston 16, February 1944, pp. 37–41. 40 cents.)

The article deals primarily with the general wage situation during the war, particularly the effect of the "Little Steel" formula. The author advocates a revision of the "Little Steel" formula but states that piece-rate and bonus workers in manufacturing have experienced larger increases in straight-time hourly earnings than have time workers and that time workers should therefore be counted as a separate group in ascertaining whether straight-time hourly earnings have risen as much as the cost of living.

Labor looks at the wage and hour law (the Fair Labor Standards Act of 1938). Detroit, United Automobile, Aircraft, Agricultural Implement Workers of America (UAW–CIO), Research Department, [1944?]. 19 pp.

Study of the background and administration of the Fair Labor Standards Act and an argument in support of the continuance and strengthening of the act.

New wage factor. By W. S. Schlauch and James D. Weinland. (In Personnel Journal, New York, March 1944, pp. 340–347. 75 cents.)

The authors propose that wage determinations take into account the average length of job life and also general life expectation. These factors, they believe, should be extended and applied by means of engineering and scientific measurements such as would considerably simplify collective-bargaining procedures.

Wage policy under stabilization. New York 1, International Statistical Bureau, Inc., February 1944. 32 pp. $2.50.

The regulations relating to wage adjustments and the administration of these regulations by the War Labor Board and the Treasury. Written primarily for the guidance of employers in handling wage-adjustment problems under the stabilization program.

Women in Industry

Girls at work in aviation. By Dickey Meyer [Mrs. G. L. M. Chapelle]. Garden City, N. Y., Doubleday, Doran & Co., Inc., 1943. 209 pp., illus. $2.50.

Gives data on the Women's Auxiliary Flying Squadrons serving the Army's Air Transport Command, on the Women's Flying Training Detachment, and on many of the wide range of manufacturing and operational occupations filled by women in the aviation field.

itized for FRASER
os://fraser.stlouisfed.org
deral Reserve Bank of St. Louis

Shipyard diary of a woman welder. By Augusta H. Clawson. New York, Penguin Books, Inc., 1944. 181 pp., illus. 25 cents.
Story of labor conditions and the people in a Pacific Northwest shipyard, told by a Government agent sent to the yard as a beginning welder.

Women's employment in the making of steel, 1943. By Ethel Erickson. Washington 25, U. S. Department of Labor, Women's Bureau, 1944. 39 pp. (Bull. No. 192–5.) 10 cents, Superintendent of Documents, Washington.

Women at war. By Margaret Goldsmith. London, Lindsay Drummond, Ltd., 1943. 224 pp., illus. 10s. 6d.
A survey of the various types of war work being done by English women.

Health problems of women in industry. By C. O. Sappington, M.D. Pittsburgh 13, Industrial Hygiene Foundation, 1944. 40 pp., bibliography. (Medical series, Bull. No. VII.) 75 cents to members of Foundation.
Report on the medical services provided in 54 plants employing approximately 131,000 women, and the health problems of these workers.

General Reports

Labor. By Don James and Donald C. MacDonald. (In Iron Age, New York 17, January 6, 1944, pp. 94–101; charts. Single copies, 35 cents.)
Review of labor developments during 1943 with a summary of changes which the authors think may occur after the war.

Report of the [Canadian] Department of Labor for the fiscal year ending March 31, 1943. Ottawa, 1944. 63 pp. 25 cents (Canadian currency).
The functions of the Department of Labor are described as well as operations in the main fields over which the Department has jurisdiction.

Anuario estadístico, [Province of Buenos Aires, Argentina], 1940. La Plata, Ministerio de Gobierno de la Provincia de Buenos Aires, 1943. 884 pp., maps, charts.
This statistical annual for Buenos Aires Province of Argentina includes data on number and capitalization of cooperatives; collective agreements, by district and class of workers covered; number of children working, by age group, sex, and industry; and industrial accidents, by class of injury.

Finanzas, bancos y cajas sociales, [Chile], año 1941. Santiago, Dirección General de Estadística, 1942. 149 pp. 40 pesos.
Includes data for 1941 and earlier years on operation of 11 social-insurance funds and the Popular Housing Fund, and on employment and average daily wages in certain industries, activities of employment agencies, labor organizations, labor disputes, industrial accidents, cooperatives, and cases handled by labor courts.

Administration report of the [Ceylon] Controller of Labor for 1942. Colombo, 1943. 42 pp.
Covers labor conditions in different pursuits, with particular reference to Indian immigrant labor.

China after five years of war. Prepared under auspices of Ministry of Information of Republic of China. London, Victor Gollancz, Ltd., 1943. 230 pp., maps, illus.
Organization of China for war, wartime industrial changes, China's industrial cooperatives, rural economy, the food problem, commodity and price control, training of youth, and role of women in the war effort and in the economic life of the country, are the subjects of 8 of the book's 21 chapters.

Annual report on the Department of Labor, Nigeria, for the year 1942. Lagos, 1943. 20 pp. 1s.
General discussion of labor conditions, supplemented by data on industrial disputes and adjustments in wages according to changes in cost of living, and by details of prosecutions for infringement of labor laws.

U. S. GOVERNMENT PRINTING OFFICE: 1944

gitized for FRASER
ps://fraser.stlouisfed.org
deral Reserve Bank of St. Louis