APRIL 1945

Monthly LABOR Review

VOL. 60 • NO. 4

IN THIS ISSUE

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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.*

MONTHLY LABOR REVIEW

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APRIL 1945, Vol. 60, No. 4

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This Issue in Brief

War—How can we prevent it?

The Dumbarton Oaks conference agreed upon the advisability of an international association of nations and made certain proposals by which it was thought such an organization could endeavor to prevent wars. These fall into two categories: Firm measures to deal with each dispute as it arises, and measures to promote the well-being of all peoples. Six specific proposals for insuring peace are discussed in an article on page 702.

Employment and annual-wage guaranties in union agreements.

Guaranteed employment or annual wages are assured to about 42,500 workers out of 8 million workers covered by employer-union agreements analyzed by the Bureau of Labor Statistics. Over 70 percent of the workers enjoying such guaranties are employed by relatively small companies in the service and distributive industries. Although there are a few outstanding examples in manufacturing companies of considerable size, the total number of employees in manufacturing industries covered by guaranties in agreements totals only about 12,500. Most of the guaranty plans in effect are limited in scope; some restrict the guaranty to particular groups of workers; some provide less than a year's guaranteed employment; and some permit the employer to cancel or reduce the guaranties under specified circumstances. A discussion of the types of plans provided in union agreements and a description of such plans in manufacturing and nonmanufacturing agreements are given in the article on page 707.

Probable post-war demand for public construction.

Although preparation for public construction is still unsatisfactory, it has improved substantially during the past year and is likely to improve further. An average volume of about 3 billion dollars per year at 1940 price levels is expected on the basis of the assumptions made. The largest element of public construction will be highway work, estimated at 1.3 billion dollars per year, plus 600 million dollars in maintenance. A fairly extensive program of reclamation, conservation, and development is likely. Schools will be the largest item of building construction, slightly larger than all other types of public buildings combined. Sewer and water projects seem to be the most strongly felt need of local government units. Page 728.

Post-war outlook for air-line employment.

To provide information needed in vocational guidance of veterans and others, estimates have been made of the numbers of workers likely to be employed in different air-line jobs 5 years after the war, on the basis of conservative and also of relatively optimistic assumptions as to future air traffic. For pilots, the post-war employment figures arrived at would mean about 2,000 to 10,000 more jobs than at present. For mechanics and related personnel, the expansion in employment envisaged was from 6,000 to 26,000 above current levels. Comparable gains were found to be in sight for some but not all other occupational groups studied. Page 739.

Trend of child labor, 1940–44.

The years from 1940 to 1944 have radically changed the picture of child labor and youth employment in the United States. Employment and age certificate records as reported to the Children's Bureau, which show the trend from year to year rather than a cross section of the actual number of young persons employed at any given moment, indicate that more than 7 times as many boys and girls 14 through 17 years of age entered the labor market in 1943 as in 1940 and went

into work generally subject to Federal or State child-labor regulation. In States and cities reporting for each of these years, the number of minors 14 through 17 years of age obtaining certificates for full-time or part-time work increased from roughly 175,000 in 1940 to more than 1,320,000 in 1943. Preliminary data for 1944 indicate that in general the high level of 1943 is being maintained. Page 756.

Labor conditions in the Philippines.

The great majority of the Filipinos, in 1939, lived under a primitive agricultural system. Only 601,335 were employed in manufacturing and mechanical industries. The average daily wage for all occupations was about 30 cents in United States currency. Wages of more than 85 percent of the workers were fixed by customary contracts. Labor organizations, in 1938, had a membership of 46,456, and were under State control. Cooperatives, encouraged and supervised by the Government, had about 120,000 members. Social insurance was limited to accident compensation and a pension system for certain classes of civil servants.

The Philippine economy was disrupted by the Japanese, with resulting unemployment, inflation, and a lower standard of living. Page 776.

Extent of collective bargaining and union status, January 1945.

Altogether, 14⅓ million workers, or about 47 percent of all wage earners, were employed under the terms of union agreements at the beginning of 1945. Agreement coverage included approximately 65 percent of the manufacturing and 33 percent of the nonmanufacturing wage earners. About 6½ million workers were covered by closed- or union-shop agreements, and approximately 3¾ million by agreements requiring maintenance of membership; the remainder had no union membership requirements as a condition of employment. Almost 6 million workers were covered by some form of check-off. Page 816.

Hourly earnings in the ammunition-loading industry, 1944.

Straight-time average hourly earnings of workers in representative key jobs amounted to 77 cents in shell- and bomb-loading plants and to 71 cents in bag-loading plants. Women comprised nearly three-fifths of the entire labor force in the ammunition-loading industry and nearly two-thirds of the employees in bag loading. In contrast to other manufacturing industries, employment opportunities for women in ammunition loading are not limited to a few specialized jobs. A description of the industry and detailed wage data are given in an article on page 837. Earnings data for the explosives-manufacturing industries were published in the March 1945 issue of the Monthly Labor Review.

Employment, earnings, and hours in Ireland, October 1943.

Average hourly earnings of males in Ireland ranged from 1s. 0.1d. to 2s. 2.8d. in October 1943. Earnings of females were slightly over half those of males in the same industries. The range of hours worked during the week was 36.2 to 50.6 for males and 22.4 to 46.6 for females at that time. Figures are for industries employing a total of 142,855 persons. For further details on earnings, hours worked, and employment in those industries, see page 853.

Current Statistics of Labor Interest in Selected Periods [1]

[Available in reprint form]

Item	Unit	1945		1944		1939: average for year
		February	January	December	February	
Employment						
Civilian labor force: Total (BC)	Thousands	51,430	50,960	51,250	51,150	[2] 54,230
Male	do	33,660	33,650	33,720	34,520	[2] 40,950
Female	do	17,770	17,310	17,530	16,630	[2] 13,280
Employed [3]	do	50,550	50,120	50,570	50,260	[2] 46,930
Male	do	33,170	33,160	33,320	34,010	[2] 35,600
Female	do	17,380	16,960	17,250	16,250	[2] 11,330
Nonagricultural	do	43,760	43,430	43,480	43,610	[2] 37,430
Agricultural	do	6,790	6,690	7,090	6,650	[2] 9,500
Unemployed, total	do	880	840	680	890	[2] 7,300
Civilian employment in nonagricultural establishments: Total [3]	do	38,000	37,997	38,888	38,840	30,353
Manufacturing	do	15,537	15,557	15,630	16,735	10,078
Mining	do	802	804	806	858	845
Construction [4]	do	564	564	594	715	1,753
Transportation and public utilities	do	3,764	3,735	3,771	3,704	2,912
Trade	do	7,044	7,088	7,611	6,867	6,618
Finance, service, and miscellaneous	do	4,356	4,356	4,304	4,131	4,160
Federal, State, and local government, excluding Federal force-account construction	do	5,938	5,894	6,172	5,830	3,988
Military personnel	do	12,000	11,900	11,900	10,600	362
Wage-earner employment:						
Manufacturing	do	13,095	13,112	13,190	14,254	8,192
Bituminous-coal mining	do	338	338	338	370	371
Class I steam railroads, including salaried employees (ICC)	do	1,413	1,391	1,400	1,387	988
Hired farm workers (BAE)	do	1,494	1,434	2,048	1,681	[5] 1,784
Hours of labor						
Average hours per week of wage earners:						
Manufacturing	Hours		45.4	45.6	[6] 45.2	37.7
Bituminous-coal mining	do		45.4	43.1	[6] 44.0	27.1
Retail trade	do		39.5	39.8	[6] 40.0	43.0
Building construction (private)	do	38.9	38.8	39.4	37.6	32.4
Weekly earnings						
Average weekly earnings of wage earners:						
Manufacturing			$47.52	$47.45	[6] $45.29	$23.86
Bituminous-coal mining			$54.25	$50.39	[6] $52.50	$23.88
Retail trade			$26.99	$26.41	[6] $25.66	$21.17
Building construction (private)		$52.90	$52.98	$53.48	$48.77	$30.24
Hourly or daily earnings						
Average hourly earnings of wage earners:						
Manufacturing			$1.047	$1.040	[6] $1.002	$0.633
Bituminous-coal mining			$1.205	$1.187	[6] $1.195	$0.886
Retail trade			$0.751	$0.728	[6] $0.707	$0.536
Building construction (private)		$1.359	$1.364	$1.359	$1.297	$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry			$0.971	$0.963	[6] $0.931	$0.622
Employment by industry as of January 1939			$0.894	$0.886	[6] $0.850	$0.622
Quarterly farm wage rate, per day without board (BAE)			$4.15		[6] $3.50	[6] $1.53
Industrial injuries and labor turnover						
Industrial injuries in manufacturing, per million man-hours worked				[7] 18.8		15.4
Labor turnover in manufacturing:						
Total separations, per 100 employees			6.2	5.7	[6] 6.7	([8])
Quits, per 100 employees			4.6	4.3	[6] 4.6	([8])
Lay-offs, per 100 employees			0.6	0.5	[6] 0.8	([8])
Total accessions, per 100 employees			7.0	5.1	[6] 6.5	([8])
Strikes and lockouts [9]						
Strikes and lockouts beginning in month:						
Number		310	240	280	340	218
Number of workers involved	Thousands	109	44	85	146	98
All strikes and lockouts during month—man-days idle:						
Number	do	412	228	380	459	1,484
Percent of available working time		0.06	0.03	0.05	0.06	0.28

See footnotes at end of table.

Current Statistics of Labor Interest in Selected Periods [1]—Continued

[Available in reprint form]

Item	Unit	1945		1944		1939: average for year
		February	January	December	February	
Cost of living						
Cost-of-living index (wage earners in large cities): All items [10]	1935–39=100	126.8	127.1	127.0	123.8	99.4
Food	1935–39=100	136.5	137.3	137.4	134.5	95.2
Clothing	1935–39=100	143.3	143.0	142.8	135.2	100.5
Rent	1935–39=100			108.3	108.1	104.3
Fuel, electricity, and ice	1935–39=100	110.0	109.7	109.4	110.3	99.0
Housefurnishings	1935–39=100	143.8	143.6	143.0	128.7	101.3
Miscellaneous	1935–39=100	123.2	123.1	123.1	118.7	100.7
Retail food prices (large cities)						
Retail price index: All foods	1935–39=100	136.5	137.3	137.4	134.5	95.2
Cereals and bakery products	1935–39=100	108.7	108.7	108.6	108.1	94.5
Meats	1935–39=100	130.7	130.2	129.9	130.5	96.6
Dairy products	1935–39=100	133.5	133.5	133.5	133.5	95.9
Eggs	1935–39=100	153.1	169.6	188.5	142.5	91.0
Fruits and vegetables	1935–39=100	168.9	168.9	164.2	163.0	94.5
Beverages	1935–39=100	124.5	124.4	124.3	124.3	95.5
Fats and oils	1935–39=100	123.5	123.4	123.3	123.8	87.7
Sugar and sweets	1935–39=100	126.3	126.4	126.4	126.6	100.6
Wholesale prices						
Wholesale price index: All commodities	1926=100	105.2	104.9	104.7	103.6	77.1
All commodities other than farm products	1926=100	100.2	100.1	100.0	99.3	79.5
All commodities other than farm products and foods	1926=100	99.2	99.1	98.9	98.0	81.3
Farm products	1926=100	127.0	126.2	125.5	122.5	65.3
Foods	1926=100	104.7	104.7	105.5	104.5	70.4
National income and expenditures						
National income payments, total (BFDC)	Millions of dollars	12,739	13,357	14,405	12,206	[5] 5,319
Consumer expenditures for goods and services, total (BFDC)	do			[11] 26,646		[11] 16,651
Retail sales, total (BFDC)	do	5,168	5,462	7,445	4,753	[5] 2,749
Production						
Industrial production index, unadjusted (FR): Total	1935–39=100	231	230	230	240	109
Manufacturing	1935–39=100	249	247	248	259	109
Minerals	1935–39=100	135	134	131	136	106
Bituminous coal (BM)	Thousands of short tons	46,900	52,760	45,774	52,817	32,905
Construction expenditures, all types (excluding maintenance, except in farm construction)	Millions of dollars	344	345	346	350	[5] 408
Building construction started in urban areas	do	77	67	70	73	([8])
New family-dwelling units in nonfarm areas		7,700	7,400	10,800	13,500	30,700
Carloadings index, unadjusted (FR)	1935–39=100	130	132	128	133	101

[1] Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines). Most of the current figures are preliminary.

[2] 10-month average—March to December 1940.

[3] Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from employment in civilian labor force mainly because of exclusion of such groups as self-employed and domestic and casual workers.

[4] Includes workers employed by construction contractors and Federal force-account workers (nonmaintenance construction workers employed directly by the Federal Government). Other force-account nonmaintenance construction employment is included under manufacturing and the other groups.

[5] February.

[6] January.

[7] Cumulative frequency rate, January to December 1944.

[8] Not available.

[9] The same series as those formerly published in this table as "Strikes."

[10] For the coverage of this index, see p. 863.

[11] Data for fourth quarter.

MONTHLY LABOR REVIEW

APRIL 1945

Building the Peace

By Frances Perkins, *Secretary of Labor*

IN THE following pages appears the first of a series of State Department documents to be republished in the Monthly Labor Review. They are concerned with the issues of the forthcoming Conference of the United Nations and are being printed here because it is felt that every available medium should be used to place before the American people as much information as possible about the vast aims of the April Conference in San Francisco.

One aspect of international organization concerns the Department of Labor and all persons having an interest in labor questions. The United States belongs to the International Labor Organization. Last September it was suggested that the ILO become a member of the large family of international institutions envisaged in the Dumbarton Oaks proposals. Recently, in London, the Governing Body of the ILO declared that the Organization welcomed the opportunity to be associated with the Dumbarton Oaks family on terms that would permit the ILO to make its best contribution toward a peaceful and prosperous world.

The incorporation of the ILO into a general international organization for the maintenance of peace will strengthen both. Without peace there can be no genuine and permanent improvement in working conditions. Among nations constantly in dread of war, liberty and expanding standards of living for the worker or the employer will not long endure.

The tripartite ILO has for more than a quarter of a century voiced the hopes of the working man. The hopes and aspirations of working people will always tend toward the establishment and maintenance of a fair and honorable peace. The ILO is the appropriate channel through which those hopes and aspirations not only can be voiced, but also can be translated into feasible programs of international and national action. Thus, a sound, developing, world-wide program of improved living standards and high employment levels may be both a cause and a result of stable international relations. Viewed thus, the ILO is a valuable tool in the making of the peace. The ILO, however, is no tool or cog in a huge international machine. It is a leaven of the whole, a great moral force, a benign social phenomenon, like conscience, shaping the whole toward social justice.

The documents here reprinted seek to give our people full opportunity to study the issues of the San Francisco Conference. When they have read, pondered, and discussed "Dumbarton Oaks," they will be ready to decide; and on their decision and on that of their elected representatives rests the fate of the world.

War—How Can We Prevent It?[1]

Peace is everybody's business.

In the coming months the foundations of peace will be laid. We want to make the best possible start. This means that the peoples of the United Nations must understand what is at stake and what is proposed.

The Foreign Affairs Outlines prepared by the Department of State set forth in simple terms what this Government is doing or proposing. These Outlines give factual information for American groups interested in studying and discussing these vital public policies in their own way.

I hope every American will participate in discussion of these subjects during the coming months and will attempt to make up his mind about them. The State Department will be glad to receive individual and group expression of opinions on these crucial problems.

EDWARD R. STETTINIUS, Jr.,
Secretary of State.

A Plan for Peace

At Dumbarton Oaks—an estate in Washington, D. C.—experts from the United States, Russia, Great Britain, and China considered from every angle the problems of peace and security. They studied previous attempts to build and keep the peace. After long preparation and weeks of discussion they submitted proposals for an international organization which they believed would constitute a sound basis for a charter to be drawn up by a conference of all United Nations.

These proposals, though not complete on all points or stated in final legal terms, were put before the peoples of the United Nations for their careful consideration.

The experts, including our own, agreed that an international organization could try to prevent wars in two ways:

1. By dealing firmly and quickly with each dispute as it arises, using united force, if necessary, to prevent or stop armed conflict. (This is the subject of the present article.)

2. By promoting the well-being of all nations and peoples. (This part is dealt with in articles that will appear in succeeding issues of the Monthly Labor Review.)

Secretary of State Stettinius has stated the following principles underlying the proposals for keeping the peace:

1. Peace can be maintained only if the peace-loving nations of the world band together for that purpose. In doing so, they have to recognize that each State has a right to a voice in the affairs of the family of nations; but also that nations are not equal in their power to prevent war.

2. War can be prevented only if the great powers employ their dominant physical power justly and in unity of purpose to that end. Hence the prominence given to the Security Council, in which the United States, Great Britain, and the Soviet Union, China, and France would hold permanent seats.

[1] The first of a series of four Foreign Affairs Outlines on "Building the Peace," prepared by the Department of State, which will appear in the Monthly Labor Review. The other three Outlines deal with the following subjects: Prosperity—How Can We Achieve It?; Social Progress—How Can We Work For It?; and Freedom—How Can We Achieve It? Reprints of these Outlines may be obtained from the Department of State or from the Superintendent of Documents, Washington 25, D. C.

3. To prevent and suppress wars is not enough. If we are to have lasting peace, we have to *build* peace. Hence the need for a General Assembly which, as the highest representative body in the world, will extend the rule of law in international relations, and advance the material and cultural welfare of all men.

4. As peace becomes more secure, armaments can and should be reduced progressively on a world-wide basis.

What is Proposed?

Six main points are made in the proposals on the problem of keeping the peace:

1. Renounce Use of Force

We, and every other nation joining the United Nations Organization, would obligate ourselves to settle our disputes *only* by peaceful means, and not by force or the threat of force.

2. Investigate Disputes

Disputes between nations that might cause friction or lead to war would be thoroughly studied by the United Nations Organization.

Any country, whether it is a member of the Organization or not, could bring a dispute to the General Assembly of all Member Nations or the Security Council of 11 Members (United States, Great Britain, Russia, China, and France are permanent members, and 6 nations are elected periodically by the Assembly). The Security Council would be on the job all the time.

3. Seek Peaceful Settlements

Several ways of settling a dispute could be recommended by the Security Council or by the General Assembly:

Urge the nations involved to get together and work out the problems to their mutual satisfaction. Propose some solution to them.

Ask them to submit their differences to a third party for mediation, conciliation, or arbitration.

Recommend that they take a dispute involving legal questions to the International Court of Justice.

4. Take Political and Economic Action

Should the Security Council consider the above methods inadequate, the proposals further provide for the enforcement of peace by nonmilitary measures—diplomatic and economic.

Diplomatic action might be taken, cutting off relations with nations threatening war.

Communications might be broken—stopping trains, ships, letters, cables, or telegrams from going in or out of the nation threatening to break the peace.

Economic boycott might be used to withhold certain important supplies or materials, or trade with an offending nation might be completely stopped.

Conditions Necessary to Success of These Actions

For such economic and political measures to be successful, the member nations, particularly the great powers, would have to cooperate fully in applying them without delay.

Force to back them up would have to be organized and ready for immediate use in case the economic measures prove insufficient to stop an aggressor.

5. Take Military Action

The Security Council would decide when and if united force should be employed. Force is considered the last resort, but in a crisis it might have to be used before other methods could be employed. This would depend on the nature of the threat to peace.

A Military Staff Committee composed of the Chiefs of Staff of the five permanent members of the Security Council or their representatives would advise the Council on military matters. This Committee would plan for effective use of the united forces pledged by the member nations.

Why not an international police force? The military experts at Dumbarton Oaks felt that national contingents of land, sea, and air forces would be more practical than an international police force, for these reasons:

Standing forces of member nations would be available at all times, near any place where they might be needed, to quell a disturbance of the peace.

The United Nations have among them good military bases in all parts of the world. Effective action would depend on forces trained at widely distributed bases, ready for speedy movement.

Effective military force requires national support—munitions, equipment, training, discipline, tactics, and the like.

6. Advise on Regulation of Armaments

The organization would make plans for the reduction and regulation of armaments to submit to the member nations. The General Assembly of all Member Nations, the Security Council, and the Military Staff Committee would work on this problem. A sense of security is probably necessary before nations will be willing to reduce armaments. It is assumed that peace-loving nations do not want to divert any more of their resources to arms than may be necessary. Successful cooperation in keeping the peace could pave the way for a general reduction of the burden of armaments.

How the Security Council Votes

1. Each member of the Security Council, consisting of five permanent and six elected members, would have one vote.
2. Decisions on matters of procedure would be made by an affirmative vote of any seven members.
3. Other decisions would be made by an affirmative vote of seven members including all of the permanent members, except that in all matters regarding the investigation of disputes and their peaceful settlement, no party to a dispute would be entitled to vote.

This means that where the Council is engaged in performing its function in the peaceful settlement of disputes, no nation, large or small, would be above the law. Where the Council is engaged in performing its *political* functions of action for maintaining or restoring

peace, a unanimous agreement among the permanent members (United States, Great Britain, Russia, China, and France) would be required.

Secretary of State Stettinius said regarding these proposals:

> Where the Council is engaged in performing its political functions of action for maintenance of peace and security, a difference is made between the permanent members of the Council and other nations for the practical reason that the permanent members of the Council must, as a matter of necessity, bear the principal responsibility for action. Unanimous agreement among the permanent members of the Council is therefore requisite.

Will This Work?

Because the previous attempt to keep the peace through the League of Nations did not prevent this war, people wonder whether the proposed Organization could succeed. This is a matter of opinion, but there are certain facts which should be considered in discussing it.

How Does It Differ From the League?

The United States was not a member of the League. It is proposed that we shall be a member of the new Organization.

In contrast to the League Covenant, unanimity of all the members of the General Assembly and of the Security Council would not be required.

We and all other nations would make special arrangement to supply certain types and quantities of armed forces to back up the decisions of the Security Council, whereas the League had neither armed force nor a Military Staff Committee.

The Security Council would be in continuous session.

These are the main differences that bear on the problem of preventing the outbreak of war.

Could It Prevent All Wars?

No one can predict the future, but certain questions at this point may help clarify the discussion.

Do you think the Security Council could enforce its decisions in cases where small nations may be involved?

Would the Security Council be able to prevent a major power from going to war?

Do you think that cooperation in an international organization and the force of world opinion would help to preserve peace among the major powers?

What Is Needed To Make It Work?

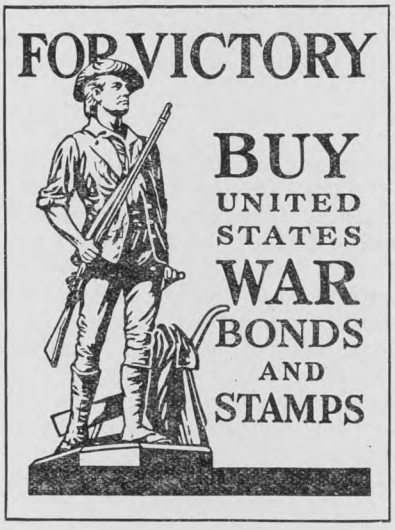
The President in his address to Congress on March 1, 1945, said:

> No plan is perfect. Whatever is adopted at San Francisco will doubtless have to be amended time and again over the years, just as our Constitution has been.
>
> No one can say exactly how long any plan will last. Peace can endure only so long as humanity really insists upon it, and is willing to work for it—and sacrifice for it.

The Choice Before Us

The proposals put on paper at Dumbarton Oaks show a large area of agreement among the principal United Nations, and will form the basis of the discussion between all the United Nations at San Francisco.

The Charter drafted at San Francisco will be presented to the nations for their decision. Each nation will decide for itself whether to adopt and support that Charter, or reject it, and seek its security and welfare in other ways.



Guaranteed-Employment and Annual-Wage Provisions in Union Agreements[1]

IN RECENT years there has been great interest in various methods of increasing the job security of American wage earners. The unemployment-compensation laws, public-works programs, and sections of the Fair Labor Standards Act represent governmental attempts to provide full employment or measures for alleviating unemployment. The various State unemployment-compensation laws not only provide a limited income, after a waiting period and for a maximum number of weeks, but some of them seek to encourage regularization by including merit-rating provisions under which the employer's unemployment tax decreases in proportion to the increase in employment stabilization. The Fair Labor Standards Act grants a partial exemption from the overtime-pay requirements to those companies entering into agreements with unions which guarantee continuous employment for 52 weeks and limit hours to 2,080 per year.

Although a number of employers have made efforts toward regularizing employment within their plants, only a few have gone so far as to guarantee annual wages or employment to all or substantial portions of their employees. The explanation of the infrequency of annual-wage and guaranteed-employment plans in American industry today lies in the very problem which such plans are designed to correct. As a rule, the only companies which feel they can guarantee full-time employment or annual wages are those which have substantially solved the problem of regularizing employment. Some guaranty plans, after being in operation for a year or two, have been abandoned when the companies found they were unable to finance them during a prolonged decrease in production.

Labor unions, of course, have always been keenly interested in all efforts, governmental and private, to secure regular and full employment. On occasion, they have cooperated with employers in plans for reducing seasonal fluctuations as well as programs for expanding the business of a particular industry or company. Faced with the stark fact of insufficient jobs for all, unions have sought to mitigate some of the effects of job insecurity through share-the-work plans, seniority rules, and dismissal pay for lay-offs. None of these measures, however, provides security of income or employment: Sharing work also means sharing unemployment; seniority rules merely decide who is to be laid off; dismissal pay only softens the blow from loss of job.

To an increasing extent unions are seeking job security for their members through the inclusion of employment or wage guaranties in their contracts with employers. The present report is confined to a discussion of such guaranties in employer-union agreements.[2] As will be seen in the following pages, very few of the agreements currently in force contain a guaranty of employment, and most of those which are in effect are limited in scope. Some restrict the guaranties to particular groups of workers; some provide less than a year's guaranteed employment; some permit the employer to cancel or reduce

[1] Prepared in the Bureau's Industrial Relations Division by Abraham Weiss under the direction of Florence Peterson.

[2] See Monthly Labor Review, August 1940, p. 283, for report similar to this one.

the guaranty under specified circumstances. None of them provides guaranties of employment for prolonged periods of time, since they are necessarily limited to the duration of the contracts, most of which are in effect for only 1 year.

Limited as they are, the existing employment-guaranty provisions in union agreements represent a partial fulfillment of workers' quest for job security; they may also indicate the beginning of a more general adoption of plans which will provide some measure of security to an increasing number of workers.

Extent and Characteristics of Guaranteed Plans

Extent of plans.—Guaranteed employment or annual wages are assured to approximately 42,500 workers out of 8 million workers covered by employer-union agreements analyzed (table 1). Most of these workers (approximately 30,000) are employed in the service and distributive industries, the agreements for which were negotiated with companies employing relatively small numbers of workers. Although there are a few outstanding examples in manufacturing companies of considerable size, the total number of employees in manufacturing industries who are covered by agreements providing guaranteed employment is very small—about 12,500.

TABLE 1.—*Extent of Employment and Annual-Wage Guaranty Provisions in Union Agreements*

Item	All industries	Manufacturing industries	Nonmanufacturing industries
Agreements examined:			
Number	(1)	6,500	(1)
Workers employed	8,000,000	6,000,000	2,000,000
Agreements providing guaranties:			
Number	(1)	131	(1)
Companies covered	(1)	142	(1)
Workers covered	42,500	12,500	30,000

[1] The exact number of agreements and companies covered cannot be estimated since many of the agreements are uniform and are separately signed by an unknown number of individual employers, and some were negotiated through employers' associations whose membership is not available. In such instances, available employment data for industries and areas are used for estimating the number of workers covered by the agreements.

Types of plans.—Broadly, the plans provided in current employer-union agreements are of two kinds—those guaranteeing employment and those guaranteeing annual wages. The employment-guaranty plans specify the number of weeks or hours of work to be provided to employees each year, without specifying the amount of earnings to be received. In other words, what is guaranteed is a year's job (or in some cases, a fraction of a year) with the total annual earnings left a variable. Under annual-wage plans, the employee is guaranteed a weekly income throughout the year, regardless of daily or seasonal fluctuations in employment. Actually, the distinction between guaranteed employment and annual-wage plans is one of emphasis only, for if the employer cannot furnish sufficient work to fulfill the contract, wages must be paid for the remainder of the time guaranteed. The significant differences among the several plans have to do with the relative completeness of the guaranty, that is, how closely the

guaranty, whether expressed in wages or in work, comes to providing the equivalent of full employment at normal wages.

Existing guaranty plans represent various arrangements and degrees of regularizing employment or income. In some instances the regular weekly wage is assured for a given number of weeks and a proportion of wages (half pay) is guaranteed during all or a specified number of the remaining weeks. Certain plans guarantee a specified number of hours' or weeks' work a year. Under the hour guaranty, weekly earnings fluctuate according to the actual hours worked in any week; under either plan, if less than 52 weeks or 2,080 hours are guaranteed, the worker has no assurance of a full year's employment or earnings.

Under some plans, full pay during weeks of less than full employment is compensated to the employer by extra work during peak seasons with no increase in the weekly pay during these overtime weeks; under others, the guaranteed wage represents a minimum to which overtime is added when worked. Somewhat similar to a guaranteed-wage plan is the wage-advance arrangement whereby an employer makes a cash loan to eligible workers in "short" weeks to bring their wages up to specified amounts, these advances being subsequently repaid by automatic deductions from wages earned during full-time or overtime weeks. One well-known plan guarantees each eligible employee 52 pay checks per year regardless of business conditions or regularity of employment, but the total annual wage fluctuates since the fund from which the pay checks are drawn is a specified percentage of the company's gross income.

Restrictive and qualifying provisions.—The plans differ not only with respect to the proportion of a year's normal income or work which is guaranteed, but also as to the inclusiveness of the labor force that benefits from the guaranties and as to the conditions, if any, which relieve the employer of fulfilling the guaranty obligations. For example, if the guaranty applies to only a small number of key employees, the plan may involve no major effort toward plant-wide stabilization but represent merely a contractual arrangement for employees who would in any case be fairly regularly employed. Even when the plan covers most of the employees within the plant, benefits are negligible if there are reservations attached which tend to reduce the guaranty as the hazards of unemployment increase.

The contractual obligation under any plan included in a general employer-union agreement is necessarily limited to the effective period of such agreement. Although a few agreements, particularly in the trade industries, are in effect for 2 or 3 years, most of them are negotiated for 1-year terms and the contractual guaranties therefore are automatically limited to seasonal or intermittent situations rather than to prolonged periods of business depression.

The most extended coverage in existing guaranty plans includes all "regular" or "permanent" employees or all those who have completed a probationary period, usually designated as 6 months. Other agreements specify "basic crew," sometimes designated by name, or a fixed total number, with provision for new persons to become eligible if vacancies occur within the original group. The most restricted plans limit the coverage to a relatively few highly skilled craftsmen and foremen or particular groups, such as truck drivers.

Some of the plans covering the greatest number of employees have no qualifying clauses; in other words, the employer is obligated to

fulfill the terms of the guaranty as long as the agreement is in effect, no matter what circumstances may develop. Several specifically revoke the guaranties in case of bankruptcy or sale of the business and reserve the right to suspend them in emergencies such as fire, flood, strikes, and other situations beyond the management's control. Some plans go much farther and allow the employer to reduce or cancel his obligations in case of "serious decline of business"; in most such cases, however, this cannot be done without permission of the union or after arbitration, and frequently dismissal wages are provided in lieu of payment of the guaranteed annual wage.

Guaranty Plans in Manufacturing Agreements

NUMBER AND COVERAGE OF PLANS

Out of a total of about 6,500 agreements analyzed in manufacturing industries, covering over 6 million workers, 131 provide some form of guaranteed-employment or annual-wage plan. These cover approximately 12,500 workers in 142 manufacturing companies.[4] Eighty-eight of these companies, employing about 5,850 workers, guarantee a full year's employment or wages; the other 54 companies, employing about 6,500 workers, provide guaranties of less than 1 year. Unqualified year-round guaranties to all or most workers in the plant are provided in only a few agreements, but these cover some of the largest companies having guaranty provisions. Most of the guaranties, both for the year and for shorter periods, have qualifying provisos which allow cancellation or modification under specified circumstances and limit the coverage to certain employees—to those on specified occupations, to those in the company's employ at the time the agreement was signed, to a specified number, or to employees with a specified period of service (table 2).

Most of the employment or wage guaranties in manufacturing industries are incorporated in 1-year agreements, although one plan assures minimum annual wages for 5 years, subject to certain conditions based on the employer's financial ability. One plan, included in uniform agreements signed separately by 58 companies in the textile dyeing and finishing industry, is effective for approximately 2½ years.

In the agreements analyzed, annual wage guaranties for all or virtually all the company's employees are provided by companies engaged in the meat-packing, shoe, dairy, and leather-products industries. Limited groups of workers are covered by wage guaranties signed by companies in the textile printing, finishing, and dyeing, ladies' apparel, grain-milling, and ice industries. Employment guaranties, for both yearly and shorter periods, are provided by a varying number of agreements in the grain- and cereal-milling, dairy, syrups and preserves, electroplating, dress manufacturing, soap, textile refinishing and bleaching, fur designing, and millinery industries.

Although the majority of these agreements containing employment or wage guaranties were signed by individual employers, most of them are of a standard or uniform type. Fifty-eight textile dyeing and finishing companies in the New York metropolitan area, and about 40 textile printing establishments are signatory to standard agreements negotiated by unions with jurisdiction over skilled employees

[4] Plans covering truck drivers only are considered under nonmanufacturing, even though the agreement may be signed by an employer in a manufacturing industry.

and foremen only. One of the standard agreements included in this study was with a local association of employers in the syrups and preserves industry.

TABLE 2.—*Characteristics of Guaranty Provisions in Collective Agreements in Manufacturing Industries*

Guaranty	Number of agreements	Number of companies covered	Number of employees covered
Total agreements analyzed, having guaranty provisions	131	142	12,500
Annual guaranty	76	88	5,850
Covering all or most employees	7	6	5,350
Unconditional	5	4	5,100
Conditional	2	2	250
Covering particular occupational groups	69	82	500
Unconditional	10	23	75
Conditional	59	59	425
Less than full-year guaranty	55	54	6,500
Covering all or most employees	18	17	6,300
Unconditional	1	12	50
Conditional	17	5	6,250
Covering particular occupational groups	37	37	200
Unconditional	20	20	100
Conditional	17	17	100

PLANS PROVIDING ANNUAL GUARANTIES TO ALL EMPLOYEES

Unconditional Guaranties

Five of the seven agreements which extend annual wage or employment guaranties to virtually all plant employees have no qualifying clauses permitting modification or cancellation during the life of the agreements. Two of these cover approximately 4,000 workers employed by a meat-packing company, one covers about 1,000 shoe workers, and two cover about 100 workers employed by dairy and hardware companies. One of the latter, an agreement with a small dairy in Wisconsin, pledges the employer to "maintain such weekly hours as will best serve its regular personnel maximum and continuous employment; such hours to average 50 per week over a 1-year period," with time and a half for work over 40 hours in any 1 week.[5] "Regular personnel" includes workers who have completed the 300-hour probationary period.

A 1-year agreement with a southern hardware company[6] assures each employee a guaranteed minimum weekly wage, equal to 40 times his straight-time average hourly earnings for the preceding year, each week during the life of the agreement. Time and a half is paid for all hours over 8 worked in any 1 day or over 40 worked in any 1 week.

George A. Hormel & Co.—The Hormel annual-wage plan for all plant personnel, as incorporated in its agreements covering its Austin (Minn.) and East St. Louis (Ill.) plants,[7] amounts to advances on wages during periods of unemployment and repayment of such advances through the working of extra hours, during peak periods, up to 53 hours. The hours of work fluctuate, but the weekly pay remains unchanged.

[5] The union involved is the Food, Tobacco, Agricultural & Allied Workers (C. I. O.).
[6] Agreement negotiated by the United Steelworkers of America (C. I. O.).
[7] The union at the Austin plant is the United Packinghouse Workers (C. I. O.) and that at the East St. Louis plant is the Amalgamated Meat Cutters & Butcher Workmen (A. F. of L.).

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Under the Hormel "straight time" plan each worker is employed on an annual basis and is assigned a regular weekly rate which is determined by budgeting over a 52-week period the estimated annual labor cost of the department.[8] The total annual labor expenses for a department are estimated and one fifty-second part of this cost is allocated as a weekly wage cost, which is divided into equal weekly payments graduated according to occupation among the workers estimated as necessary to do the work, regardless of the number of hours worked in any particular week. In return, employees regularly attached to a department work as many hours as are required to turn out the production scheduled, without extra pay, up to a maximum of 53 hours during peak periods; however, when they are required to work more than 10 hours in any 1 day, overtime is paid for hours worked in excess of 48 in that week.[9]

The yearly wage is calculated on the basis of a 40-hour week in most departments, with an allowance for vacation and sick leave. In other departments, in which the budget is insufficient to guarantee 40 hours' pay or for which it is most difficult to forecast yearly production accurately, the yearly wage is based on 38 or 36 hours' pay as a safety margin. If at the end of the year employees in these departments have worked more than the hours paid for, they receive a year-end check for extra hours actually worked.

Bonuses are paid to all plant employees (except a small group of engineers, maintenance men, and elevator operators) if actual production exceeds the estimated volume. In general, the scheduled annual total of unit production divided by 2,000 constitutes one production-hour for the department. Each department is reimbursed for the excess of production-hours over total man-hours actually worked, and this money is thereupon allocated to the individual workers on the basis of their "hourly" rates.[10] When members of a gang are absent, their wages are credited to the gang, and are divided among the employees in the gang at the end of the year.

Nunn-Bush Shoe Co.—The Nunn-Bush plan, which was evolved as a part of the management-worker partnership ideal, guarantees 52 pay checks a year to practically all employees with at least 2 years' service.[11] A specified percentage of wholesale value of shoes sold, representing the ratio of labor costs to wholesale value of shoes as determined from past years' experience, is put into a Share Production Fund from which all wage payments except those for overtime are made.

Individual weekly drawing accounts are established for each eligible employee from this fund on the basis of one fifty-second of the individual's "yearly differential rate," obtained by multiplying the worker's present average hourly drawing by 2,080 (40 hours $\times$ 52).

[8] Data are from union agreement on file in Bureau of Labor Statistics and report entitled "The Hormel Annual Wage, Wage Incentive and Joint Earnings Plans," published by George A. Hormel & Co., February 1944.

[9] Extra gang employees receive time and a half for work in excess of 12 hours a day or 56 per week, maximum straight-time hours permissible under Section 7(b)(2) of the Fair Labor Standards Act. At the East St. Louis plant, time and a half is paid to all employees for work over 10 hours per day or 53 per week.

[10] The Hormel East St. Louis agreement provides that if at the end of the fiscal year production is less than the budgeted volume of work "the members of the group individually and collectively become indebted to the company for producing that much extra work at the first opportunity, without extra pay." If production has exceeded the yearly schedule, each member of the group receives a bonus on the basis of one-fortieth of a week's pay for each specified unit of production in excess of quota.

[11] The plan now covers the company's Milwaukee plant only. A somewhat similar plan for the company's Edgerton, Wis., plant was discontinued at the outbreak of the war when most of the plant's regular employees went into the armed services.

Individual "differential rates" vary according to occupation. A reserve fund of 12½ percent of the yearly differential rate is maintained to insure regularity of income. Full weekly drawings (one fifty-second of the individual's yearly differential rate) are issued unless the individual employee's reserve falls below 5 percent of the annual estimated income. When an individual's reserve account exceeds 12½ percent of the annual estimated income, the excess is paid as a monthly (or adjusted compensation) check. The company pays the prevailing rate of interest on savings-deposit accounts on the reserve. Changes in the weekly drawing are made by increasing or decreasing the yearly differential rate; a downward revision in weekly drawing may be made if continued payment of the regular weekly drawing would reduce the reserve below 5 percent of the annual estimated income.

The plan covers all employees with 2 years' service except handicapped workers. Eligible workers are classified into A, B, and DB members. Class A members, limited to 595, may not be laid off; the others may be laid off if work for the first group falls below 40 hours a week, but as long as employed they participate in the Share Production Fund. Each month, the company furnishes the union with an estimate of the status of the Share Production Fund and at the end of the year union accountants are given access to the company's records to check the wholesale value of the shoes packed during the life of the agreement and the wages paid out of the fund.

Conditional Guaranties

Two of the 7 agreements which assure employment or wages on an annual basis, to all the plant's employees, include certain limitations on the employer's responsibility. These conditional guaranties cover about 250 workers.

Under one of these, effective for 1 year with a grain mill,[12] the work guaranty is 48 hours for millers, machine tenders, and one millwright, and 40 hours each week for all other "regular employees" (i. e., those with at least 60 days' service). Time and a half is paid for work over 8 hours per day or 40 per week. However, employees may be laid off regardless of the guaranty during any prolonged shut-down caused by an "act of God, lightning, fire, or explosion."

The other agreement, in effect for 5 years with a southern textile dyeing company [13] employing about 200 workers, provides minimum weekly wages ($18 for men and $15 for women)[14] to employees with 6 months' service, but limits the company's obligation to $8,000 per year. In the case of employees who fail to report for work when notified, the equivalent of the amount earned by workers in their department is deducted from their weekly minimum, but such deductions are applied only during slack periods when application for the weekly minimum is made.

ANNUAL GUARANTIES TO PARTICULAR OCCUPATIONAL GROUPS

In 69 of the 131 manufacturing agreements providing continuous annual employment or a minimum annual wage, the guaranties are

[12] Agreement negotiated by the American Federation of Grain Processors Council (A. F. of L.).
[13] Agreement negotiated by the Federation of Dyers, Finishers, Printers, & Bleachers (C. I. O.).
[14] During employment, the minimum hourly scale is 80 cents for men and 62 cents for women, or weekly minimums, on a full 40-hour basis, of $32 and $24.80, respectively.

limited to a specified number of the plants' employees or to those engaged in particular occupations. About 500 workers, employed by 82 different firms, are covered by these guaranties. In 10 of these agreements the guaranty is unqualified, but in the remaining 59 is subject to cancellation or modification in emergencies.

Unconditional Guaranties to Limited Groups

Seven of the 10 agreements which guarantee a minimum annual wage to a limited number of workers are subject to the provisions of section 7 (b) (2) of the Fair Labor Standards Act.[15] Four of these, with individual textile printing firms, were negotiated with a union representing highly skilled printers only; the fifth, with 5 ice-manufacturing companies, was signed with a union consisting of only engineers-in-charge and operating engineers; the sixth, with a midwestern millinery firm employing about 300 workers, limits the guaranty to foremen and 1 head machinist; and the seventh, with a grain firm, is limited to maintenance employees and watchmen.[16]

Each of these seven plans restricts the annual hours to be worked—2,000 hours under the textile-printing, ice-manufacturing, and grain-milling agreements, and 2,080 hours under the millinery agreement. The millinery and the four textile-printing agreements specify time and a half for work over 40 hours per week, although the textile plans permit the workweek to be extended by mutual consent to a maximum of 48 hours. The ice-manufacturing and grain-milling agreements, in accordance with the exemption under the act, require overtime pay only after 12 hours per day or 56 hours per week. Under the textile-printing agreements, employers unable to work as a result of physical disabilities arising outside the course of their employment receive pay for not over 2 weeks, with the understanding that the hours paid for shall be made up if possible. A discharged employee receives 1 full week's pay. Vacancies caused by discharge must be filled immediately, for the remaining period of the contract.

The annual guaranties in 3 of the 10 agreements which limit the guaranty to particular employees, but carry no other qualifications, are not subject to the Fair Labor Standards Act. A Chicago dress manufacturer guarantees cutters, representing about 10 percent of the work force, a specified annual salary, exclusive of overtime.[17] An association of 10 employers engaged in the manufacture of syrups and preserves, guarantees "permanent routemen [driver-salesmen] and cooks" 52 weeks of steady employment in each of the 2 years of the agreement.[18] One company, engaged in electroplating and employing about 60 workers, guarantees 5 designated maintenance men 48 hours of work "or the monetary equivalent thereof" in every week during the 52-week period of the contract. The agreement does not mention overtime pay.[19]

[15] Under section 7 (b) (2) of the Fair Labor Standards Act of 1938, employers may obtain partial exemption from the overtime requirements of the act by entering into agreements (with unions certified as bona fide by the National Labor Relations Board) that provide for employment on an annual basis and limit hours of work to 2,080 in any 52 consecutive weeks. Employees must be paid time and a half for hours over 12 per day or 56 per week.

[16] The unions signing these agreements are, respectively: Machine Printers Beneficial Association (Ind.); International Union of Operating Engineers (A. F. of L.); United Hatters, Cap & Millinery Workers (A. F. of L.); and Food, Tobacco, Agricultural & Allied Workers (C.I.O.). While this last agreement does not specify annual employment or an annual wage, the guaranty is implied by virtue of the overtime tolerance.

[17] Agreement negotiated by International Ladies' Garment Workers' Union (A. F. of L.).

[18] Agreement negotiated by United Retail, Wholesale & Department Store Employees (C.I.O.).

[19] Agreement negotiated by United Electrical, Radio & Machine Workers (C.I.O.).

Conditional Guaranties to Limited Groups

Of the 59 agreements providing conditional guaranties to limited numbers of employees, one is a 1-year grain-milling agreement covering fewer than 15 employees.[20] It guarantees annual employment to all those in the bargaining unit at the time the agreement was negotiated, but not to employees thereafter hired; the guaranty is void in the event of sale or liquidation. If it becomes necessary to lay off more than 2 employees on the seniority list in order to maintain the 52-week guaranty to the senior employees, and no agreement on the lay-off is reached, the issue may be arbitrated. The guaranty provides a minimum weekly wage equivalent to 40 times an employee's hourly rate for 52 consecutive weeks, with time and a half for all work in excess of 40 hours per week.

Fifty-eight agreements in the textile dyeing and finishing industry in the Paterson (N. J.) and New York areas, negotiated by local unions of foremen, skilled employees, semiskilled employees, and assistant colorists, guarantee annual wages to these particular groups of employees; the guaranty is cancelled in the event any plant or department is shut down by "Government directive order."[21] An employee whose services are ended because of "job or department elimination" receives severance pay equal to 2 percent of his annual earnings for each year of service up to a maximum of 5 years, and any discharged worker is entitled to 2 weeks' severance pay (discharges are not arbitrable).

Pay on the basis of 52 weeks per year is provided for all skilled employees who have passed a 30-day probationary period and to all semiskilled employees and assistant colorists previously paid on a basis of 52 weeks per year, "provided, however, that this condition shall not be construed to mean that if the employee's relations with the company are severed voluntarily or involuntarily, that such employee shall be entitled to the weekly wage based on the 52-week principle." For semiskilled employees and assistant colorists not previously paid on the basis of 52 weeks per year, the agreement provides half pay up to 14 weeks if the plant or department shuts down for more than 6 weeks for lack of work. New employees, who replace those on the 52-week basis leaving the company's services either because of discharge or by resignation, must be placed on the full-year basis.

GUARANTIES FOR PERIODS OF LESS THAN A YEAR

Employment or wage guaranties for periods of less than a full year are provided in 55 of the 131 manufacturing agreements studied which include guaranties. These cover about 6,500 workers and, with a few exceptions, the guaranties are limited to particular groups of employees and may be suspended by the employer either when specific contingencies occur or "at any time."

Fur-clothing industry.—Under 1 agreement, negotiated for a 3-year period with 12 employers employing a total of fewer than 50 fur designers, patternmakers, and fitters,[22] the annual guaranty amounts to

[20] Agreement negotiated by the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers (A. F. of L.).
[21] These local unions are affiliates of the Federation of Dyers, Finishers, Printers & Bleachers (C.I.O.).
[22] Agreement negotiated by International Fur and Leather Workers' Union (C. I. O.).

46 full weeks of work (except for fitters, who are guaranteed 47 weeks), exclusive of vacation with pay or overtime.

Dress manufacturing.—Under 2 dress-manufacturing agreements in Wisconsin, negotiated for 3-year terms, a specified number of permanent employees (about two-thirds of total plant employment) are guaranteed 45 weeks or 1,800 hours of work for each contract year.[23] The employer, however, has the right to cancel the guaranty if present wages are increased by 5 percent or if he is "not * * * able to comply with the guaranty of the equivalent of 45 weeks of employment." In the latter case the 5-percent increase in wages is automatically effective.

The guaranty is exclusive of overtime but includes paid vacation time, the latter being credited on the guaranty on a pro-rata basis in case of cancellation. Vacancies among the permanent staff are automatically filled by temporary workers "whose efficiency averages 87½ percent of the base rate for three previous pay periods." Permanent workers absent "for a legitimate reason or sickness for 2 months, or less," are entitled to return to the permanent list, if vacancies are available at the time of the return. Employees absent from work without legitimate excuse and without notification to the company lose their permanent status, but determination of such status must be mutually agreed upon by the company and union.

In the event the employer has been unable to furnish 1,800 hours' work to the permanent employees during any contract year, he may either pay a refund (minimum rate for piece workers and hourly rate for time workers) for such hour deficit, or pay back 5 percent of the earnings of such permanent employees from the beginning of the yearly contract period. If the employer cancels the guaranty during the contract year, the refund is based on the proportion of hours worked to the prorated guaranty.

In the event the employer complies with the conditions and penalties established for cancellation or nonfulfillment of the guaranty, he is credited with State unemployment benefits received by the employees affected; but if employees find temporary employment elsewhere, he is credited with such earnings against any hour or week deficit resulting from such cancellation or nonfulfillment. If, however, he elects to pay to the employees 5 percent of earnings from the date of any yearly contract period, in lieu of making up the hour deficit, he is not credited with such unemployment benefits or earnings.

Time lost as a result of plant shut-downs caused by "fire, tornado, explosion, or any other catastrophe beyond the control of the employer" or by voluntary absence from work or through sickness, is deducted from the guaranty. The employer is also relieved of obligation in the event he discontinues business. All the terms and conditions affecting the guaranty are subject to arbitration.

Cereal and grain companies.—The work-guaranty plan in a company making cereals[24] includes a wage "loan" when less than 30 hours' work is provided in any week. This company, operating on a normal 40-hour-week basis, guarantees a minimum of 1,704 working hours annually, including vacation time, to employees with 3 years' seniority, provided such workers have reported and worked whenever work was available. The guaranty is subject to a deduction for time

[23] Agreements negotiated by International Ladies' Garment Workers' Union (A. F. of L.).
[24] Agreement negotiated by the American Federation of Grain Processors (A. F. of L.).

lost through sickness or accident or shut-down of the mill, caused directly or indirectly by fires, strikes, floods, and other causes beyond the company's control.

An employee with 3 or more years' service who in any week earns wages for less than 30 hours, owing to lack of work, is paid for the actual hours worked plus (if he so requests) the difference between actual earnings and 30 hours' pay. The money advanced is deducted, interest free, from the first week's or weeks' wages amounting to more than 30 hours' work. When employment is terminated for any reason, all excess payments become immediately due and payable in full.

Five agreements, covering separate plants of another company making cereals and other grain-mill products,[25] with about 2,000 workers, contain a reference to the existing "guaranteed work plan." Although the plan grants the company the right to modify or terminate it at any time, 2 of these agreements provide that the plan shall continue during their term; 1 restates the company's right, "in the event of changed conditions," to change or terminate the plan; and the remaining 2 make no reference to this point.

This "guaranteed work plan" assures 140 hours of work per month and provides a system of lay-off pay to hourly and piece workers with 6 months' accumulated service within a continuous 12-month period. New employees are eligible to participate, after completing similar service requirements, upon approval of the plant management. Guaranteed time is calculated once a month and is included in the pay for the latter half of each month. Vacation time is included in the guaranty but time lost for personal reasons, sickness, and accident is deducted.

In case of lay-off, a qualified employee is entitled to 70 hours' pay per month at his regular rate for from 2 to 6 months, depending on his length of service, with a maximum of 6 months' lay-off pay for 3 years' service. Payments are discontinued, however, if full-time employment is obtained elsewhere or if an employee fails to return upon request, or if he quits, is discharged, or is laid off because of destruction of property or because of the permanent closing of a plant or department. An employee returning to work after a lay-off automatically comes under the 140-hour guaranty for the calendar month in which he returns, unless he was off for more than 6 months, in which event he is considered as a new employee and not eligible for guaranteed employment for another 6 months.

Procter & Gamble.—Nine agreements covering plants of the Procter & Gamble Co.[26] refer to the company's guaranteed-employment plan, reaffirming the company's right to terminate or modify it at any time. The plan covers all hourly paid employees who have been in the company's service for a period of 2 years, except workers hired to replace those in military service, who are considered temporary employees. Eligible employees are guaranteed work for 48 weeks per year, less time lost for holiday closings, disability because of sickness or accident, voluntary absence, and certain emergencies such as floods, fires, and strikes.

The plan has certain protective clauses which permit the company to transfer employees to other work (even to that paid at a lower

[25] Agreements negotiated by locals of the Food, Tobacco, Agricultural & Allied Workers Union (C. I. O.).
[26] Agreements are signed by local unaffiliated plant unions. The guaranty applies at another plant of this company, but is not referred to in the agreement for this plant.

rate), to change the number of hours constituting the established workweek to which the guaranty applies, and to reduce the hours of guaranteed work to 75 percent of the standard workweek in effect at each plant.

Textile printing.—Wage guaranties amounting to less than a full year's earnings are provided in 37 agreements negotiated by a union [27] which includes only highly skilled textile printers. In 17 of these, covering silk-textile printing firms, printers and apprentices are guaranteed full pay from January 1 to July 15, and half pay for any period in the rest of the year during which they may be out of work, with the stipulation that if hostilities should terminate prior to a specified date or if Government orders or directives issued prior to that date "confront the industry with a curtailment of business which reduces operations," either party may, on 15 days' notice, request negotiations on the advisability of "maintaining or modifying the full-work guaranty." [28]

The other 20 agreements covering cotton-textile printing firms, provide no guaranty of full pay during specified periods but specify without any qualifications "one-half pay for any 17 weeks during which, at any time throughout the terms of this contract, a printer is not employed." Under these agreements, employees receive a full week's wages, whether or not they work a full 40 hours, if they report without previous lay-off notice from the company or if they work at any time during any calendar week; under the silk-textile printing agreements, they receive full pay if they report for work or if they work at any time during any 3 days of any calendar week. Under both plans, a printer who leaves a company's employ, or who has been discharged, must be replaced by another journeyman printer for the remaining period of the agreement.

Guaranty Plans in Nonmanufacturing Agreements

NUMBER AND COVERAGE OF PLANS

Approximately 30,000 workers in nonmanufacturing industries, out of an estimated 2 million workers under the nonmanufacturing agreements included in this study, are covered by some form of employment or wage guaranty.[29] Over 90 percent of these workers receive year-round guaranties, while the others are assured employment or wages for periods of less than a year.

Most of these plans cover persons employed in retail and wholesale trade, chiefly in New York City. Others cover workers in service industries, such as cleaning and dyeing establishments, and in maintenance work in hotels, office buildings, and railroads, as well as public-utility employees, press wireless operators, and employees in social services, cemeteries, and custom tailoring. In several branches of retail and wholesale trade, the agreements examined were negotiated with employers' associations and cover numbers of employers, while elsewhere identical agreements have been signed separately by individual employers.

Owing to the nature and type of the industries involved, the normal size of establishment which these agreements cover is very small.

[27] Machine Printers Beneficial Association (Independent).
[28] Foremen, under these agreements, "must be hired on an annual basis and shall receive an annual salary payable in equal weekly installments."
[29] See footnote to table 1, page 708.

In addition, the guaranty most frequently covers only a portion of the working staff—a "basic crew" agreed upon at the time the agreement was negotiated. According to some of the retail-trade agreements—for example, those covering department or specialty stores—only such skilled employees as custom tailors or furriers benefit from the guaranties. However, with few exceptions, replacements of covered employees are included in the plans, and there is no reduction, therefore, in the number of full-time guaranteed jobs.

The majority of the agreements which contain guaranties are in effect for 2 years, and in one instance for 3 years. Most of them are voidable under certain specified conditions, among which are liquidation or discontinuance of business, withdrawal of capital, "material decrease in revenue," "unforeseen catastrophe," "conditions arising out of the national emergency," situations "seriously affecting either party," etc. In the event of disagreement between the parties on the necessity for the modification or termination of the guaranty, arbitration is usually specified. Under a few plans, chiefly in trade but including a telegraph agreement covering press wireless operators, dismissal pay is granted to employees laid off.

ANNUAL GUARANTIES TO ALL EMPLOYEES

Unconditional Guaranties

Some of the nonmanufacturing plans guarantee year-round work to all employees without restrictions of any kind. Between 10,000 and 13,000 workers in over 2,400 retail establishments in New York City are covered by such guaranties in 2-year agreements negotiated with grocers, fur dealers, and men's and boy's clothing merchants and in 1-year agreements covering retail liquor dealers.[30]

The food and grocery store 2-year agreements, negotiated with several employers' associations as well as with individual employers, specify that all employees "now or hereafter employed * * * are to be continued in such employ during the life of the agreement," and no worker "employed * * * continuously for a period of one week or longer shall be discharged except with the written consent of the * * * union." The entry of a new partner into the firm is not deemed cause for discharge. The fur and liquor agreements guarantee 52 consecutive weeks of work, exclusive of overtime, and the men's and boys' clothing agreements assure continuous employment to every "steady" salesman and stock clerk throughout the life of the 2-year agreement and thereafter, unless his employer gives him and the union at least 2 weeks' notice of discharge prior to the expiration of the agreement. Both the food and clothing agreements require that vacancies be filled immediately.

Conditional Guaranties

A number of the other agreements in retail trade, both with employers' associations and with individual employers, guarantee year-round employment to all employees but permit the guaranty to be cancelled under certain specified circumstances. About 375 firms, employing over 1,800 workers in men's hats and furnishings and cigar

[30] These agreements were negotiated by the Retail, Wholesale & Department Store Employees (C. I. O.), Fur & Leather Workers Union (C. I. O.), Amalgamated Clothing Workers (C. I. O.), and Retail Clerks International Protective Association (A. F. of L.), respectively.

and luncheonette stores, subway newsstands, and alteration and tailoring of fur garments, provide such conditional guaranties.[31] Except for the fur and retail cigar and luncheonette store agreements which run for 2 years, these are 1-year agreements and the guaranties assure a minimum coverage through a provision that vacancies must be filled immediately or within a few weeks.

The retail men's wear agreements guarantee to each employee, after a 2-week trial period, "52 consecutive weeks of employment" but the employer retains the right to discharge employees, subject to arbitration, under the following specified circumstances: For good cause, such as insubordination or dishonesty; upon 2 weeks' written notice to the union and with its written consent; in the event a store is discontinued; or when the employer is in need of "relief." The last mentioned refers to a situation in which an employer's business has changed permanently for the worse, so that it is financially impossible for him to continue to employ his full staff of regular employees. "Slack season" is expressly ruled out as a basis for discharge. The employer has the right at the expiration of the agreement to make changes in the labor force, provided the union is given 6 weeks' prior notice, but no personnel changes may be made unless the union accepts the change within a week after notice. In disputed cases, however, the employer may seek arbitration.

The agreements with retail cigar and luncheonette stores likewise guarantee 52 consecutive weeks of employment, including limited sick leave, for all employees retained after a 2-week trial period. Three weeks' dismissal pay is provided for employees affected by "a lay-off or a store closing * * * where less than 4 employees are employed and where unemployment insurance is not being paid." No employee may be discharged, suspended, or laid off pending an application to the union and a decision by the arbitrator, and the entry of a new or additional partner or stockholder is specifically mentioned as not being a sufficient cause for discharge.

A 2-year agreement with an association of fur merchants in Atlantic City guarantees all employees 1,750 hours of work a year, which is the equivalent of 50 weeks based on the standard 35-hour workweek. Paid vacations of 1 or 2 weeks, depending upon length of service, are also provided. The guaranty may be invalidated only in the event of "an unforeseen catastrophe which makes it physically impossible" for the employer to furnish 1,750 hours of work and if the employer "actually does not have 1,750 hours of work for the particular year except that an employer who violates this agreement by sending work to outside contractors shall be deemed to guarantee 1,750 hours of work in any event."

Another agreement guarantees agents currently employed on subway newsstands not less than 1 year's employment, except for certain stands which are closed during the summer months, in which case the guaranty is for 9 months' employment. However, the company reserves the right to discontinue the operation of any newsstand as a result of conditions beyond its control and arising out of the national emergency. In the event that the subways discontinue any present services, the company may lay off men in proportion to the number

[31] Agreements for the men's furnishings and luncheonette stores were negotiated by the Retail, Wholesale & Department Store Employees (C. I. O.); for newsstands, by the United Office and Professional Workers (C. I. O.); and for fur shops, by the International Fur & Leather Workers' Union (C. I. O.).

of stands discontinued. Relief from the guaranty clause in the event of any unusual conditions—"including material decreases in the revenue from the stand"—is also granted.

ANNUAL GUARANTIES TO PARTICULAR OCCUPATIONAL GROUPS

About half (13,000) of the total workers in nonmanufacturing industries, covered by year-round guaranties, include special groups of employees who comprise only a part of the working force of about 2,000 employers. These workers include cemetery employees, truck drivers, railroad maintenance and repair workers, public-utility employees, social-service employees, inside cleaning and dyeing workers, retail and wholesale clerks, bushelmen, and fur workers in fur shops and department stores. The majority of these agreements permit the employer to modify or cancel the guaranty under specified circumstances.

Two agreements for cemetery employees guarantee specified amounts of employment to their "regular" employees.[32] One establishes 3 classifications of workers: "Casual employees"; a basic crew of "regular employees Class A" who are paid regularly irrespective of weather conditions and may not be laid off; and a basic crew of "regular employees Class B" who are guaranteed a minimum of 33 weeks of employment during the 9 months between April and December. Basic Crews A and B have approximately the same number of employees and vacancies must be filled within 2 weeks except vacancies in the Class B quota after November 15. Any season's quota of Class B employees must include those in that classification during the previous season and any necessary replacements to maintain the minimum crew. The other cemetery agreement provides that no "regular" employee shall be laid off during its 2-year term. It establishes 6 days as the normal workweek but permits the employer to limit the workweek to 5 days every alternate week and specifies 3 months during which the workweek consists of 5 days only.

Another type of guaranty is found in standard agreements signed by 448 companies in the retail and wholesale paper and paper-box industry in New York City, under which each employer agrees to employ "not less than one chauffeur or driver for the full time of 52 weeks per year." [33] Drivers may be discharged only for justified cause, such as incompetence or failure to report an accident. Under 2-year agreements with an association of 23 employers and 3 independent firms engaged in textile refinishing and clothing manufacture, 90 drivers are guaranteed regular employment through a provision that each of the signatory employers is to employ a specified minimum number of drivers each working day.[33]

Bushelmen are guaranteed 40 hours of work per week, 52 weeks per year, under a 1-year agreement signed by an association of retail clothing merchants in New Haven, Conn.[34] Five agreements, with Chicago fur and department stores, guarantee 52 weeks' work, exclusive of overtime, to fur workers.[35] In 3 of these cases, the guaranty includes 1 week's vacation; in the other two, 2 weeks' vacation.

[32] Both agreements negotiated by the Food, Tobacco, Agricultural & Allied Workers (C. I. O.).
[33] Agreements negotiated by the International Brotherhood of Teamsters, etc. (A. F. of L.).
[34] Agreement negotiated by the Amalgamated Clothing Workers (C. I. O.).
[35] Agreements negotiated by the International Fur & Leather Workers' Union (C. I. O.).

Under a "continuity of employment" agreement between the Seaboard Air Line Railway and various A. F. of L. shop-craft unions, the parties negotiate in December of each year the size of a minimum force (currently 2,300 employees) of "mechanics, apprentices, helpers and coach cleaners" who are guaranteed employment for 6 days per week during the ensuing 12-month period. In the event it is found necessary to close permanently any shop or engine terminal during the year, the company is not required to transfer the employees affected to some other terminal on the system, but the established minimum number of positions on the system must be maintained at all times. Reductions in the size of the minimum force are permissible under 2 conditions: (*a*) if the established minimum of coach cleaners is found excessive, and (*b*) if "any situation arises during the life of the agreement which would seriously affect either party." Joint conferences must be held before reductions are made and if no solution is reached either party may terminate the agreement on 10 days' written notice.

An agreement covering a public-utility company contains a "guaranteed annual income" plan for certain listed monthly and hourly paid employees.[37] Those who are paid on a monthly basis are guaranteed against deductions from their regular monthly wage during the 1-year period of the contract "because of lack of work or inability on the part of the company to supply work." Furthermore, no deduction is made for time off, not to exceed 1 week, for necessary personal reasons such as serious sickness or death in the immediate family, provided such time off is made up by working two-thirds of the hours lost. Listed employees who are on an hourly basis are given the opportunity to work a minimum of 2,080 hours during the year, including vacations and holidays. The guaranty is unconditional except for men released in the event that the company is required by the Government to institute a workweek in excess of 40 hours.

Under a 1-year agreement with a social-service agency, visiting housekeepers who had at least 1½ years' service when the agreement was signed are guaranteed an annual wage equal to 52 times their regular rates.[38] However, all earnings, including regular, overtime, vacation, and sick-leave pay, are credited toward fulfillment of the annual guaranty. Each visit is to be paid for at the time made at the specified rate, and any balance due on the annual guaranty must be paid in a lump sum within 2 weeks after the end of the year. The wage guaranty is forfeited in the event of resignation or dismissal, except when dismissal is caused by retrenchment or reorganization, in which event the employee is entitled to payment of the proportionate part of the guaranteed wage from the start of the 1-year period to the date of dismissal, plus dismissal pay amounting to 1 week's pay for every year of service after 2 years' service, up to a maximum of 6 weeks' pay. Housekeepers on the guaranteed list are entitled to 2 weeks' paid sick leave per year; other absences are deducted from the guaranty unless they total less than one-half day in any 1 day or an aggregate of 2 days in any 1 year.

An agreement with a press wireless company guarantees "at least one-half pay of the full weekly wage in every week throughout the year" to a total of 43 Morse operators highest on the seniority list,

[37] Agreement negotiated by International Union of Operating Engineers (A. F. of L.).
[38] Agreement negotiated by United Office & Professional Workers (C. I. O.).

and to all "printer operators, maintenance men and radio operators of at least 1 year's seniority standing." [39] The company reserves the right to furlough the junior Morse operators on the guaranty list and to hire or use other operators if those on the list refuse a job providing 30 hours' work per week after posting by the company. When the need for a particular job ends, the furloughed employee is restored to the list. In case of "jobs of local nature which are not required to be bulletined," employees on half-pay basis must be available for duty should their services be required. The employer may elect to pay dismissal pay in lieu of half-time pay at the rate of 1 full week's wages for every 6 months of service, up to a maximum of 26 weeks' full pay.

Retail and wholesale trade agreements in New York City.—Over 1,500 employers in New York operating wholesale, jobbing, textile converting, warehouse, and retail establishments (excluding department stores) have negotiated agreements which guarantee full-time employment to a "basic crew" or to "regular full-time workers" or to "permanent employees." [40] It is estimated that 10,000 workers are covered by these guaranties, most of which are in effect for 2 years, although one with about 450 proprietors of retail furnishing and dry-goods stores runs for 3 years. Under one of the plans covering about 400 shoe stores, regular part-time workers are guaranteed employment for at least 3 full days (or 3 nights and a Saturday) weekly for 52 consecutive weeks.

The size of the basic crew is negotiated for each individual establishment, and in most cases is frozen for the duration of the agreement. One association agreement provides for determination of the number to be included through the grievance and arbitration machinery; another stipulates that the size of the basic crew must equal the number of workers which the employer has continuously employed all year round for the 12 months preceding the signing of the agreement.

Members of the basic crew are not subject to lay-off at any time during the life of the agreement and, in most cases, vacancies in the basic crew must be filled immediately. An exception is made in the dry-goods agreements if the employee leaving enters business within a 5-block radius of the employer's store. According to this agreement, extra employees may be hired for not over 6 weeks, but if retained for periods in excess of a total of 12 weeks they become permanent employees. The number of extra employees is jointly determined by the employer and the union, with resort to arbitration if there is a difference of opinion.

According to about four-fifths of these agreements the employer has recourse to arbitration, "should conditions arise during the term of the agreement which necessitate a reduction of [basic crew] staff." Several, including an agreement covering retail shoe stores, state that the basic-crew guaranty shall not be subject to arbitration. A few of the agreements which permit arbitration specify the circumstances which warrant a request by the employer for a reduction or lay-off in the number of employees, e. g., permanent or substantial decline in business other than seasonal slack time, permanent withdrawal of capital, store closing, or "some unavoidable cause which will make it

[39] Agreement negotiated by Commercial Telegraphers' Union (A. F. of L.).

[40] Some of these employers are covered by association agreements; some were signed individually. Since the latter contain virtually the same terms as the association agreements, the analysis is restricted to the association agreements. Likewise, if the union has a form contract which is separately signed by individual employers, only one representative agreement is discussed. These agreements were negotiated by the United Retail, Wholesale and Department Store Employees (C. I. O.).

impossible for the employer to continue employing all the workers of the basic crew." Three agreements provide for termination of the guaranty on dissolution, liquidation, consolidation, sale, bankruptcy, or assignment for creditors, and one other specifies that no wages shall be paid when the place of business is closed because of fire.

Employees who are affected by staff reduction are granted dismissal pay under 4 agreements, and preferential rehiring rights under one of these. In 3 cases the dismissal pay amounts to 2 weeks' wages but in one instance applies only to lay-offs in stores where fewer than 4 workers are employed and which are not covered by unemployment insurance. In the fourth agreement the amount of dismissal pay varies with the length of service and depends on whether the dismissal was a result of sale or entry of a partner, or because of adverse business. The amounts range from the equivalent of 1 week's pay for less than 1 year's service to 6 weeks' pay after 3 years' service.

GUARANTIES FOR PERIODS OF LESS THAN A YEAR

Of the approximately 30,000 workers in nonmanufacturing industries protected by employment-guaranty provisions, 2,000 were covered by provisions guaranteeing less than a year's employment or wages. Such guaranties were found in agreements with over 200 firms employing workers in custom tailoring of women's garments and fur coats, maintenance painting in hotels and office buildings, selling and jobbing materials for the fur-manufacturing industry, cemetery work, and retail salesmen in women's and children's wearing apparel stores, truck drivers and chauffeurs, warehousemen, and polishers employed by furniture stores. Some of these guaranties, although applicable to only a fraction of the total force, are unconditional, while others permit cancellation of the plan, generally in the event of liquidation of the business.

Unconditional Guaranties

Two agreements negotiated with women's specialty stores in Chicago guarantee $1,900 per year to about 60 custom tailors; in one, tailors receive $55 per week for a 40-hour week and the guaranty therefore amounts to 34½ weeks' pay; in the other, the regular weekly wage is $52.50 for a 35-hour week and the guaranty amounts to slightly more than 36 weeks' pay.[41]

Twelve agreements guarantee employment to approximately 200 workers engaged in fur repairing and custom tailoring in both fur and department stores in Cleveland and Chicago.[42] In 8 of the agreements, the minimum guaranty, exclusive of overtime, ranges from 38 to 44 weeks; in three agreements, in which the standard workweek is 35 hours, it is 1,650 hours; in the twelfth it runs from the start of the season on May 1 until February 1 (9 months) for cutters, operators, and nailers, and until the end of February (10 months) for finishers. In addition to the specified guaranty, 3 agreements provide 1 week's paid vacation, and 1 agreement 2 weeks' paid vacation. One agreement includes the vacation week in the 38-week guaranty.

A standard agreement, covering about 250 maintenance painters in a number of hotels and office buildings in Cleveland, provides a

[41] Agreements negotiated by International Ladies' Garment Workers' Union (A. F. of L.).
[42] Agreements negotiated by International Fur & Leather Workers' Union (C. I. O.).

guaranty of not less than 42 weeks' work, at 40 hours per week, including 10 days' annual sick leave and 14 days' vacation with full pay.[43] The hourly rate for these workers is $1.25, whereas painters on general construction work, employed on a day-to-day basis, receive $1.55 per hour.

An agreement covering cemetery workers in Milwaukee defines regular employees as "those employed regularly for 9 months, and * * * on call during the balance of the year" and contains the following guaranty: "Regular employees shall be given an amount of employment between December 1 and April 1 that compares with the average amount of employment during the same period of the 3 previous years." [44]

Conditional Guaranties

A plant-wide agreement covering a textile-bleaching firm guarantees weekly paid truck drivers and helpers 48 weeks of work, but the company reserves the right to lay off drivers "in the event of an unusual slack period or in a period of emergency where production materially decreases." [45]

Three 2-year association agreements covering 44 employers and 150 employees dealing in materials used in the fur-manufacturing industry guarantee full employment for 10 months each year, including 7 days' paid sick leave.[46] During July and August, equal division of available work is practiced. An employer who finds himself overmanned during the guaranteed period of employment may submit his case to arbitration, and the arbitrator, after examining the employer's records, may reduce the guaranteed period of employment, in which case the additional lay-off period is to be shared among the employees affected. In the event of a general strike or lockout among the wholesale fur manufacturers in New York City, the arbitrator is to rule whether a division of work shall be instituted. The agreement is automatically terminated when an employer liquidates or discontinues his business.

Under an association agreement covering 8 retail furniture merchants in New York City, about 40 chauffeurs, warehousemen, and polishers are guaranteed work for a minimum of not less than 5 days per week during 21 weeks of the year, a minimum of 4 days during 1 week, and a minimum of 3 days per week during the remaining 30 weeks, at a wage scale proportionate to the minimum weekly wage scale.[47] The agreement also provides 18 paid holidays and a minimum of 10 paid Saturdays during the summer months, even though no work is performed, but such holidays and Saturdays are not included in the computation of the annual guaranty. No lay-offs may be made "because of insufficiency of business" during the term of the contract, but the agreement is voided if the employer goes out of business.

New York women's apparel stores.—Under 2-year agreements with an employers' association and a number of independent employers, both "steady" and "steady-extra" sales clerks in retail ladies' and children's apparel stores in New York City are guaranteed employment for specified periods each year.[48] The association contract, covering

[43] Agreements negotiated by International Brotherhood of Painters, Decorators & Paperhangers (A.F. of L.).
[44] Agreement negotiated by Food, Tobacco, Agricultural & Allied Workers (C. I. O.).
[45] Agreement negotiated by Textile Workers' Union (C. I. O.).
[46] Agreements negotiated by International Fur & Leather Workers' Union (C. I. O.).
[47] Agreement negotiated by International Brotherhood of Teamsters, etc. (A. F. of L.).
[48] Agreements negotiated by United Retail, Wholesale & Department Store Employees (C. I. O.).

about 800 workers, insures "steady sales clerks" a minimum employment of 10½ months in each year and "steady-extra sales clerks" 19 consecutive weeks starting October 1, and 12 consecutive weeks starting March 15.[49] The standard agreement with nonassociation members provides the same guaranty to "steady employees" but 4 more weeks to "steady-extra employees." Under both plans, "steady sales clerks" receive 2 weeks' paid vacation and "steady-extra sales clerks" 1 week's paid vacation in addition to the employment guaranty. In all these stores not more than 1 "steady-extra sales clerk" may be employed for every 2 "steady sales clerks," except that 1 "steady-extra sales clerk" is permitted where only 1 "steady sales clerk" is presently employed.

Vacancies among "steady" or "steady-extra" sales clerks, no matter what the cause, must be filled immediately. For new employees a 2-week trial period, which may be increased to 3 weeks at the employer's request, is specified in the association agreement while the independent employer agreement provides for 1 week. Should any employee prove to be unsatisfactory during the trial period, a successor must be hired "so that there shall be no lapse of time between the termination of the trial period of the unsatisfactory employee and the employment of his successor."

Under the association agreement, the employer reserves the right to change his sales force either 2 weeks prior to the expiration of the first year of the agreement, or 2 weeks prior to the expiration of the agreement. Employees affected are to receive 2 weeks' notice; if the change is desired after the first year of the agreement, the employer must also submit a written statement of the reason for such change to the union and the association.

The association contract (but not the independent standard contract) frees the employer of his obligations to furnish minimum employment in the event of a bona fide liquidation or if the employer discontinues his business. Should the employer reenter business prior to the expiration of the agreement, either individually or by entering into a partnership, he resumes his obligations from the date of reentry into business until the expiration of the agreement.

Licensed officers on Great Lakes and inland waterways vessels.—Licensed deck and engine officers on Great Lakes and inland river vessels receive employment or wage guaranties under 22 agreements examined. Fourteen of these cover licensed engine officers and 8 cover licensed deck officers, although 2 of the latter cover pursers and stewards only.[50]

Under several agreements, a company may modify its guaranty and lay off affected personnel after a period of 7 days if vessel service is discontinued because of marine disaster, condemnation by the Bureau of Marine Inspection and Navigation, or sale, commandeering, or taking over by Government authority. In contrast, one agreement provides that "suspension of operations—shall not relieve [the company] from its guaranty of the said 6 months' continuous employment."

Guaranties for engine officers run from 6 months to a full year. Two plans guarantee employment for 12 months; six for 10 months;

[49] In certain specified sections of the city "steady-sales clerks" must be employed for a minimum period of 10 months each year and "steady-extra sales clerks" for 18 consecutive weeks in the fall season and for 11 consecutive weeks in the spring season.

[50] Agreements covering engine officers were negotiated by the Marine Engineers' Beneficial Association (C. I. O.); those for deck officers, by the Masters, Mates & Pilots (A. F. of L.).

two for 9½ months; and three for 9 months. The fourteenth guarantees 6 months' pay when boats operate from 4 to 6 months in a year, 8 months' pay when boats operate from 6 to 8 months, 10 months' pay for from 8 to 10 months, and 12 months' pay when boats operate more than 10 months. In 6 of the 14 agreements, junior officers on Class A vessels, and all officers on other than Class A vessels receive lesser guaranties, usually 1 month less, but amounting to 3 months less in one agreement.

Under one agreement all engine officers on Class A vessels receive their regular monthly salary each month for the full period of the agreement, including 4 weeks' vacation. On other vessels, the chief and first assistant engineer, though guaranteed 12 months' work in each year, receive less pay during the lay-up season, which includes 6 weeks' paid vacation at lay-up wages. Second assistant engineers on these vessels, who work a major portion of the operating season and who are still in service at the end of the season, are guaranteed 3 months' work additional, including 4 weeks' vacation at lay-up pay. Guaranties in the agreements analyzed covering deck officers run from 5 to 12 months. One provides 12 months, two provide 10 months, two provide 8 months, one provides 7 months, one provides 6 months, and the eighth, covering two groups of pursers, 5 and 7 months, respectively.

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Probable Volume of Post-War Construction[1]

Part 3.—Demand for Public Construction

Summary

THE average annual volume of construction started (exclusive of maintenance and minor repairs) during the first 5 years following defeat of Japan is expected to be 10.9 billion dollars at 1940 cost levels, with a maximum of 12.1 billion dollars in the fifth year. Publicly financed construction will make up about 3 billion dollars of this average figure, increasing from about 2.1 billion dollars in the first post-war year to almost 3.5 billion dollars in the fifth. The largest single item will be private residential building, which with alterations and modernization will comprise more than a third of total construction, and which will consist primarily of detached houses built for sale. Apartment construction will be active, but will not approach its pre-depression rate until a number of developments occur at a later time. The volume of commercial construction will be close to that of the 1920's, but will consist more of modernization than of new buildings.

Preparation for public construction varies extensively among the different government bodies. Although still unsatisfactory, it has improved substantially during the past year and is likely to improve further. On the whole, non-Federal bodies are basing their programs on expectation of Federal aid or new sources of tax revenue. The largest element of public construction will be highway work, estimated at 1.3 billion dollars per year plus $600,000,000 in maintenance. A fairly extensive program of reclamation, conservation, and development is likely, for which both the U. S. Corps of Engineers and the Interior Department have working plans ready. Schools will be the largest item of building construction, slightly larger than all other types of public buildings combined. Sewer and water projects seem to be the most strongly felt need of local government units, as indicated by the advanced state of preparation of working plans.

Public Construction Situation

The types and extent of public construction at any time are a reflection of current public policy. This construction is carried out by or for thousands of different bodies—the Federal Government, the State governments, counties, townships, municipalities, boards of education and park boards, sanitary and water districts, government corporations, and various others.

Although traditionally a project is financed by the body by which it is to be maintained or operated, there have been exceptions. The earliest of these were the national roads constructed by the Federal Government, well over a century ago, because they were regarded as having national rather than merely local value. The recent grants to States and local bodies made under the Federal Works program, in

[1] Prepared in the Division of Construction and Public Employment by Alexander C. Findlay. This is the final part of this article, of which the previous two appeared in the Monthly Labor Review for February and March 1945. The first presented the general forecast, the basic conditions which will be present, and the assumptions made; the second discussed effective demand for privately financed construction.

A later article will present an estimate of the site employment accompanying the predicted construction operations.

large part to stimulate employment and raise the level of business activity, were intended also to improve the national welfare through providing improved facilities for public services. This latter consideration was one influence in the choice of activities for employment-producing expenditures.

What any State or local government unit spends for construction will be governed in part by its financial condition, but unquestionably will be influenced by the extent to which grants or nonlocal tax revenues are available. The current financial condition of local government units on the whole is very good, but this is principally the result of wartime conditions—unusually good tax collections because of wartime business and employment levels, combined with suspension of all but the most urgent capital expenditures. With few new bond issues to offset retirement of maturing bonds, a substantial margin of borrowing power has been built up, and in many cases liquid assets have been accumulated as well. This condition will permit an active start on post-war construction, but is regarded as merely temporary by numerous authorities on public administration and municipal finances. Preliminary schedules of post-war improvement programs presented by States and municipalities have in a large number of cases included the direct or implied statement that execution of the proposed work was dependent on some form of Federal grant. This viewpoint was expressed with the greatest frankness by Robert Moses in a memorandum, dated February 1, 1944, which he issued as chairman of the Triborough Bridge Authority of the City of New York.[2]

Obviously the volume of public construction which will actually take place will be governed by broad decisions on public policy which have not yet been made. If projects are to be constructed because of a recognized immediate need for the physical facilities to be provided, the volume during this period will be less than if projects which would otherwise have been postponed to a later date are advanced in order to provide employment. It has been assumed for the purpose of the estimate that the former of these policies will be adopted, but this assumption may be incorrect. As a result, the estimates of specific types of public construction may be regarded as conservative and in most cases are below the potential programs of public bodies.

Similarly it has been assumed that Federal grants will be provided for those State and local projects recognized as valuable to the Nation as a whole. This assumption would include grants for projects such as highways, schools or hospitals, and other institutions, but not for projects of primarily local benefit such as construction of public administration buildings or paving of purely local streets. If this assumption is not met and there are no grants other than those for the Federal-aid highway system, the local construction program will be delayed and the volume during the early post-war years will be substantially below that estimated. Conversely, appropriations to stimulate employment will bring an increase.

It has also been assumed that some effective procedure of Federal loans will be established for revenue-producing local improvements, consisting largely of municipally owned utilities. These loans would be in the form of revenue bonds, secured by the operating revenue from

[2] Function and Degree of Participation of the Federal Government in the Construction of Postwar Federal, State and Local Public Works (published by City of New York with a transmittal letter addressed to Hon. Fritz G. Lanham, Chairman of the Committee on Public Buildings and Grounds of the House of Representatives).

the improvements. This procedure will be important for those government units whose bonds are not yet reapproved for fiduciary investment, because of defaults which occurred during the depression. It may be even more important for other government units in permitting them to segregate the financing of these improvements in bonds secured only by operating revenue, which are distinct from the general bonds secured by the full faith and credit of the municipality and are exempt from the debt limit existing for these general bonds.

Starting of public work is dependent not only on accessibility of funds and of land but also on availability of detailed working drawings with specifications. Obtaining needed land can be a time-consuming process, but in most cases need not be. If there is definite decision on the property needed, and if the purpose of the project is accepted as unquestionably a public use, in most States possession can be obtained with slight delay by condemnation, even though legal determination of the price to be paid may be in process and may, indeed, continue over a long period. Acquisition in this manner is likely to be more expensive than by negotiation in advance, because there is no opportunity to choose among a number of suitable sites on the basis of negotiations with their respective owners. It is, however, an alternative to prolonged delay when site purchase has not been undertaken sufficiently in advance. Furthermore, information from a considerable number of government bodies indicates that a rather substantial part of the total land needed for contemplated public construction is already publicly owned.

For preparation of drawings and specifications there are few shortcuts, except for certain kinds of work. The time required varies with the type, size, and complexity of the project, but for a project of any magnitude is likely to be at least several months. Basic designs for some types of work are fairly well standardized, but other types require preliminary surveys and careful study of alternative designs before work on the final drawings can be started.

Design preparation is somewhat meager, but has advanced during the past year and shows signs of further acceleration. Preparation has gone farthest for State highway work. For other work, it is improved but still spotty. Early in 1944, architectural sources reported that little public work had reached the design stage, except that in and near New York City and Los Angeles. Since then, architects have been engaged for projects in many other parts of the country, but still there are some extensive areas and a great number of local political bodies for which this step has not yet been taken. The report on the subject,[3] published jointly by the Federal Works Agency and the Bureau of the Census in September 1944, notes that there were 29,270 projects (other than Federal-aid and State highways) having a total estimated cost exclusive of land of $5,969,000,000, which were in at least a preliminary stage of preparation on July 1, 1944.[4] Of these, plans were completed for not quite a fourth, having about a sixth of total cost; design was in progress for somewhat over a fourth, both in

[3] Report of Proposed Post-War Public Works: Volume and Status of the Plan Preparation of Post-War Public Works Proposed by State and Local Governments, prepared at the request of the Special Committee on Post-War Economic Policy and Planning, House of Representatives, by the Federal Works Agency in collaboration with the Bureau of the Census.

[4] That report summarizes data obtained from 1,480 government units—44 States, 731 counties, 593 cities, and 112 special districts. All information given is for those 1,480 units exclusively, rather than an estimate for all State and local government units in continental United States. Estimated expenditures are, in general, at the cost levels expected by the various units when the work is carried out.

number and in cost; and the remainder were in a preliminary stage only. In addition, 27,513 projects with estimated cost excluding land of $5,665,000,000 were in what was termed the "idea stage" (i. e., being contemplated as possibilities).

The seriousness of this situation is indicated by the concentration of plans in limited areas. New York City alone reported 29 percent of all completed plans, in terms of value, while the other 4 cities having populations over 1,000,000—Chicago, Philadelphia, Detroit, and Los Angeles—reported 9 percent of the total. These 5 cities reported almost 42 percent of all work currently in the design stage. Furthermore, almost a sixth of the 1,480 public bodies reporting—237—had no plans in any stage of preparation. Of the remaining 1,243, only 600 had completed plans for any of their projects at the time of submitting their reports. Reports on ability to complete plans for their projects in the design, preliminary, and idea stage showed that 535 units would be able to carry plans to completion, while 689 would not. For this latter group there were two principal reasons—lack of funds, and legal restrictions which prevent numerous government bodies from spending money on plans for any project until its construction is officially authorized.

With respect to construction funds, the current state of preparation is likewise incomplete. According to the same report, for the projects having completed plans, 31.4 percent of necessary funds were on hand or arranged for; for those on which design was in progress, 14.8 percent; for those in preliminary stages, 7.2 percent; and for those in the "idea stage," 5.5 percent. Negotiations were currently under way for about 5 percent of necessary funds for the first 3 of these groups, and for about 3 percent of funds for the projects in the "idea stage." Even for those projects for which plans were complete, little more than a third of the necessary funds was on hand, arranged for, or under negotiation.

It is apparent that, with respect to both planning and financing, much remains to be done if public construction is to be started as early as needed. There are indications that this situation is being increasingly recognized.

Public-Construction Situation

HIGHWAYS, ROADS, AND STREETS

The most important single element of public construction will be highway, road, and street work. It will be necessary ultimately to bring the entire street and highway system into conformity with traffic requirements, including, of course, the provision of access to new localities. This will mean work to improve the traffic flow and reduce the accident hazard on primary highways, extension of the all-weather mileage of minor roads, and relief for urban traffic congestion. In many cases work will consist of improvements to existing highways, such as construction of additional lanes or replacement of sharp curves, excessive grades, and other localized defects. In other cases it will be necessary to replace outworn pavement, while in some cases it will be more satisfactory to construct new highway on new right of way, for the heaviest concentrations of traffic. Work on structures will also be important—new bridges and culverts, re-

placement of bridges and culverts not meeting modern traffic requirements, and grade separations.

Work within cities is likely to emphasize the arterial-street system and access portion of intercity highways to a greater extent than formerly. In some cases satisfactory treatment will require widening or relocation of right-of-way, which may necessitate demolition of buildings. This procedure involves large expenditures for purposes other than construction, and thus will take place over a fairly long period. Other city paving is likely to be fairly small in volume, except for repairs and replacement and for work in new areas actually undergoing development. Difficulties in collecting special assessments during the last 15 years have made city officials cautious about provision of improvements in undeveloped areas.

The Federal Works Agency and Census Bureau report above cited shows that of Federal aid and State highway projects to cost almost $2,200,000,000, plans had been completed for 10 percent by July 1, 1944, and were in preparation for another 43½ percent. It commented on the rapid progress in preparation of plans, and expressed the opinion that plans would probably be available for at least the volume of work that could be financed for the first 3 post-war years. State highway revenues, balances in the various State highway funds, and probable Federal aid would permit expenditures of approximately $1,000,000,000 per year during this period, for construction plus engineering and land acquisition.

Highway, street, and road projects not in the State and Federal-aid systems, which were in the preliminary planning stage or beyond, reported somewhat over $1,500,000,000 in estimated cost exclusive of land, of which plans had been completed for about 15 percent and were in progress for another 25 percent. These figures include bridges, viaducts, and grade separations, as well as grading and paving.

The total of all new highway and related construction may be estimated at an average of $1,300,000,000 per year, at 1940 price levels.

In addition, there will be a large volume of maintenance. Definitions of maintenance vary somewhat between State highway departments and other bodies carrying on road work, but in general it is regarded as meaning prevention and correction of deterioration by repairs, patching, and routine operations such as periodical scraping of gravel surfaces. Even during the curtailments of war years such maintenance has been above $400,000,000 in value per year. It is likely that an average annual expenditure will be $600,000,000 in the first 5 post-war years, in part for current needs and in part to overcome the deterioration resulting from past curtailments and from heavy concentration of wartime traffic.

PUBLIC HOUSING

The construction rate for wartime public housing has been falling rapidly for almost 2 years, and it seems unlikely that any substantial number of dwelling units will be started during the final year before defeat of Japan. The number during that year is estimated at about 4,000, although this may be increased somewhat by unforeseen requirements of war production.

When the war is over, a fairly rapid increase may be expected in construction of permanent slum-clearance projects by local housing authorities, with an average of 50,000 dwelling units started annually during the first 5 years. It is estimated that about 30,000 units will be started during the first year, most of these during the latter part of the year when difficulties of material supply are alleviated, and that the annual construction rate will increase to about 60,000 during the fourth and fifth years. Average construction cost during the period is estimated at about $160,000,000, at 1940 cost levels.

It is recognized that public housing has been subjected to detailed criticism, and to some degree of attack. There is a widespread desire to give every opportunity, and in fact every reasonable assistance, to private operators to meet as much of the housing need as is possible. Nevertheless there is fairly general recognition that an acute need exists for housing of families unable to meet full commercial charges for decent accommodations, whether new or used. There is accompanying recognition that slum-clearance housing projects provided for such families have been civic assets, both in the physical facilities provided and in the accompanying removal of what was often the worst of the slum buildings. It is therefore believed that public housing will be constructed on a moderate scale, but with close observation of the results being achieved.

In New York State approximately 18,000 public dwelling units are scheduled for construction within the early post-war period, most of these within New York City. Drawings and specifications are completed for many of these and well advanced for others, and numerous sites have been acquired. Because of State legislation, financing is not dependent on actions or available funds of the National Housing Agency. Elsewhere, preparations have been made through the stage of signed loan contracts between local housing authorities and National Housing Agency or its predecessors for some 25,500 dwelling units in slum-clearance projects still postponed because of the war. It seems likely that many of these will be built, although the increase in building costs since 1941 introduces financial and legal problems. It is also possible that a few local housing authorities having sufficiently high credit will construct additional projects even without grants from other bodies. Apart from these, it is thought, from proposed legislation and published but unofficial expressions of legislative opinion, that sufficient Federal financing will be provided to permit a total program of the size estimated.

SCHOOL BUILDINGS

Schools are the public buildings most urgently needed. One educational authority has estimated that there is extremely urgent need for capital expenditure of at least $3,000,000,000 within the first 5 years after the war for public schools and colleges, and that additional capital expenditure of $4,000,000,000 during this period would be highly desirable. About two-thirds of each figure is for construction proper, the remainder being for equipment, architectural services, and in some cases, land. The estimate includes rural schools, urban schools below college level, and public colleges and universities.

Plans to date are not commensurate with such a program, but the situation in this respect is likely to be improved materially. Al-

though school design has been undergoing fairly extensive development for more than a decade, this is an architectural field in which requirements are rather widely understood, and in which certain basic designs are applicable with minor modification to different localities of similar composition and similar climate. In fact, a few cases are known in which architects specializing in school work have retained their staffs during dull periods to prepare tentative drawings for schools of common types and sizes in order to have plans ready, when needed, for modification and completion to fit individual requirements.

An average volume of $400,000,000 per year is estimated for new work, additions, alterations, and improvements. This is expected to begin with $250,000,000 in work started during the first post-war year, and to amount to $450,000,000 annually during the third, fourth, and fifth years. Annual expenditure was above $400,000,000 at 1940 cost levels for 6 successive years ending with 1929, and was somewhat above $450,000,000 in 1925 and 1926, but this pre-depression period was marked by a combination of stimulating factors—spread of the junior-high-school system with its need for new buildings, movement of urban population from older residential areas to outlying and suburban areas, widespread realization that nonfireproof urban schools needed replacement, and of course the viewpoint of the period favorable to physical improvements of almost all kinds.

HOSPITALS AND INSTITUTIONS

Hospitals and institutional buildings, including sanitoria and mental hospitals, will probably be built to the extent of about $75,000,000 per year. The Veterans Administration plans an annual expenditure of $20,000,000 per year for veterans' hospitals alone—probably replacement of temporary hospitals built during the war, for the most part. This figure includes equipment and other nonconstruction costs, and the remainder must be deflated to about $12,000,000 annually at 1940 price levels. In addition, States and local government units have projects in various stages of preparation for general hospitals, mental and other specialized hospitals, sanitoria, training and custodial institutions for the handicapped, institutions for the aged,[5] and establishments of numerous minor types. In part this proposed work will provide increased capacity in accordance with greater public recognition of the need present, and in part will replace existing buildings which—in some classifications especially—are badly suited to their purposes.

Because of the greatly increased recognition of the value of hospitals especially, and of other public institutions to a lesser degree, it is expected that funds will be available for the volume of construction estimated. The present state of plan preparation indicates readiness for this volume.

PUBLIC ADMINISTRATION BUILDINGS

The Federal building program is directed by the Public Buildings Administration, which submits to Congress the building programs proposed. After Congressional approval and accompanying authori-

[5] While old-age assistance and social-security benefits are supplanting institutional care for the able-bodied aged, they do not affect the need for such care for the infirm, chronically sick, or handicapped.

zation of funds, a committee representing PBA and the executive agencies selects specific projects from the approved list, after which land is purchased, drawings are prepared, and contracts are awarded.

This activity is divided between work in the District of Columbia and work elsewhere. For the former, a study of space requirements has been made by PBA on the basis of expected reductions in personnel, return of some agencies transferred from Washington, release and demolition of unsuitable buildings, and restoration of the space per employee to the figure found from experience to permit best efficiency. The proposed program based on this study calls for demolition of temporary and obsolete buildings with about 6,000,000 square feet of space, release of about 3,400,000 square feet of rented space, and construction of new permanent buildings with about 6,000,000 square feet. Construction cost of this program would be about $15,000,000 per year for 5 years at 1940 levels of prices.

For buildings outside of Washington, a tentative program consisting of 3,000 buildings throughout the country has been prepared by PBA for submission to Congress. In accordance with established procedure, this list will be approved with or without modification, and then annual or biennial appropriations will be made establishing the construction rate. Past appropriations suggest a rate somewhat over $50,000,000 per year at 1940 cost levels.

These buildings will be of all types and sizes. Some will be simple, single-purpose buildings such as border-patrol stations or small post offices, while a few will be comparable to metropolitan office buildings. For a number of years it has been the policy, in designing custom-houses, post-office buildings, and other specialized buildings, to provide space for those other Federal offices in the same cities which could use this space advantageously. This policy has been followed in preparation of the tentative program.

If land is not already owned it can be obtained within 30 days if necessary, by a declaration of seizure. For smaller buildings needed in quantity, mainly small post offices, numerous standard designs have been in use for some years, which can be modified within 30 to 45 days to fit individual requirements. This could not be done, of course, in the case of larger buildings or those for less-standardized uses, for which preparation of drawings ordinarily requires 6 months to a year or more, depending on the size and characteristics of the building wanted.

State and local government units are planning for buildings of many types. No comprehensive tabulation by type is available, but reports from individual government bodies indicate that most projects will be for operating departments—fire stations, shops for public-work activities, and other strictly utilitarian structures. There will also, however, be both additions and new buildings for city halls, courthouses, and public offices, to overcome crowding and to replace obsolete buildings.

Publicly financed industrial buildings have been important only under war conditions or when war was imminent, and commercial buildings have been minor at all times. It is expected that these will be few in number and small, limited to those built in conjunction with other types of work.

MILITARY AND NAVAL CONSTRUCTION

Military and naval construction in continental United States will probably be fairly small—about $60,000,000 per year—since curtailment rather than expansion of the total military and naval establishment is expected. This work is likely to consist largely of improvement to existing establishments to make them better suited for post-war operation.

AIRPORT CONSTRUCTION

There will certainly be a large public construction program for aviation facilities, for which a tentative estimate is $75,000,000 per year. Large expansion of commercial aviation over pre-war levels may be expected, as well as some expansion of private flying. The wartime construction has been enormous, but with some exceptions military requirements meant location of new fields where they will have but limited value for post-war civilian use.

The principal agency in this field is the Civil Aeronautics Administration, but numerous States, counties, and municipalities have also carried out varying degrees of planning. Although no formal program will exist until Congressional authority is given, the subject is being studied carefully and rather detailed programs have been prepared for submission to Congress.

Whatever the extent of the program authorized, it seems likely to consist of two principal types of facilities: (1) Metropolitan airports capable of accommodating the largest planes and the heaviest traffic volume, to be built close to the center of the city. Average construction cost will be about $20,000,000 each. Because of the area required, these can be built only in cities located on suitable bodies of water where land can be created by filling in. The cost of buying a sufficient area of improved property near the downtown section, on which it would be necessary to demolish all buildings, would obviously be prohibitive. (2) Smaller airports on natural land, in several size groups intended for corresponding classes of expected traffic volume. Preliminary estimate of construction cost for these is from $80,000 to $360,000 each, depending on size.

It is expected that land will be provided and supplementary expenses (such as those for legal services) will be paid by local sponsors, ordinarily municipalities. This preparation has lagged thus far and start of work will in many cases by delayed unless planning is accelerated. The preparation time required, including that for design, ranges from 9 months for the smallest airports up to 2 years for the metropolitan airports to be built on filled-in land.

RECLAMATION, CONSERVATION, AND DEVELOPMENT

Comprehensive plans for reclamation, conservation, and development work have been prepared by the Corps of Engineers and by the Interior Department, and construction can therefore be started on short notice. Proposals affecting the contemplated programs of both of these agencies have been made for unified development, of the TVA type, for six major river systems. Other proposed projects

include the St. Lawrence Seaway. for which a large part of the construction would be performed in Canada.

The purposes to be served include improvement of navigation; flood control, erosion control, and soil improvement; irrigation; the generation, transmission, and distribution of electric power; and the provision of recreational areas. Some projects will serve a single purpose, particularly improvement of navigation, while others will contribute to most if not all of those listed. All this work is heavy engineering, but includes a variety of types of construction, of which dredging, rock removal, moving of earth, and construction of dams, locks, piers, and facilities for generation and distribution of electricity will be the most important.

Public policy on expenditures will affect the volume of work on projects within this general classification more than that on most others. There is seldom the immediate urgency that there is, for example, for relief of overcrowded schools or hospitals. Results of earlier development work, and particularly the value of many of the completed projects to the war production program, have been an effective demonstration that these undertakings augment the Nation's resources and productive capacity. Hence there seems to be little chance that they will be regarded merely as means of creating employment and stimulating business. An average volume of $350,000,000 annually during the first 5 post-war years is estimated, with a range from $275,000,000 in the first year to $400,000,000 in the fourth and also in the fifth year.

SEWER AND WATER FACILITIES

Sewer, sanitation, and water-supply projects are local undertakings, except that in metropolitan areas they are not uncommonly constructed and operated by special districts for several municipalities and the intervening unincorporated territory. Their importance, particularly as regards sewage-treatment facilities, is considerably more than local because of the effect on other localities.

After the war there will be extension of service to growing neighborhoods, both those formerly dormant and those entirely new, and provision of public facilities—especially for sewage—in smaller municipalities formerly lacking such improvement. In cities already providing water and sewage service there will be development of new sources of water supply, increase of capacity for pumping stations and primary distribution mains, construction of water-treatment plants, and construction or enlargement of sewage-treatment plants. Considerably greater attention than in the past is likely to be given treatment of industrial wastes, with provision made in part through public plants and in part through private facilities at industrial establishments producing objectionable liquids.

As might be surmised, sustained level for sewer and water construction was greatest during the pre-depression period when residential and other building was at its height and when urban subdivisions were being marketed in greatest number. From 1925 through 1929, average annual volume was about $180,000,000 for sewer construction and about $155,000,000 for water.

The estimated averages during the first 5 years after the war are, respectively, $200,000,000 for sewage facilities and $150,000,000 for

water. Widespread public recognition of the importance of such projects is indicated by the fact that they lead all other types of work reported to the Federal Works Agency by local government units, as regards estimated cost of work for which plans were completed on July 1, 1944, and also for which plans were in preparation on that date. There will of course be caution about proceeding in vacant new subdivisions and other vacant areas, but the influence of this factor is reflected in the estimate.

Financing should present no difficulties for any justified project. Water service is a revenue-producing utility, the rates for which include debt service as well as operating costs. A considerable part of the cost of sewer work will be paid from special assessments. Collection risks will commonly be avoided by requiring the property owners to pay the assessments prior to start of the work, when they desire construction in vacant areas or areas where property values are speculative. The several forms of "sewer rental" by which property owners or occupants are charged separately for sewage service have been adopted in relatively few cities, but in the course of time may become inportant as a source of funds for debt service.

PARKS AND RECREATIONAL FACILITIES

This work consists in part of buildings such as auditoriums, field houses, and shelters, and in part of grading, landscaping, construction of swimming pools and beaches, and other outdoor work. The expenditure level for buildings alone rose rather consistently during the 1920's to a peak of $56,000,000 in 1928 and then, after depression curtailment, increased again with somewhat less regularity through 1939. Recent newspaper accounts show strong public support for some proposed projects. Nevertheless, this is one of the smaller classes of public construction and one likely to be subordinated to schools, hospitals, and other types of work which are generally regarded as more urgent. Volume is estimated at $70,000,000 per year.

Occupational Outlook

Post-War Employment Outlook in Aviation Occupations[1]

Part 1.—Job Prospects With Air Lines

Summary

TO MANY thousands of men in the military and naval air forces who will be looking for civilian jobs after the war, the post-war employment outlook in aviation is a matter of immediate and urgent concern. It is also of importance to young people leaving school, for whom the attraction of aviation jobs has no doubt been enhanced by the war. A study of air transportation and related fields was therefore undertaken by the Bureau to provide information needed in vocational guidance of both these groups. The present article, which is the first of a series, deals with employment prospects in the major branch of commercial aviation—the air lines.

Gains in air-line traffic and employment after the war are widely and confidently predicted. Most carriers are already planning to make major additions to routes and schedules as soon as needed authorizations, aircraft, and personnel can be obtained. There is, however, great difference of opinion as to how large the increases will be. In studying post-war employment prospects, two forecasts of air traffic, one conservative and the other relatively optimistic, were therefore selected from among many different predictions by persons well acquainted with the industry. Rough estimates were then made of the numbers of workers who would be needed 5 years after the war if these traffic forecasts were realized.

For pilots, the lowest post-war employment figure arrived at was little over 6,000, the highest not quite 15,000. This would be a gain of roughly 2,000 to 10,000 above present employment in commercial and military-contract activities. For mechanics and related personnel, the range of employment possibilities envisaged was 20,000 to 40,000—6,000 to 26,000 more jobs than at present. Comparable gains were found to be in sight for stewards and stewardesses and for ground communications operators. In the other occupations studied—flight engineers, flight radio operators, navigators, dispatchers and meteorologists, and stock and stores employees—present employment is so large relative to probable post-war needs that a sizable gain in job openings may be expected only if the more optimistic forecasts of air-line traffic prove to be correct.

[1] Prepared in the Bureau's Occupational Outlook Division by Helen Wood, with the assistance of Hilda L. Pearlman. The Bureau wishes to acknowledge the generous assistance received in the preparation of this article from many members of the staff of the Civil Aeronautics Administration, Civil Aeronautics Board, National Mediation Board, and Harvard Graduate School of Business Administration, and from officials of the Air Transport Association and of a number of companies and trade-unions.

To measure the chances of finding work in these occupations after the war, it is of course necessary to combine the figures on future air-line jobs with estimates of job opportunities in other aviation fields and to relate both to figures on post-war labor supply. This will be done in a later article.

Background and Scope of Study

Three years of war, during which the airplane has been not only a major weapon of combat but a mainstay of supply lines to every continent of the world, have aroused hopes of a tremendous post-war expansion in commercial aviation. Before the war, the comparatively new and small air-line industry was growing much faster than any other branch of transportation. Wartime conditions have brought shortages of planes and other operating difficulties but have increased optimism as to the future. Because of their experience in transoceanic flying under the Air Transport Command and the Naval Air Transport Service, the airlines are aiming higher than ever before in their plans for international operations. Both inside and outside this country, unprecedented volumes of cargo have been carried, and this has led to a new emphasis on the peacetime potentialities of air express and freight, as well as of passenger traffic. The strides made in the field of radar and in military aircraft and engine construction are also expected to benefit post-war flying. When applied to civilian planes after victory, these developments should mean even greater speed, safety, regularity, and economy of operations.

Hand in hand with these technical advances has gone a rapid increase in public acceptance of air transportation. There can be no doubt that many people who regarded a trip by plane as a hazardous adventure only a few years ago now travel by air line as casually as by railroad. Persons with knowledge of the industry predict that this trend will continue after the war, though they emphasize that air transportation is likely to remain small relative to land and water transportation during the foreseeable future. It is generally agreed that, as fares and cargo rates are reduced, equipment improved, routes extended, and flying speed further increased, there will be a marked rise in the volume of both passenger and cargo traffic moving by air. Great increases in nonscheduled flight services, in the use and ownership of airplanes by business establishments, and in recreational flying and the services necessary to maintain private aircraft have also been prophesied.

What this expansion in commercial aviation is likely to mean in terms of employment, and how employment opportunities will compare with the numbers of skilled workers seeking jobs as pilots and in other aviation occupations, are questions of obvious importance to hundreds of thousands of men in Army, Navy, and Marine Corps aviation who will be entering the civilian labor market at the end of the war. They are also of concern to young people graduating from school, who may be expected to feel the lure of jobs in aviation more strongly after the war than in the past.

To provide at least rough answers to these questions the Bureau undertook a study of the prospects for employment both with the air lines and in the other fields—fixed-base operations, airports, corporate and executive users of aircraft, and the Civil Aeronautics Authority.

One important aviation industry—the manufacture of aircraft and aircraft engines and parts—was excluded from the study. Because of the reduction in orders for military planes which victory will bring, drastic cuts in output and employment are known to be ahead for this industry. Many men and women now on the pay roll will have to be laid off, despite the efforts that will be made to convert plants to other types of production. It is evident that veterans with specific reemployment rights and perhaps a few other individual ex-servicemen are the only ones not on the wartime staff for whom airplane factories hold hope of employment after the war.

This article deals with post-war employment prospects in the largest branch of commercial aviation—the air lines or, as they are sometimes termed, scheduled air transportation. All members of flight crews—pilots, flight engineers, navigators, radio operators, and stewards and stewardesses—are considered separately. Certain technical ground occupations are also covered, among them dispatchers and meteorologists, communications operators, and mechanics and helpers.

Later articles will discuss future employment opportunities in other fields and will also suggest what the chances of finding a job in each occupation are likely to be, by comparing the probable number of job openings with the air lines and elsewhere to the numbers of men in the armed forces having the specified types of skill. Data on duties, qualifications, training, licensing requirements, wages, and working conditions in aviation jobs will also be presented.

The Air Lines and Their Routes

Domestic operations.—There are at present 16 air lines that act as interstate common carriers of passengers or property on regular schedules within the continental United States.[2] As required under the Civil Aeronautics Act of 1938, all these companies hold certificates of public convenience and necessity from the Civil Aeronautics Board specifying the routes over which they may operate and the communities they may serve. Four lines, known as the "Big Four," bulk large in the domestic industry. These are American Airlines, Transcontinental and Western Air, and United Air Lines, all of which offer transcontinental service over different routes, and Eastern Air Lines, which, as its name implies, operates mainly on north-south routes in the eastern part of the country. The Big Four have in recent years transported about four-fifths of the total volume of domestic traffic and employed two-thirds to three-fourths of the workers engaged in commercial operations. Three other carriers (Northwest, Pennsylvania Central, and Braniff) have accounted for over half of the remaining traffic and employment. One of the medium-sized carriers (Northwest) was recently granted an extension of its routes which makes it the fourth transcontinental line.

These companies' routes, together with those of the smaller carriers, form an integrated transportation system reaching all States. There are now some 61,000 airport-to-airport miles of permanently certificated domestic routes, with authorized stops for passenger, mail, and cargo service at at 370 cities in the United States. Not all these cities and routes are served at present, because of wartime restrictions, but all will be served after the war. Moreover, applica-

[2] Fifteen of these lines carry passengers, mail, and property. There is, however, one small company (All American Aviation) which is authorized to carry mail and property only.

tions for new or extended routes which the domestic carriers have on file with the Civil Aeronautics Board will, if approved, provide service to many additional cities. Whether great numbers of small communities will be reached directly will depend, however, on the future of local feeder services, still in an early and experimental stage of development. There are already a few small intrastate carriers, and some of the major air lines have routes of feeder type. No specialized interstate feeder line transporting both passengers and cargo has yet been authorized, however. The CAB has received many applications for certificates to operate such lines but has announced that only those which show "a justifiable expectation of success at a reasonable cost to the Government" will be authorized and that, as a safeguard, only temporary certificates will be issued.[3]

International and territorial operations.—Before the war, by far the greatest part of this country's international and territorial air traffic was handled by the Pan American Airways System, including Pan-American-Grace Airways.[4] Pan American was the only United States carrier authorized to operate routes to Latin America, across the Atlantic and Pacific, and to and from Hawaii, the Philippine Islands, Alaska, and Puerto Rico. In addition, its foreign subsidiaries furnished service within a number of foreign countries. Service by other companies outside continental United States was limited to a few short routes to Canada, operated by domestic air lines, and a minor intraterritorial service in the Hawaiian Islands.[5]

The greatest wartime change in this picture has been the spectacular and extensive transocean flying done by several domestic lines under contract with the War and Navy Departments. Other changes include temporary authorizations from the CAB, permitting American Airlines to serve Mexico City and Braniff Airways to cross the border to Nuevo Laredo. In addition, a small new company (American Export Airlines) inaugurated a trans-Atlantic route in 1942, but thus far has been granted a temporary certificate only.

What the post-war situation will be is still uncertain. Stimulated by their experience in international flying with the Air Transport Command and Naval Air Transport Service, many domestic air lines have applied to the CAB for authorization to undertake international services. At least one carrier has proposed a round-the-world route. Several steamship companies have also asked permission to operate transoceanic air lines. At the time this report was written, no decision had been rendered on the applications for permanent international routes.[6] It may well be that the number of carriers offering

[3] U. S. Civil Aeronautics Board, Docket No. 857, Investigation of Local Feeder and Pick-up Air Service, Opinion by the Board, July 11, 1944, p. 4. The question of expense to the Government arises from the fact that, under the Civil Aeronautics Act of 1938, the rates paid for air mail must be sufficient, together with all other revenues, to enable air carriers "under honest, economical, and efficient management, to maintain and continue a development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service, and the national defense."

[4] Fifty percent of the stock of Pan-American-Grace is owned by Pan American and the other 50 percent by the W. R. Grace Co., which also owns the Grace steamship line. Pan-American-Grace connects at Cristobal with the Pan American route between the United States and the Canal Zone, furnishing service along the west coast of South America to Chile and thence across the Andes to Buenos Aires.

[5] In addition, Caribbean-Atlantic Airlines, a Puerto Rican company operates an inter-island service in the Caribbean. There is also a network of local air services within Alaska, but these have thus far been classified as nonscheduled operations by the Civil Aeronautics Board.

[6] Although no decisions on this subject have yet been announced by the Board, reports by the Board's examiners with regard to the applications for North Atlantic and Latin American routes were recently issued. The first of these recommended that Pan-American Airways and American Export Airlines be authorized to operate North Atlantic routes and that applications for such routes from other air lines be denied. The report on Latin American routes recommends that certificates be granted to Pan American, Eastern, Braniff, American, and Western Air Lines, authorizing service between the United States and various points in Central and South America and the West Indies. Applications for South Atlantic and Pacific routes are also under consideration.

service outside the Americas will eventually be decided by Congress rather than the CAB, because of the major questions of international policy involved.

Air-Line Traffic and Employment Before and During the War

TRENDS IN TRAFFIC AND EMPLOYMENT

The air lines of the United States had a total of only 22,100 employees at the end of 1940, the last "normal" pre-war year. Of these workers 15,800 were employed by the domestic carriers and the remainder by those engaged in international or territorial operations (table 1). With this comparatively small staff, the air lines handled 1,152 million passenger-miles of revenue traffic during 1940, of which 1,041 million passenger-miles was in domestic operations and 111 million in operations wholly or partly outside the limits of continental United States. They also moved 14 million ton-miles of mail, express and freight over domestic routes and a smaller tonnage outside the United States. The railroads, on the other hand, accounted for 23,762 million passenger-miles of transportation and 373,253 million ton-miles of freight during 1940,[7] and in December of that year had more than a million employees.[8]

TABLE 1.—*Employment and Traffic in Domestic and in International and Territorial Air-Line Operations, 1936–43* [1]

Item	1936	1937	1938	1939	1940	1941	1942	1943
	Domestic operations							
Number of employees (as of Dec. 31 of each year)	7,045	7,529	8,955	10,509	15,800	18,984	26,447	30,349
Revenue passengers carried (in thousands)	911.1	958.5	1,176.9	1,717.1	2,727.8	3,768.9	3,349.1	3,351.5
Revenue passenger-miles (in millions)	388.2	407.3	476.4	677.7	1,041.2	1,369.6	1,398.0	1,606.1
Mail ton-miles (in millions)	5.7	6.7	7.4	8.6	10.0	12.9	21.1	35.9
Express ton-miles (in millions)	1.9	2.2	2.2	2.7	3.5	5.2	11.7	15.1
	International and territorial operations							
Number of employees (as of Dec. 31 of each year)	2,950	4,063	4,354	5,414	6,256	7,474	13,214	(2)
Revenue passengers carried (in thousands)	(2)	(2)	(2)	161.2	216.8	311.1	383.9	(2)
Revenue passenger-miles (in millions)	(2)	(2)	(2)	78.2	111.2	179.0	264.0	(2)
Mail pounds (in thousands) [3]	328.3	426.3	484.7	675.4	1,045.4	1,637.4	3,355.5	(2)
Express pounds (in thousands) [3]	873.2	1,114.0	1,270.0	1,398.0	1,682.0	3,105.4	8,509.4	(2)

[1] Figures for domestic operations obtained from Statistical Handbook of Civil Aviation (Civil Aeronautics Administration, Oct. 15, 1944); statistics for international and territorial operations, from Civil Aeronautics Journal (U. S. Department of Commerce), Jan. 15, 1944.
[2] Not available.
[3] Ton-mile figures not available for international and territorial operations.

Considered in the light of its brief history, the 1940 position of the air transport industry was very favorable. At that time the industry was only about a decade and a half old [9] and had been growing much

[7] Statistics of Railways of Class I (Interstate Commerce Commission), 1929–42, sheet 3. Figures refer to revenue traffic only.
[8] Wage Statistics of Class I Steam railways in the United States (ICC, Bureau of Transport Economics and Statistics), Statement No. M-300, 1940.
[9] For all practical purposes, the transportation of passengers and property by air on a regular schedule and a commercial scale began in 1926. A number of private carriers opened contract mail routes during that year, under the provisions of the Air Mail (Kelly) Act of 1925. Before then the only extensive air service in this country was the Government-operated mail route between New York and San Francisco, initiated in 1919–20.

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faster than any other form of transportation. In the 4 years from 1936 to 1940, air-line employment more than doubled in both branches of the industry. Large gains were registered also by all classes of traffic during this period, although, as table 1 shows, the rate of increase was greater for passengers than for mail or other cargo.

During 1941, the rise in business activity incident to the national defense program further accelerated the growth in air-line traffic and employment, but since then expansion has been restricted by shortages of planes. The domestic carriers had 359, the international and territorial carriers 94 planes in service or reserve at the end of 1941. Shortly after the attack on Pearl Harbor, however, the armed forces took over many of these aircraft by purchase or lease. At the end of 1942, the domestic commercial fleet was left with 179 planes, only half its pre-war strength. A few urgently needed planes were returned to the airlines for commercial operations in 1943, but the numbers released were small until mid-1944 and raised the domestic fleet to only 347 planes by the end of that year.

The record of the air lines in maintaining traffic at high levels despite the shortage of equipment is a major achievement. Though there has been a drop in number of passengers carried, from the 1941 peak, passengers have averaged so many more miles per trip than before the war that total revenue passenger-miles have shown an increase. There has also been a substantial rise above 1941 levels in tonnage of mail and other cargo handled by both domestic and international carriers (table 1).

The seeming paradox of increased service with decreased equipment has been made possible partly by higher pay-load factors and partly by an extraordinary increase in plane utilization. During 1943, the domestic carriers used, on the average, 88 percent of their passenger capacity per flight for revenue traffic, compared with only 59 percent in 1941. Whereas before the war average plane utilization in domestic operations was about 6 or 7 hours a day and in 1941 was 8½ hours, since 1943 it has been 10 to 12 hours.[10]

A rise in labor requirements per plane has of course accompanied the intensified plane utilization. It has been estimated that about 4½ crews are required for each aircraft in service under present operating conditions,[11] although at the end of 1940 the domestic lines averaged less than 3 crews per plane. In addition, an expanded ground and office force has been necessary to service the heavily taxed equipment and handle the continued increase in traffic.

The result has been a gain in personnel employed in domestic commercial operations from the previously cited figure of 15,800 at the end of 1940 to 30,300 at the end of 1943 (table 1). In the international and territorial segment of the industry, employment more than doubled in an even shorter period, rising from 6,300 at the end of 1940 to 13,200 on December 31, 1942, the last date for which considerations of military security have permitted release of employment figures.

These statistics exclude, as far as possible, personnel employed full time in the special wartime activities undertaken by all air lines

[10] The Airlines of the United States at War (Office of War Information); Statement by Colonel Edgar S. Gorrell, President, Air Transport Association, before the ninth Annual Meeting of the Association, November 29, 1944.

[11] Air Facts (New York), August 1944 (p. 26): Air Line Flying for Post-War Military Pilots, by F. A. Spencer.

under contract with the War and Navy Departments. Most carriers have participated in transport operations for the ATC and the NATS, within this country and to all the major theaters of war. Some have conducted training programs for Army and Navy personnel, providing instruction in the operation and maintenance of multi-engined transport craft. A number of lines have also had contracts for the maintenance and repair of military aircraft, engines, and instruments or have operated modification centers at which armed-force planes undergo changes needed to fit them for a specific task.

The exact numbers of workers employed in these different activities are a military secret. Total air-line employment exclusive of personnel in modification centers was, however, about 45,000 or 50,000 at the end of 1944, according to information supplied by the Air Transport Association.

EMPLOYMENT, BY OCCUPATION

Though the total employment figures for air transportation presented above are important as a measure of the industry's growth, they include many diverse occupational groups—pilots, stewards and stewardesses, mechanics and helpers, and communications, administrative, and clerical employees—which may have quite different employment trends. Estimates of the numbers of employees in each of these fields of work and in some other occupations of special interest in this study are shown in table 2, for 1940 and later years.

It is seen that pilots and other members of flight crews make up only a minor fraction of the industry's work force. At the end of 1940, only 1,900 pilots and copilots were employed in domestic operations, 12 percent of total personnel in all types of work. In international and territorial operations, there were then fewer than 400 pilots, 6 percent of all employees in that segment of the industry. The numbers of stewards and stewardesses employed were still smaller, and there was no appreciable employment of other flight personnel. By far the largest occupational groups were mechanics and helpers, office employees, and, in international operations, other hangar and field personnel; taken together, these three groups represented over two-thirds of the work force in each branch of the industry.

According to the statistics for 1941–43, wartime developments have not greatly changed this relative picture, although there has been a marked increase in employment for all occupational groups except stewards and stewardesses. Caution is necessary, however, in interpreting the figures for 1942 and 1943. As already mentioned, the statistics compiled by the CAA and CAB are, in general, limited to the air lines' commercial activities, but it has not been possible to exclude workers engaged part time in commercial and part time in military-contract operations. For some occupational groups, therefore, the 1942 and 1943 figures in table 2 exaggerate the increase in employment in commercial activities during the period covered, but they no doubt understate present employment in all instances if all types of air-line activities are considered.

In the case of pilots, for example, the most recent statistics show a total of 3,500 employed—2,500 with the domestic lines at the close of 1943 and 1,000 with the international and territorial carriers as of December 31, 1942 (table 1). In comparison, a rough but apparently

reasonable forecast made in the summer of 1944 placed the number of pilots likely to be flying in domestic commercial activities at the end of the year at 2,700 and estimated those engaged in military-contract

TABLE 2.—*Employment in Domestic and in International and Territorial Operations of Air Lines, by Occupational Group, 1940–43* [1]

Occupational group [2]	Number of employees as of December 31			
	1940	1941	1942	1943
	Domestic operations			
All groups	15,800	18,984	26,447	30,349
Pilots	1,894	2,137	2,277	2,516
Captains and senior pilots	893	1,065	974	1,005
First pilots and copilots	1,001	1,072	1,303	1,511
Other flight officers and mechanics [3]	16	47	112	284
Stewards and stewardesses	910	1,024	788	835
Dispatchers and meteorologists [3]	237	266	383	394
Mechanics and assistants	3,995	4,333	7,770	8,084
Stock and stores employees [3]	371	503	752	929
Communications operators, ground [3]	798	892	1,179	1,374
Other hangar and field personnel	1,063	1,293	2,178	3,349
Office employees	5,815	7,759	9,883	10,800
All other employees	701	730	1,125	1,784
	International and territorial operations			
All groups	6,256	7,474	13,214	[4]
Pilots	368	480	1,010	[4]
Captains and senior pilots	153	217	377	[4]
First pilots, copilots, and other flight officers	215	263	633	[4]
Stewards and stewardesses [5]	130	186	386	[4]
Mechanics and assistants [5]	1,414	2,056	3,649	[4]
Other hangar and field personnel [5]	2,388	2,746	4,477	[4]
Office employees [5]	1,922	1,951	3,473	[4]
All other employees [5]	34	55	219	[4]

[1] Except as indicated in footnotes, figures for domestic operations were obtained from Statistical Handbook of Civil Aviation (Civil Aeronautics Administration, October 15, 1944); statistics for international and territorial operations, from Civil Aeronautics Journal (U. S. Department of Commerce), January 15, 1944.

[2] The figures for groups other than flight crews do not cover strictly comparable personnel for all carriers because of differences in reporting methods.

[3] Figures for these occupations are estimates based upon data from the Civil Aeronautics Board's Annual Airline Statistics. The estimates for "other flight officers" were subtracted from the C. A. A. figures for copilots; those for dispatchers and meteorologists and stock and stores employees from the C. A. A. figures for "other employees" (including dispatchers); those for communications operators from the figures for "other hangar and field personnel."

[4] Information not available.

[5] Foreign personnel employed abroad are included, as well as personnel from the working population of the United States.

operations at 1,300.[12] If allowance had been made also for the commercial activities of international and territorial carriers, the total of 4,000 thus arrived at would have been raised to at least 4,600 pilots and copilots.[13]

[12] Spencer, op. cit., p. 27. The estimate of 2,700 for commercial operations was based on the assumption that about 300 planes would be in service at the end of 1944 and that 4½ crews of 2 pilots each would be required per plane. Since somewhat more planes than this were actually in service by that time, the estimate may be slightly low.

[13] At the end of 1943, about 590 pilots and copilots were employed by Hawaiian and Colonial Airlines and by Pan-American Grace and the Latin-American divisions of Pan-American Airways, all of which have had uninterrupted commercial operations though the system's other divisions for a time operated exclusively on a naval contract basis. The Alaskan Division was returned to commercial operation in the summer of 1944, and the same change was made in the Atlantic Division at the beginning of 1945. The Pacific Division is still operating entirely on contract.

Post-War Employment Prospects

Unquestionably there will be marked gains in air-line traffic and employment after the war. As already mentioned, such increases are generally expected, and many signs point in that direction—the strong pre-war upward trend in the industry, the continued rise in traffic and employment during the war, despite the shortage of equipment, and the plans for major expansions in routes and schedules announced by most lines. There is, however, great disagreement as to the probable size of the impending increases. Forecasts of the volume of domestic passenger traffic in the fifth year after the war, for example, range from less than 5 billion to more than 16 billion passenger-miles.

Among the most careful and reasoned analyses of post-war air-line traffic and equipment are those given in an article by Dr. Edward P. Warner, Vice Chairman of the Civil Aeronautics Board, [14] and a more elaborate study by the Business Research Department of the Curtiss-Wright Corporation.[15] The first study reaches considerably more optimistic conclusions than the second with respect to domestic traffic, but the results of both lie well within the range of expert opinion. Dr. Warner forecasts a yearly total of 12 billion and the Curtiss-Wright study one of 7 billion passenger-miles for about 5 years after the war.[16]

These estimates cover not only air-line operations of the conventional type but also scheduled local feeder services. In both studies, the point of departure is a calculation of the lowest passenger fares and cargo rates that will be economically feasible for different classes of traffic a few years after the war. Forecasts are then made of the volume of traffic that will be newly created or diverted from other forms of transportation at the specified fares and of the numbers of planes of different sizes that will be needed to handle the estimated traffic. The conclusions reached thus rest in both instances primarily upon economic factors. Underlying them is, however, the assumption that the expansion in this country's airport and airways system will keep pace with the need, and that, in the international field, post-war political arrangements will allow a free development of air transport. It is also implicitly assumed that the total volume of traffic will be relatively little affected by possible alternative decisions by the CAB on air-line routes, important as these decisions are to the individual companies involved.

In considering how many flight personnel, mechanics, and other skilled workers are likely to be employed in post-war air transportation, the Bureau has relied heavily upon the Warner and Curtiss-Wright studies. By estimates of labor requirements per plane or per unit of traffic handled, the two sets of traffic and equipment forecasts shown in table 3 have been translated into numbers of workers. The resulting employment figures are of course subject to wide uncertainties and possibilities of error, but they do illustrate, in broad terms, about how many air-line jobs may reasonably be expected under the given widely different assumptions regarding traffic and equipment.

[14] Air Transport (New York), September 1944 (pp. 33–37) and October 1944 (pp. 79–89): Where Next?, by Edward P. Warner.

[15] Air Transportation in the Immediate Post-War Period, by B. A. McDonald and J. L. Drew. Buffalo, Curtiss-Wright Corporation, 1944.

[16] The Curtiss-Wright forecasts cited in this report are for 1950, but were made on the assumption that the war would be over in all theaters in 1945. Dr. Warner's estimates are stated to be for 5 or 6 years after the war.

TABLE 3.—*Forecasts of Air-Line Traffic and Planes for Fifth Post-War Year, Compared With 1940* [1]

Item	Yearly traffic (in millions of ton-miles) [2]				Number of planes [3]				
	Total	Passenger	Mail	Cargo	Total	Feeder	Small trunk	Intermediate trunk	Large trunk
Domestic operations:									
1940	117.5	104.0	10.0	3.5	338	101	232	5	------
Forecast, for 5th year after war, by—									
Curtiss-Wright	897.0	700.0	87.0	110.0	571	91	216	264	------
Warner	(4)	1,200.0	(4)	(4)	1,200–1,700	(5)	[6] 600–900	600–800	------
International and territorial:									
1940	13.7	11.5	1.0	1.2	124	70	39	15	------
Forecast for 5th year after war, by—									
Curtiss-Wright	188.6	155.0	8.6	25.0	158	60	36	55	7
Warner	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)

[1] Data are from Curtiss-Wright Corporation, op. cit. (pp. 14, 16, 22, and 23), and Warner, op. cit. in Air Transport, September 1944 (p. 37) and October 1944 (p. 83).

[2] 1 ton-mile is considered as equivalent to 10 passenger-miles. This assumes an average weight (including baggage) of 200 pounds per passenger.

Statistics for 1940 are those given in the Curtiss-Wright report. It will be noted that the estimate of international passenger traffic is slightly higher than the CAA figure in table 1, reflecting differences in the definition of international operations. Figures on mail and cargo tonnage in such operations, for which no exact statistics have been compiled, are estimates by the Curtiss-Wright Corporation.

[3] The classifications of planes given here are those used in the Curtiss-Wright report. The range in passenger-seating capacity for each class of aircraft is as follows: Feeder, 10–15 seats; small trunk, 20–25; intermediate trunk, 40–60; large trunk, 80–125. In both the Curtiss-Wright and Warner studies the aircraft estimates are in terms of combined passenger-cargo planes. Since it was expected that specialized cargo planes would be a very small part of the total fleet for at least 5 years after the war, no allowance was made for them in the above forecasts or in the Bureau's employment estimates.

[4] Information not available. Dr. Warner's article includes an extensive analysis of air-cargo potentials but no definite forecasts of cargo traffic. Since he concluded that cargo operations would be, for the most part, incidental to carriage of passengers during the first post-war years, his estimates of future aircraft requirements in domestic operations are based on forecasts of passenger traffic only. In the case of international operations, his article gives a traffic estimate only for the United States and foreign-flag carriers combined.

[5] Included with small trunk planes.

[6] Includes feeder planes, also. An allowance of 300–600 planes of feeder or small-trunk sizes was made for local feeder operations and of 300 small planes for regular air-line use.

FLIGHT CREWS IN DOMESTIC OPERATIONS

If the forecast of 1,200 to 1,700 planes in domestic operations made by Dr. Warner should be realized by 1950, this would mean a 250–400 percent increase within one decade in the numerical strength of the domestic fleet. The increase in its passenger- and cargo-carrying capacity would be much greater still, owing to the anticipated use of larger and faster planes, at least for long-distance and main trunk-line service. Similarly, the expansion in flight personnel would exceed that in numbers of planes. To man the Lockheed Constellations and Douglas DC–4's and DC–6's already ordered by the air lines, and future planes in the same "intermediate trunk line" class, a flight engineer will sometimes be necessary in addition to the two pilots carried on all domestic flights.[17] At least two stewardesses (or a steward and a stewardess) will also be needed for the 40 to 60 passengers carried on these planes, though one is sufficient on "small trunk line" planes such as the present 21-passenger DC–3's. On the even smaller feeder-type planes, where the copilot generally handles

[17] The Civil Air Regulations require in effect that there shall be at least two pilots on all planes used in scheduled transportation of passengers or in any transport flying by instrument. In local feeder pick-up services handling mail and other cargo only and flying by contact, only one pilot need be carried, together with a crew member to operate the pick-up device; no allowance could be made for this deviation from usual air-line personnel practice, but it will probably not be widespread enough to have an appreciable effect upon the post-war employment situation.

the duties assigned to a stewardess on larger craft, no one in this occupation will be required.

In addition, the number of crews needed per plane will be larger after than before the war, though probably less than at present. Other things being equal, the number of crews required varies with the number of hours the planes are used per day. With the return to peacetime conditions, aircraft utilization is likely to decline somewhat from its present great intensity. More planes will then be available to the air lines, and since people will tend to be less willing than now to travel at any time they can get transportation, there will be pressure to concentrate flights at convenient hours of the day and also to schedule additional flights at week ends and other periods of peak loads. It is, however, assumed in the Warner and Curtiss-Wright studies, as by others familiar with the industry, that the carriers will be successful in holding utilization above pre-war levels, which would be desirable in view of the relation to operating expenses. This line of reasoning obviously implies that the average number of crews employed after the war will be somewhere between the pre-war and the wartime figures, perhaps 3.5 or 4 per plane.

Taking these various factors into consideration, it seems likely that the use in domestic operations 5 years after the war of 1,200 to 1,700 planes of the types indicated in table 3 would mean the employment of about the following numbers of flight personnel.

	Number of employees
Total	16, 300–19, 500
Pilots and copilots	9, 500–12, 000
Flight engineers [1]	800– 900
Stewards and stewardesses	6, 000– 6, 600

[1] In deriving these figures, one flight engineer was allowed for every 3 crews. This assumption tends if anything to overstate their probable future employment, since intermediate planes are not expected to require such personnel in domestic operations, except on long flights.

These figures, which are illustrations rather than forecasts, of course take no account of factors now immeasurable or unforeseen that may nevertheless affect personnel requirements by 1950. The figures are approximately in line with confidential forecasts of total employment in domestic operations made by one major air line and low in comparison with rough estimates by another company. Nevertheless, they are believed to be an optimistic picture of post-war employment opportunities. If the estimates of numbers of planes in the Curtiss-Wright study should prove to be correct, only about 5,000 pilots, 400 flight engineers, and 3,300 stewards and stewardesses are likely to have jobs in domestic operations in 1950.[18]

FLIGHT CREWS IN INTERNATIONAL AND TERRITORIAL OPERATIONS

In the smaller international and territorial branch of the air-transport industry, a marked expansion in traffic is also expected after the war, with a lesser increase in equipment and flight personnel. The Curtiss-Wright study predicts that United States carriers will move 189 million ton-miles of passenger and cargo traffic outside this country in 1950—13 times as much as in 1940. It is estimated,

[18] To allow for the especially high assumption as to utilization of equipment made in the Curtiss-Wright study, a somewhat greater number of crews per plane (4½) was allowed in deriving these employment figures than in deriving those based on Dr. Warner's equipment forecasts.

however, that 158 planes, only about one-fourth more than at the end of 1940, are all that will be needed to handle this volume of traffic, owing to the increased size and speed of the aircraft, much higher pay-load factors, and more intensive utilization of equipment. These traffic and equipment estimates are the foundation of the illustrative figures on post-war employment in international operations presented below.[19] In the Warner study, estimates for operations outside the continental United States are limited to a forecast of passenger-mileage for United States and foreign-flag carriers combined, and this is of the same general magnitude as the comparable figure from the Curtiss-Wright report (2 billion compared with 2.4 billion passenger-miles).

The planes needed to handle post-war traffic outside this country are expected to include small feeder-type aircraft, for use in internal operations in foreign countries by American flag subsidiaries, small trunk-line types for short runs to Central American and Caribbean points and other short-haul operations, intermediate planes for intercontinental, transocean, and trunk-line use, and a few giant planes such as the projected Lockheed Constitutions and Douglas DC–7's for long-range transocean flights. Even among planes in the same size class, the composition and size of the crew are likely to vary with the nature of the route, the company involved, and the model of plane in use. In international flying, small and intermediate trunk-line planes will often need radio operators and sometimes also navigators, besides the crew members carried in domestic operations, though the need for these types of personnel will diminish as world-wide radio direction-finding systems are established route by route. Some but not all lines plan to employ a captain in addition to two other pilots on intermediate-sized planes, and to carry relief crews on long flights. On the largest aircraft, which will accommodate 80 to 100 or more passengers, there is likely always to be a captain, besides the senior pilot, and other additional crew members such as a second flight engineer and a number of stewards and stewardesses.

These prospective variations in the make-up of flight crews are one reason why assumptions as to personnel requirements are more uncertain and difficult to make for the international than for the domestic carriers. Another reason is that, in the case of international operations, pre-war relationships are of little use as a guide in analyzing post-war labor requirements. Before the war, flights were made largely by day in services outside this country, but after victory, as during the war, flying will go on "around the clock" on many international routes. In consequence, utilization of equipment and crew requirements per plane will no doubt continue to be much above the low pre-war figures. In the Curtiss-Wright study, the conclusion is reached that the international carriers are likely to achieve in 1950 a level of aircraft utilization little below the high figure predicted for post-war domestic operations.

In translating the Curtiss-Wright forecasts of numbers of planes into figures on flight personnel, nearly as many crews per plane (4) have therefore been assumed for international as for domestic operations, though the international and territorial carriers averaged only

[19] Because of differences in the definition of international operations between the Curtiss-Wright study and other sources, post-war employment figures based on the Curtiss-Wright forecasts for such operations tend to have some upward bias in comparison with the available statistics on pre-war and wartime employment. No quantitative allowance could be made for the bias, but it is too small to affect substantially the conclusions as to employment opportunities and trends.

about 2 crews per aircraft in 1940. Differences in crew composition have also been allowed for, roughly. The results are the lower figures in the tabulation on flight personnel given below.

Despite the comparatively large number of crews assumed, these minimum figures are far below the employment levels which are suggested by relating the Curtiss-Wright traffic forecasts to pre-war labor requirements per unit of international traffic, or even to the lower pre-war labor requirements of the domestic carriers. This is due to the great rise in volume of traffic carried per plane which the study postulates. Some idea of the number of employees that might be needed to handle the predicted traffic if there should be only a moderate decrease in equipment and personnel ratios compared with the past experience of international and territorial operators is provided, however, by the higher figures in the accompanying tabulation. To derive these figures, actual 1940 statistics on numbers of pilots and of stewards and stewardesses employed per revenue passenger-mile in domestic operations were related to the Curtiss-Wright forecasts of international passenger traffic (from table 3). Since the domestic carriers employed few if any flight engineers, navigators, or radio operators in 1940, comparable figures for these groups were approximated by means of ratios to numbers of pilots, based on recent data on the international operations of a major air line.

The ranges of figures on flight crews in international and territorial operations 5 years after the war, thus obtained, are as follows:

	Number of employees
Total	2, 950–7, 200
Pilots (including captains)	1, 300–2, 800
Flight engineers and mechanics	300– 900
Navigators	250– 700
Radio operators	400–1, 400
Stewards and stewardesses	700–1, 400

MECHANICS AND RELATED OCCUPATIONS

Skilled mechanics and mechanics' helpers are employed by the air lines both at their main overhaul bases and in "line maintenance" or "servicing" of aircraft at stations along their routes. The greatest concentrations of both skilled and semiskilled men are of course at the maintenance bases, to which planes are taken for overhaul at regular intervals and where all major repairs and modifications in planes and engines are carried out. The total number of mechanics needed at air-line stations to inspect aircraft and make necessary adjustments and minor repairs is, however, considerable also.

Future employment in this occupation will be influenced not only by the number, size, and complexity of the planes to be serviced at the major overhaul bases, but also by such unpredictable factors as the number of stations at which service mechanics will be needed, the frequency of plane arrivals at these stations, and the degree to which the mechanics' working time is utilized. On lightly traveled routes, skilled maintenance men may have little to do in the intervals when there are no planes to be serviced, and they may thus be able to handle an increased number of aircraft and volume of traffic without a corresponding increase in the working force. Under these circumstances, refined estimates of future labor requirements are obviously impossible. A study of past trends in ratios of mechanics employed to volume of

traffic, supplemented by data from a large air line as to workers needed at the repair base for each engine in service, has, however, provided a basis for rough illustrative figures on post-war employment opportunities in the occupation.

For at least 7 years before the war, there was a steady decrease in the number of mechanics employed per million ton-miles of traffic handled by the domestic lines, as a result of increased traffic, improved equipment, and many other factors. The decrease was interrupted in 1942, owing to wartime equipment shortages and special military-contract activities, but it was resumed in 1943 and there is reason to believe that it will be evident to some degree after the war. If so, the likelihood is that about 30,000 mechanics will be employed in domestic operations if Dr. Warner's predictions as to passenger traffic come to pass, but only about 15,000 if the more conservative forecasts of the Curtiss-Wright study prove correct. For international and territorial operations, the most probable level of employment in the occupation would be 5,000 to 10,000, depending on the efficiency of operations, assuming a realization of the Curtiss-Wright forecasts with regard to international traffic in 1950. By no means all the jobs included in the latter figures would go to American workers, however, since carriers with stations in foreign countries will employ considerable numbers of foreign personnel.

These figures cover not only all-round engine mechanics but also aircraft structural mechanics, specialists such as radio and instrument repairmen, and semiskilled helpers and line maintenance men. No figures on anticipated job opportunities for these different occupational groups can be given. The only available information on this subject is a percentage distribution of maintenance personnel by occupational specialties, based on estimates of personnel requirements by the Airlines War Training Institute, which is presented in the tabulation below. Since these estimates were made for very large wartime operations where there would naturally be more specialization of function than in many repair bases, they probably overstate employment opportunities for propeller, instrument, and other specialists in the air transport industry as a whole. They do, however, set a useful upper limit on the proportion of mechanics' and related jobs likely to be available to men with any of the specified types of specialized skills.

	Percent [1]		*Percent* [1]
Airplane overhaul	21. 5	Accessory overhaul—Continued.	
Metal workers	8. 8	Starter	0. 4
Welders	2. 3	Control box	. 4
Machine-shop workers	3. 4	General	2. 3
Paint and interiors	2. 3	Propeller overhaul	1. 1
Hydraulic overhaul	0. 8	Radio maintenance	4. 6
Engine overhaul	9. 2	Instrument maintenance	4. 6
Accessory overhaul	8. 5	Riggers and cable splicers	2. 3
Carburetor	4. 6	Line maintenance	30. 6
Magneto	. 4		
Generator	. 4	Total	100. 0

[1] Based on unpublished estimates of the Airlines War Training Institute.

OTHER GROUND PERSONNEL

Employment of stock and stores employees varies directly with the number of mechanics on the pay roll, to whom tools and other equipment and supplies must be issued About one stock clerk or supply

man is needed for every 10 mechanics employed, according to the 1940–43 employment statistics for domestic operations as a whole (table 2). On the basis of this ratio, the numbers of stock and stores jobs implied by the figures on mechanics given in the preceding section would be 1,500 to 3,000 for domestic air transport and 500 to 1,000 for the international and territorial branch of the industry.

The volume of work for dispatchers and meteorologists, on the other hand, is governed to a considerable extent by the number of flights through air-line stations. In the absence of forecasts with regard to such flights, the best available clue to post-war employment in this occupational group is apparently the prospective increase in flight crews, which will also be related, though perhaps less directly, to the numbers of plane arrivals and departures. The same proportionate gains in employment above 1940 levels as had been arrived at for pilots were therefore assumed for dispatchers and meteorologists in domestic operations, yielding an estimate of from 650 to 1,500 jobs for such personnel with the domestic carriers 5 years after the war. Roughly comparable figures on post-war employment of dispatchers and meteorologists in international operations would be about 250 to 500.

For communications operators, the expected volume of air traffic is probably the best guide to post-war labor requirements. Handling reservations and other messages with regard to traffic is a sizable part of air-line communications work, although employees in this group also transmit weather information and operations and general messages from station to station and ground to plane. It must be borne in mind, however, that sharp increases in traffic may not necessitate equal gains in indirect operating personnel such as communications employees. Also, because of the keen competition which the air lines will face both within the industry and from other branches of transportation, they will be under continual pressure to reduce staff and thus cut operating expenses. In all probability, therefore, the number of communications operators employed per million ton-miles of traffic will be much lower by the fifth post-war year than in 1940—perhaps about one-half as great. Should this be correct, roughly 4,500 such employees would be required to handle the volume of domestic traffic forecast by Dr. Warner and only about 3,000 to handle that indicated by the Curtiss-Wright study, while 800 to 1,000 more might be employed in international and territorial services in view of the Curtiss-Wright forecasts for this segment of the industry.

In addition to the occupational groups so far discussed, there is of course a wide variety of other air-line employees—administrative and supervisory personnel, professional engineers, clerical workers (a very large group), ticket and passenger agents, cargo handlers, and many others. These workers have comprised about half of total domestic air-line personnel since 1940. In the international branch of the industry, they have bulked even larger, although no exact ratio to total personnel can be given because of the lack of separate employment data for certain occupations.

As air-line traffic rises after the war, so will the numbers of employees in these different groups, but whether the rate of gain will be faster or slower than in the occupations for which post-war employment figures were arrived at is uncertain. Many of the workers not covered by post-war estimates are of course indirect employees, and

experience in many industries has shown that the proportion of personnel in this category tends to fall as business rises. In air transportation, however, this tendency will be tempered by a sharp drop from pre-war levels in the numbers of direct operating personnel employed per unit of traffic.

PROSPECTIVE INCREASES IN EMPLOYMENT ABOVE PRE-WAR AND WARTIME LEVELS

What do all these figures mean in terms of expansion in air-line employment? Compared with pre-war employment levels, the prospective gain is obviously great. The lowest post-war figure arrived at for pilots was nearly 3 times, the highest figure more than 6 times, the number employed at the end of 1940, considering both branches of the industry together. For mechanics and related personnel, the range of employment possibilities envisaged was from 3¾ to 6½ times the 1940 employment figure. In the other occupations covered, equal or greater relative gains were found to be in sight. As already indicated, no definite statement can be made as to future prospects for the remaining large group of workers not studied in detail. For purposes of illustration let us assume, however, that these workers will continue to represent the same proportion of air-line personnel as in 1940. If this should be the case, the most probable minimum and maximum figures for total air-line employment 5 years after the war would be about 80,000 and 160,000, compared with 22,000 at the end of 1940 and more than twice that figure at the beginning of 1945.

How post-war employment is likely to compare with present personnel strength, occupation by occupation, is a still more important question to men who may be seeking aviation jobs. To provide some approximate answers, the most recent available employment estimates for commercial operations were adjusted as far as possible for personnel now engaged in military-contract activities, who will no doubt have a prior claim on the commercial jobs that will gradually be created after the war. The adjusted estimates were then subtracted from the highest and lowest post-war employment figures for each occupation presented in preceding sections. (See table 4.)

The variations in the range of employment opportunities indicated for different occupational groups of course result both from the differing total figures on post-war employment and from the varying numbers of workers estimated as employed in these occupations at present. In the case of navigators and flight radio operators, for example, employment especially in contract activities is now so large relative to probable post-war needs that there would be little gain, or an actual decrease in jobs, should the more conservative forecasts for international operations prove to be correct. Because of the incompleteness of the available data on current employment, these figures tend to give an optimistic picture of the impending expansion in air-line jobs.[20] Moreover, many of the new employment opportunities in international operations, particularly for mechanics and other ground personnel, will go of necessity to foreign workers.

On the other hand, the figures make no allowance for job openings created by deaths, retirements, quits, and dismissals. Some additional employment opportunities with the air lines will arise from such

[20] See table 4, note 1.

TABLE 4.—*Estimates of Air-Line Employment for Fifth Year After the War, Assuming Realization of Curtiss-Wright or Warner Traffic Forecasts*

Occupational group	Post-war employment						Prospective increase above present employment in all air-line operations [1]	
	Domestic operations		International operations		All air-line operations			
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Total, selected occupations	28,850	58,500	9,500	19,700	38,350	78,200	13,250	53,100
Pilots	5,000	12,000	1,300	2,800	6,300	14,800	1,700	10,200
Flight engineers	400	900	300	900	700	1,800	100	1,200
Navigators			250	700	250	700	50	500
Flight radio operators			400	1,400	400	1,400	(2)	900
Stewards and stewardesses	3,300	6,600	700	1,400	4,000	8,000	2,700	6,700
Mechanics and assistants	15,000	30,000	5,000	10,000	20,000	40,000	6,400	26,400
Stock and stores employees	1,500	3,000	500	1,000	2,000	4,000	300	2,300
Dispatchers, meteorologists, and assistants	650	1,500	250	500	900	2,000	300	1,400
Communications operators, ground	3,000	4,500	800	1,000	3,800	5,500	1,800	3,500

[1] In the case of pilots, the current employment estimate subtracted from the post-war employment figures was the previously cited estimate of 4,600 for the end of 1944, which is probably a little too low. For other occupations the figures deducted understate present employment somewhat more greatly, since only a partial adjustment could be made for military-contract activities and no adjustment was possible for employment trends since 1943 nor for certain other discrepancies. To the extent of this understatement, the prospective increase in employment above present employment levels is of course exaggerated.

[2] A net decrease of 100 is indicated.

causes, though the number of vacancies will tend to be smaller relative to total employment than in many other industries. Turnover is now said to be high—at least among ground personnel—but is probably not greater than in many factories, and the impending oversupply of trained personnel will tend to discourage quits after the return to peacetime conditions. Moreover, since most air-line employees are young, like the industry itself, death and superannuation rates are low and are expected to remain so during the immediate post-war period. Whether substantial numbers of veterans and other skilled workers now outside the industry will be able to find jobs there after the war, in the occupations for which they have been trained, clearly depends upon the fulfillment of the more optimistic predictions as to future air-line traffic.

Child Labor

Trend of Child Labor, 1940–44

By Ella Arvilla Merritt and Floy Hendricks, *U. S. Children's Bureau*

Summary

THE war years from 1940 to 1944 have radically changed the picture of child labor and youth employment in the United States. In the two decades preceding 1940, the employment of boys and girls had been steadily decreasing. The number of working minors 14 through 17 years of age, as counted by the Census, fell from nearly 2½ millions in 1920 to about 1 million in 1940.[1] During the 4 years since 1940, urgent demands for workers of all ages, especially in war production centers, the opening up of new job opportunities for children and young persons, high wartime wages, patriotic pressures, and social restlessness have pushed the numbers of employed boys and girls of this age group up to unprecedented levels. This upward swing in the number of teen-age workers has been clearly reflected in the three major sources of data on national trends in child labor and youth employment—the reports sent to the Children's Bureau on age or employment certificates[2] required for children going to work, the records of young persons under 18 applying for social security account numbers, and United States Census figures.

Employment and age certificate reports, which show the trend in child labor from year to year rather than a cross section of the actual number of young persons employed at any given moment, indicate that more than seven times as many boys and girls aged 14 through 17 years entered the labor market in 1943 as in 1940 and went into work generally subject to Federal or State child-labor regulation. In States and cities reporting for each of these years, the number of minors 14 through 17 years of age who obtained certificates for full-time or part-time work increased from roughly 175,000 in 1940 to more than 1,320,000 in 1943. Preliminary data for 1944 indicate that in general the high level of 1943 is being maintained.

The record of applicants under 18 years of age for social security account numbers tells a similar story. From 1940 through 1943 the number of minors under 18 years of age applying for account numbers more than trebled, climbing from roughly 950,000 to 2,900,000. In 1944 there was a drop from 1943 to slightly over 2 millions; but

[1] The 1940 Census showed 872,314 minors 14 through 17 years of age employed in the last week of March, 1940—209,347 aged 14 and 15, and 662,967, aged 16 or 17. In addition it showed 132,214 minors of these ages classed as "experienced unemployed persons seeking work". The total of these two groups—1,004,528—is roughly comparable to the total number of young persons 14 through 17 years of age (2,395,443) classed as "gainfully employed" in 1920.

[2] Because both employment and age certificates are "employment papers," differing only in certain requirements for issuance or return of the certificate to the issuing office, the term "employment" certificates will be used generally throughout this report to refer to both.

despite this decrease the 1944 figure was more than twice as high as that for 1940.[3]

Census figures for 1940 and estimates based on Census sample surveys since that date show an increase from about 1,000,000 in 1940 to nearly 3,000,000 in April 1944 in the number of young workers 14 through 17 years of age. During the summer months of 1943 and 1944 the number approached 5,000,000.

This wartime increase in child labor has meant a loss of education for children and an increase in illegal employment. According to the U. S. Office of Education figures, high-school enrollment had reached a total of 7,244,000 in the school year 1940–41 (an increase of nearly 5,000,000 since the school year 1919–20) whereas in 1943–44, three years later, the number of children enrolled had dropped by nearly 1,000,000.[4]

Large increases in the extent of illegal employment have been noted by both State and Federal labor inspectors. For instance, in one State (North Carolina) there were 14 times as many child-labor law violations found by State inspectors in 1943 as in 1940 and 22 times as many in the first half of 1944 as in the first half of 1940; in another (Illinois), more than 500 establishments were found to be in violation in the first 6 months of 1944 as compared with fewer than 40 in the corresponding period of 1941; in a third (New York), there was a rise of nearly 400 percent between 1940 and 1943 in the number of boys and girls under 18 found to be illegally employed. The figures for violations of the child-labor provisions of the Federal Fair Labor Standards Act, which are administered by the Children's Bureau, tell the same story as the record of violations of State laws. Nearly five times as many children (8,436) were found by inspectors to be illegally employed in the year ended June 30, 1944, as in the year ended June 30, 1941 (1,761), and these violations occurred in more than five times as many establishments (2,938) in the latter as in the former year (579).

These facts emphasize the need to reestablish and improve the legislative standards that help to give to the country's youth opportunity for education and for normal physical and social development, and to strengthen the machinery for their enforcement.

Extent of Child Labor and Youth Employment

YOUNG WORKERS OBTAINING CERTIFICATES

More than 2 million boys and girls 14 through 17 years of age obtained employment certificates in 1943 for full-time or part-time jobs, according to reports on certificate issuance received by the Children's Bureau from nearly all the States. Of these young workers nearly a fourth were 14 or 15 years of age. The largest proportion of the boys and girls of 14 and 15 years—91 percent—entered vacation employment or employment outside school hours (table 1). Among

[3] These numbers of applicants for social security account numbers give only a rough indication of the rate at which young persons have joined the labor force; they do not in all cases represent actual employment, since persons may obtain account numbers without having a job or even a prospect of one. On the other hand, they do not reflect employment in agriculture, domestic service or other occupations not covered by the Social Security Act.

[4] This reduction is mainly due not to entrance into the armed forces nor to a decrease in population of school age—though these reasons account for some of the loss—but to the great increase in the number who left school for work, many cutting short their courses in mid-term.

the 1½ millions who were 16 and 17 years of age, however, a large majority obtained regular certificates allowing full-time jobs.[5]

For 1942 the reports received by the Bureau show roughly a million young persons 14 through 17 years of age as obtaining certificates for full-time or part-time work during the year. The areas for the 2 years are not strictly comparable and cannot be made the basis of numerical comparison, but it is significant that whereas in 1942 only 17 percent of the total number of young workers were 14 and 15 years of age, in 1943 there were 23 percent in this younger age group.

TABLE 1.—*Minors Aged 14 Through 17 Years, Receiving Regular and Vacation and Outside-School-Hours Certificates, 1942 and 1943* [1]

[Areas reporting in 1942 and in 1943 not comparable]

Year and kind of certificate	Total	Minors 14 and 15 years of age	Minors 16 and 17 years of age
1943	2,040,206	466,798	1,573,408
Regular [2]	1,186,987	42,518	1,144,469
Vacation and outside school hours [2]	853,219	424,280	428,939
1942	1,053,041	178,951	874,090
Regular [2]	620,241	19,830	600,411
Vacation and outside school hours [2]	432,800	159,121	273,679

[1] Numbers estimated for a few areas from which reports were not received or which were incomplete.
[2] By the term "regular certificate" is meant a certificate that permits a minor to leave school and go to work. A "vacation or outside-school-hours certificate" is one that permits a minor to work only during vacation or outside school hours during the school term. In a few States, for children 14 and 15, and in a larger number of States, for minors 16 and 17, a regular certificate is issued whether the minor leaves school for employment or continues to attend school. For this reason, figures for minors receiving regular certificates, especially in the 16- and 17-year-old group, include some minors who do not leave school for work.

Preliminary and incomplete figures for 1944 give a total of 1,222,914 young workers 14 through 17 years of age entering full- or part-time employment, as compared with 1,238,078 in comparable areas in 1943, indicating that approximately as large a number of boys and girls of these ages went to work in 1944 as in 1943.

These figures show not the total number actually at work at any given time, but only the minimum number of young persons of these ages in the country entering employment during the given year in work under the regulation of Federal and State child-labor laws. Certificate laws in many States still fall far short of covering the entire field of youth employment, even though much has been accomplished since the first such law was passed in Massachusetts in 1878. At the present time, in most States, certificates are not usually required, even for children as young as 14 and 15, for work in domestic service and agriculture, in which large numbers of children are employed, and in some States most nonfactory work outside school hours and during vacation is outside the scope of the certificate law. For young workers 16 and 17 years of age, about half of the States do not legally require certificates for any employment, although administratively they are issued on request and are accepted as proof of age under the Fair Labor Standards Act. Furthermore, these reports obviously do not include the many thousands of young workers who, even though they may be old enough to be employed legally, go to

[5] By the term "regular certificate" is meant a certificate that permits a minor to leave school and go to work. A "vacation or outside-school-hours certificate" is one that permits a minor to work only during vacation or outside school hours during the school term. In a few States, for children 14 and 15, and in a larger number of States, for minors 16 and 17, a regular certificate is issued whether the minor leaves school for employment or continues to attend school. For this reason, figures for minors receiving regular certificates, especially in the 16- and 17-year old group, include some minors who do not leave school for work.

work without getting a certificate. Also, they do not include boys and girls who are below the legal age for employment and who are working in violation of State or Federal child labor laws—a situation which has been found increasingly during the war period. Nevertheless these certificate figures, corroborated as they are by other sources of information (see page 756), give a representative picture of the minimum extent of the flow of boys and girls 14 through 17 years of age into the labor market in the United States.[6]

CENSUS COUNTS OF YOUNG WORKERS

Federal Census figures provide two benchmarks for gauging the total numbers of young workers in the nation before and during the war. One was established by the decennial census taken in 1940.[7] The second was fixed in April 1944, when, at the request of the Children's Bureau, the U. S. Office of Education, and other interested Federal agencies, the Census Bureau included supplementary questions on school attendance of boys and girls 14 through 19 years of age, in its sample survey for that month.[8]

These Census data show an increase, in round figures, in the number of boys and girls 14 through 17 years of age in the labor force [9] from 1,000,000 in 1940 to 2,900,000 in 1944, a rise of nearly 200 percent. This peak 1944 figure of youth employment amounted to roughly 30 percent of the estimated 9,200,000 young people in that age group in 1944, as compared with about 10 percent of that age group who were at work in April 1940.

Like the employment-certificate reports, the Census figures show a much higher rate of increase in the number of 14- and 15-year-old boys and girls at work than in the number of 16- and 17-year-old workers. In the younger group the increase during the 4-year period in the numbers at work was nearly 300 percent, as compared with about 150 percent in the older group (table 2). The upward swing was marked among 14- and 15-year-old girls, of whom nearly 5 times as many were at work in 1944 as in 1940. However, the increase was proportionately greater among girls of all ages than among boys—243 percent and 170 percent, respectively.

In July of both 1943 and 1944, at the summer peak of seasonal employment, when youth employment was also at its peak, 5 million, or over half of the more than 9 million boys and girls between 14 and 18 years of age in the population, were at work.

[6] Some duplications occur, but these are far outweighed by the large number going to work without certificates. (Duplications may occur because the reports received combine first and reissued vacation certificates, and because, at the end of the school term, a child may exchange a vacation certificate for a regular certificate permitting work during school hours.)

[7] The information on employment status obtained in the 1940 Census was as of the last week in March 1940.

[8] These sample surveys of labor supply and employment have been made monthly since April 1940. The population sample on which the Census estimates have been based consists of 30,000 scientifically selected households in 68 sample areas, each area containing one or more counties (123 counties in all). These sample areas are in 42 States and the District of Columbia. See Teen Age Youth in the Wartime Labor Force, in Monthly Labor Review, January 1945 (p. 6), and Young Workers in the Wartime Labor Market, in The Child, November 1944 (p. 72).

[9] As a basis for comparison of the young persons in the labor force in 1940 and 1944, it seemed desirable to use the total of two groups—(1) those at work during the census week, including those with jobs but not actually working during the census week, and (2) experienced workers seeking work. In 1940 the number of young persons 14 through 17 years of age actually employed, including those having jobs but not in fact working during the census week, was 872,314. In addition there were 132,214 classed as experienced unemployed persons seeking work. In 1944 the labor force of this age group consisted of 2,900,000 young persons, of whom 2,800,000 were actually at work or had jobs during the census week. Only 100,000 (practically all 16 or 17 years of age) were experienced workers seeking work.

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TABLE 2.—*Minors Aged 14 Through 17 Years, in Labor Force in the United States, 1940 and 1944* [1]

Age and sex	1940 [2]	1944 [3]	Percent of increase in 1944 over 1940
14 through 17 years of age	1,004,528	2,900,000	189.7
Boys	733,506	1,950,000	169.9
Girls	271,022	950,000	243.1
14 and 15 years of age	225,116	850,000	295.4
Boys	179,594	650,000	278.6
Girls	45,522	200,000	361.3
16 and 17 years of age	779,412	2,050,000	159.2
Boys	553,912	1,300,000	134.7
Girls	225,500	750,000	219.3

[1] Those at work during the census week, those with jobs but not actually working during the census week, and experienced workers seeking work.
[2] Compiled from Sixteenth Census of the United States: 1940, Population, Third Series, The Labor Force.
[3] Compiled from data collected in the April 1944 monthly sample survey made by the Census Bureau.

Neither the July nor the April estimates include working children under 14. Official reports from both State and Federal labor officials and from other sources show, however, that many children under 14 are employed.

YOUNG WORKERS IN ABOVE-NORMAL LABOR FORCE

Another illustration of the fact that children and young persons 14 through 17 years of age have made up a very large proportion of new workers in the labor force is found in estimates made by the U. S. Bureau of Labor Statistics of the excess of labor force over normal, as of April 1944. Of the 6,700,000 persons in the labor force and military service over what would have been expected on the basis of proportions found in 1940, 1,730,000, or over a fourth, were boys and girls aged 14 through 17 years.

Trends in Youth Employment

The reports of employment certificates obtained by the Children's Bureau may serve roughly as a barometer of the rise or fall from year to year in the numbers of young workers entering the labor market. When the Bureau began in 1920 to collect and analyze information on the numbers of "employment certificates", "age or schooling certificates," or "work permits," as they have been variously called, reports were available only from certain cities. The area covered has steadily widened and in recent years information has been obtained from all 48 States, the District of Columbia, Hawaii, and Puerto Rico, although in some cases it is incomplete, or is not available for every year.

The first Children's Bureau report on numbers of employment certificates, covering the period from 1913 to 1920, reveals parallels to the present wartime period and the immediate past. Then also, child labor declined during pre-war years of low employment and rose as wartime needs for workers drew increasing numbers of children into the labor market. According to the incomplete reports then collected, a marked rise in employment of children 14 and 15 years of

age began in the fall of 1915 and reached a peak in 1918,[10] when 125,974 children of 14 and 15 obtained regular certificates for work in 23 cities in 11 States and the District of Columbia.[11] No data for that period are available for young workers 16 and 17 years of age.

In general, child labor during the nineteen-twenties rose or fell along with general business conditions, though there was a total decrease particularly for the 14- and 15-year-old group as a result of improvement of child-labor and school-attendance standards. In the years between 1929 and 1943 new and more decisive factors entered into the situation. The period began with the onset of one of the worst depressions in this country's history. It ended with a new peak of employment and production induced by the war. The 15-year record of the numbers of employment certificates issued to young workers 14 through 17 years of age shows that the trend of youth employment followed the trend of general employment with two important exceptions when, twice in the decade and a half, Nation-wide legislation was enacted drastically affecting the employment of children under 16 years of age. In 1933 and 1934 the NRA codes, practically all of which included a 16-year minimum age requirement, reduced very materially the employment of young workers 14 and 15 years of age during the 2 years they were in effect. The removal of the code restrictions in 1935 was followed by an upward swing for employment of this younger group, which continued until it was checked by the slight economic recession beginning in 1937 and continuing into the first part of 1938. In October 1938 the Fair Labor Standards Act established a basic 16-year minimum age in industries producing goods for shipment in interstate commerce, with the result that in spite of rising employment the number of 14- and 15-year old children going to work continued to drop. The permanent decrease which this legal standard might have been expected to bring about, however, was almost immediately reversed by the heavy wartime demands for workers, although the law has been an effective barrier against wholesale employment of children under 16 in manufacturing industries. (See page 773.)

Table 3 and the accompanying chart, comparing for the years 1939 through 1943 the increase in employment of minors 14 through 17 years of age, as shown by certificates issued, with the increase in estimated nonagricultural employment in the United States [12] show how much sharper the rise has been in the employment of young persons 14 through 17 years of age during the war than in the employment of persons of all ages. Using the year 1939 as a base, the index for total estimated nonagricultural employment rose from 100 to 131, whereas for minors 16 and 17 years of age obtaining employment certificates the index rose from 100 to 592 and that for children 14 and 15 years of age soared from 100 to 1,184.

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[10] These figures are for the calendar year 1918 in case of 13 cities (Buffalo, Cincinnati, Jersey City, Milwaukee, Newark, New York City, Paterson, Philadelphia, Pittsburgh, Providence, Rochester, Toledo, and Yonkers), and for the fiscal year 1918—ending June 30, July 31, or August 31—in case of 10 cities (Akron, Chicago, Dayton, Detroit, Los Angeles, New Britain, Reading, Springfield, Mass., Washington, D. C., and Youngstown).

[11] Reports on employment certificates issued to young workers have been published periodically in the Monthly Labor Review since April 1921.

[12] Estimated nonagricultural employment in the United States is used as a basis of comparison with employment certificate statistics because the latter are on the whole representative of nonagricultural employment only.

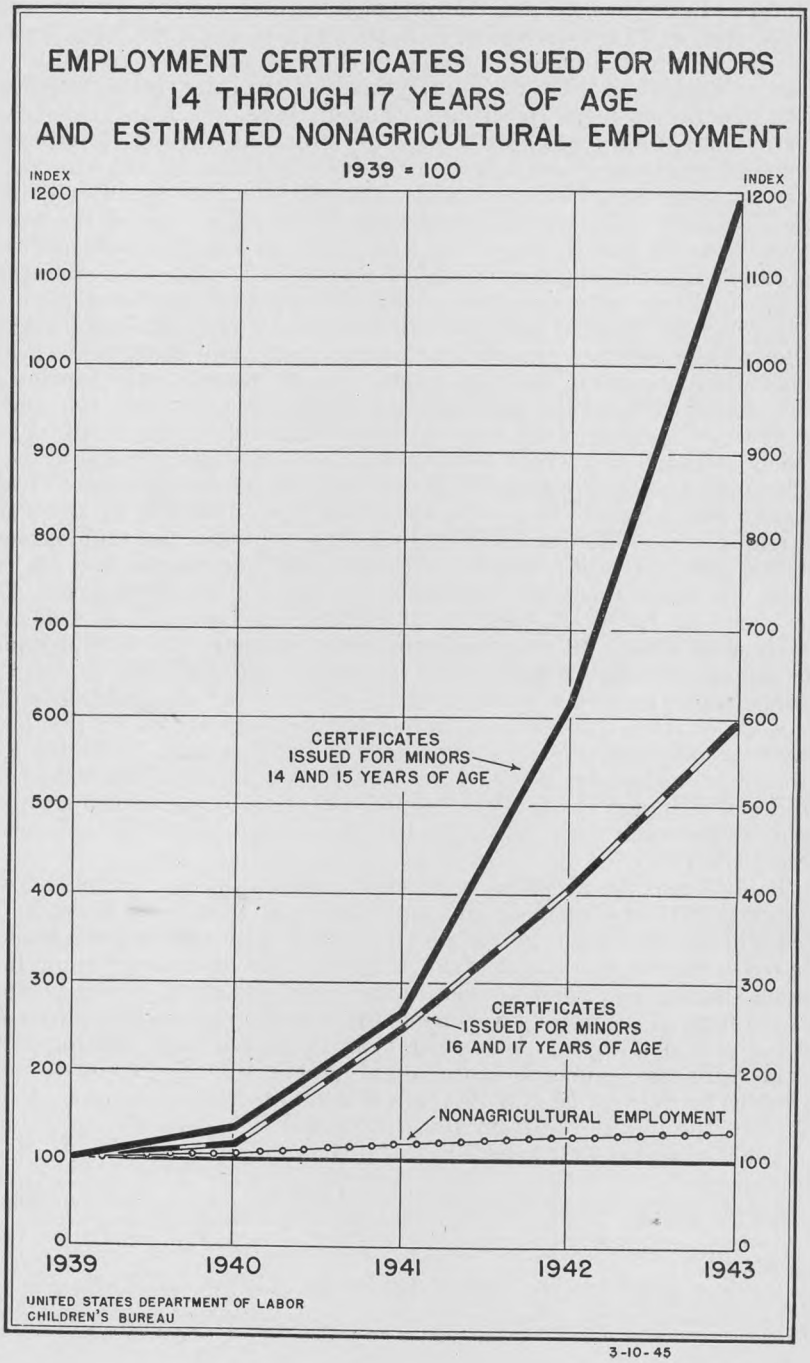

TABLE 3.—*Minors Aged 14 Through 17 for Whom First Regular Employment Certificates Were Issued, and Persons of All Ages in Nonagricultural Employment, 1939–43*

Year	Children 14 and 15 years of age for whom employment certificates were issued [1]		Minors 16 and 17 years of age for whom employment certificates were issued [3]		Estimated nonagricultural employment in United States (all ages) [4]	
	Number [2]	Indexes (1939=100)	Number	Indexes (1939=100)	Number	Indexes (1939=100)
1939	556	100.0	52,745	100.0	30,353,000	100.0
1940	738	132.7	60,894	115.4	31,784,000	104.7
1941	1,474	265.1	131,381	249.1	35,668,000	117.5
1942	3,432	617.3	214,832	407.3	38,447,000	126.7
1943	6,580	1,183.5	312,222	591.9	39,728,000	130.9

[1] Figures based upon reports from 17 selected cities with 100,000 or more population (1940 Census) in which minimum age standards were not changed during the period 1939–43. Cities included are Atlanta, Baltimore, Birmingham, Detroit, Fort Wayne, Grand Rapids, Indianapolis, Kansas City (Mo.), Knoxville Nashville, Oklahoma City, Portland (Oreg.), South Bend, St. Louis, Tulsa, Washington (D. C.), and Wilmington.

[2] Figures for Detroit and Grand Rapids are for 15-year-old children; law does not permit issuance of certificates for 14-year-old children.

[3] Figures based upon reports from 44 cities with 100,000 or more population (1940 Census). Cities included are Albany, *Atlanta, *Baltimore, *Birmingham, Boston, Buffalo, Charlotte, *Denver, *Detroit, Erie, Fall River, *Fort Wayne, Grand Rapids, Indianapolis, *Kansas City (Mo.), Knoxville, *Louisville, Lowell, Nashville, New Bedford, New York City, Oklahoma City, *Omaha, Philadelphia, Pittsburgh, Portland (Oreg.), Providence, Reading, Richmond, Rochester (N. Y.), Salt Lake City, Scranton, Somerville, *South Bend, Springfield, St. Louis, *Syracuse, Tulsa, *Utica, *Washington (D. C.), *Wichita, Wilmington, *Worcester, and *Yonkers. For the cities with asterisk, "regular" certificates include certificates issued for vacation and outside-school-hours employment.

[4] Source: U. S. Bureau of Labor Statistics, U. S. Department of Labor. The estimates presented here exclude officials, proprietors, and self-employed persons.

YOUTH EMPLOYMENT, 1940–43

The number of children 14 and 15 years of age obtaining certificates for full-time or part-time work in the 4-year period 1940–43, for the comparable areas from which yearly reports were received, rose from

TABLE 4.—*Minors Aged 14 Through 17 Years, Receiving Employment and Age Certificates for Full-Time or Part-Time Work, 1940–43*

Age of minor and type of certificate	1940	1941	1942	1943	Percent of increase in 1943 over—		
					1940	1941	1942
14 through 17 years of age	174,739	385,465	706,882	1,322,331	656.7	243.0	87.1
Regular [1]	108,694	252,320	452,967	810,134	645.3	221.1	78.9
Vacation and outside school hours [1]	66,045	133,145	253,915	512,197	675.5	284.7	101.7
14 and 15 years of age	35,309	60,955	119,011	304,458	762.3	399.5	155.8
Regular	5,205	8,306	16,184	34,311	559.2	313.1	112.0
Vacation and outside school hours [1]	30,104	52,649	102,827	270,147	797.4	413.1	162.7
16 and 17 years of age	139,430	324,510	587,871	1,017,873	630.0	213.7	73.1
Regular	103,490	244,014	436,783	775,823	649.7	217.9	77.6
Vacation and outside school hours [1]	35,940	80,496	151,088	242,050	573.5	200.7	60.2

[1] A "regular certificate" is a certificate permitting a minor to leave school and go to work. A "vacation and outside-school-hours certificate" is one permitting a minor to work only during vacation and outside school hours during the school term. In a few States for children 14 and 15, and in a larger number of States for minors 16 and 17, a regular certificate is issued whether the minor leaves school for employment or continues to attend school. For this reason, figures for minors receiving regular certificates, particularly for the 16- and 17-year-old group, include some minors who do not leave school for work.

35,309 in 1940 to 304,458 in 1943, and the corresponding number of 16- and 17-year old entrants into the labor market rose from 139,430 to 1,017,873.[13] (See table 4.) This was an increase of more than

[13] These numbers are smaller than those previously quoted, because not all States and cities reported for each year.

700 percent for 14- and 15-year old workers and more than 600 percent for those 16 and 17 years of age. Children 14 and 15 years of age obtaining vacation and outside-school-hours certificates showed the largest proportionate increase of any one group—nearly 800 percent.

The upward trend in employment of boys and girls of these ages is shown also in tables 5 and 6, which give for the individual States and cities reporting the number of first regular employment certificates issued for children 14 and 15 years of age and for those 16 and 17 years of age, respectively.

TABLE 5.—*Number of First Regular Employment Certificates Issued for Children Aged 14 and 15 Years, 1940–43*

State or city	1940	1941	1942	1943
Alabama	124	242	347	955
Birmingham	57	41	113	512
Arizona	----------	[1] 8	20	116
Arkansas	3	19	104	208
California	419	573	[1] 1,166	----------
Los Angeles	128	281	[1] 539	----------
San Diego	11	6	76	----------
San Francisco	1	2	[1] 7	----------
Colorado	[2] 51	[2] 164	[2] 508	[2] 1,675
Denver	[2] 41	[2] 152	[2] 416	[2] 1,173
Connecticut	236	278	305	377
Delaware	36	45	48	105
Wilmington	35	45	45	80
District of Columbia	28	69	262	433
Florida [3]	[2] 7	[2] 110	[2] 674	[2] 3,293
Georgia	0	[2] 27	[2] 230	[2] 478
Atlanta	0	[2] 12	[2] 120	[2] 172
Hawaii [3]	[1] 128	235	[4] 694	295
Illinois	32	145	620	[1] 852
Indiana	28	23	8	0
Fort Wayne	0	1	0	0
Indianapolis	14	7	4	0
South Bend	0	0	0	0
Iowa	[2] 1,639	[2] 1,555	[2] 1,771	[2] 3,245
Kansas	8	17	164	685
Wichita	0	1	46	253
Kentucky	[2] 157	[2] 359	[2] 715	[2] 1,760
Louisville	[2] 124	[2] 271	[2] 466	[2] 1,043
Louisiana [3]	----------	[5] 190	[2] 1,524	0
New Orleans	[2] 193	[2] 161	[2] 1,215	0
Maine [6]	1	8	70	141
Maryland	371	914	1,813	2,880
Baltimore	339	873	1,676	2,648
Massachusetts	581	1,162	1,752	3,090
Boston	36	151	330	650
Brockton	7	7	14	22
Cambridge	11	22	[1] 10	----------
Fall River	7	8	7	9
Holyoke	5	18	9	1
Lawrence	29	73	109	191
Lowell	12	26	42	80
Lynn	8	34	65	149
Malden	8	12	30	59
Medford	3	1	9	18
New Bedford	87	139	101	136
Newton	2	4	4	28
Quincy	9	12	33	52
Somerville	7	22	46	128
Springfield	25	76	258	365
Worcester	15	44	54	108
Michigan [6]	514	1,266	1,467	3,975
Detroit	132	211	362	911
Grand Rapids	19	28	18	98
Minnesota	85	77	398	603
Missouri	51	62	483	1,119
Kansas City	4	0	89	268
St. Louis	32	38	295	478
Montana	0	0	0	0
Nebraska	[2] 117	[2] 270	[2] 952	[2] 2,226
Omaha	[2] 81	[2] 205	[2] 575	[2] 1,139

See footnotes at end of table.

TABLE 5.—*Number of First Regular Employment Certificates Issued for Children Aged 14 and 15 Years, 1940–43*—Continued

State or city	1940	1941	1942	1943
Nevada				[1] 13
New Hampshire	118	[1] 155	551	877
Manchester	35	[1] 32		
New Jersey [3]	1,360	3	3	0
Newark [3]	147	0	0	0
New Mexico	[2] 6	[2] 2	[2] 41	[2] 77
New York	33	88	94	134
Albany	0	2	0	1
Binghamton	0	0	0	0
Buffalo	0	0	0	0
Mount Vernon	0	0	0	1
New Rochelle	1	0	0	0
New York	12	37	50	38
Niagara Falls	0	2	0	0
Rochester	0	0	0	0
Schenectady	0	0	0	0
Syracuse	0	0	0	0
Troy	0	0	0	0
Utica	0	0	0	0
Yonkers	0	0	0	0
North Carolina	0	0	0	0
Charlotte	0	0	0	0
North Dakota	1	1	2	11
Ohio		94	109	
Cincinnati	2	8	4	
Cleveland	1	3	3	
Oklahoma	[1] 16	56	120	267
Oklahoma City	1	5	11	42
Tulsa	36	44	70	154
Oregon	4	22	211	613
Portland	0	12	176	498
Pennsylvania:				
Altoona	0	0	1	0
Bethlehem	5	4	12	27
Chester	27	30	38	46
Erie	2	6	5	32
Harrisburg	0	0	1	4
Johnstown	15	22	27	53
Lancaster	16	28	31	65
McKeesport	8	5	7	24
Philadelphia	322	327	510	601
Pittsburgh	49	92	71	123
Reading	0	0	0	0
Scranton	36	23	26	30
Wilkes-Barre	30	49	64	51
York	79	77	129	136
Puerto Rico [3]		153	84	0
Rhode Island	0	0	0	0
Providence	0	0	0	0
South Dakota	0	0	0	0
Tennessee	67	151	328	848
Knoxville	37	82	172	238
Nashville	4	6	19	48
Utah	44	30	214	212
Salt Lake City	0	1	19	41
Vermont	0	0	2	38
Virginia	[2] 561	[2] 913	[2] 1,967	[2] 3,147
Richmond	[2] 90	[2] 179	[2] 444	[2] 767
Washington			[7] 736	[7] 3,214
Seattle			[7] 215	[7] 916
West Virginia	14	51	39	39
Wisconsin	1	0	30	30
Milwaukee	0	0		
Wyoming	0	0	0	0

[1] Data not complete for entire year.
[2] Includes certificates issued for work outside school hours or during vacation.
[3] 16-year minimum-age law went into effect in Hawaii in January 1940, in New Jersey in September 1940, in Florida in July 1941, in Louisiana in July 1942, and in Puerto Rico in August 1942.
[4] Following Pearl Harbor, schools were closed until February 1942, and for some months thereafter school attendance in case of employed children was not enforced. Therefore, many children under 16 who would otherwise have stayed in school went to work.
[5] Includes certificates issued for work outside school hours or during vacation. Data not complete for entire year.
[6] In Maine and Michigan 15 years is the minimum age for issuance of regular certificates.
[7] Includes reissued certificates.

TABLE 6.—*Number of First Regular Employment Certificates Issued for Minors Aged 16 and 17 Years, 1940–43* [1]

State and city	Number of certificates issued				Percent of change in 1943 as compared with—		
	1940	1941	1942	1943	1940	1941	1942
Alabama [2]	1,625	2,636	5,058	19,855	+1121.8	+653.2	+292.5
Birmingham [2]	178	332	622	1,849	+938.8	+456.9	+197.3
Arizona [2]	----------	22	67	398	----------	(3)	+494.0
Arkansas	89	193	573	1,142	+1183.1	+491.7	+99.3
California	5,853	[4] 1,153	[4] 19,989	----------	(3)	(3)	(3)
Los Angeles	2,241	[4] 4,054	[4] 5,637	----------	(3)	(3)	(3)
San Diego	312	681	1,401	----------	(3)	(3)	(3)
San Francisco	664	[4] 1,644	[4] 2,564	----------	(3)	(3)	(3)
Colorado [2]	233	590	837	2,467	+958.8	+318.1	+194.7
Denver [2]	214	529	527	1,864	+771.0	+252.4	+253.7
Connecticut	7,202	21,634	30,220	34,203	+374.9	+58.1	+13.2
Delaware [2]	715	1,360	2,753	4,171	+483.4	+206.7	+51.5
Wilmington [2]	237	644	1,519	2,801	+1081.9	+334.9	+84.4
District of Columbia [2]	2,371	6,317	11,753	10,050	+323.9	+59.1	−14.5
Florida [2]	222	[5] 1,284	3,325	11,359	+5016.7	+784.7	+241.6
Georgia [2]	1,989	3,182	7,834	24,241	+1118.8	+661.8	+209.4
Atlanta [2]	125	337	663	2,290	+1732.0	+579.5	+245.4
Hawaii [2]	[4] 3,949	[5] 5,635	6,487	5,218	+32.1	−7.4	−19.6
Idaho [2]	22	114	752	974	(3)	+754.4	+29.5
Illinois [2]	3,031	9,286	16,568	[4] 48,643	(3)	(3)	(3)
Indiana [2]	4,615	11,911	26,403	68,129	+1376.3	+472.0	+158.0
Fort Wayne [2]	281	975	1,829	3,434	+1122.1	+252.2	+87.8
Indianapolis [2]	1,050	1,922	4,354	11,401	+985.8	+493.2	+161.9
South Bend [2]	76	469	1,226	2,250	+2860.5	+379.7	+83.5
Iowa [2]	363	499	993	4,681	+1189.5	+838.1	+371.4
Kansas [2]	33	158	800	7,438	(3)	+4607.6	+829.8
Wichita [2]	17	79	264	2,682	(3)	+3294.9	+915.9
Kentucky [2]	533	1,240	2,009	3,273	+514.1	+164.0	+62.9
Louisville [2]	414	954	1,387	1,791	+332.6	+87.7	+29.1
Louisiana [2]	----------	[4] 1,502	[5] 4,734	11,745	----------	+682.0	+148.1
New Orleans [2]	439	861	[5] 3,316	7,718	+1658.1	+796.4	+132.8
Maine [2]	878	3,458	5,944	8,377	+854.1	+142.2	+40.9
Maryland [2]	4,516	12,585	20,239	23,932	+429.9	+90.2	+18.2
Baltimore [2]	3,527	10,767	17,059	19,944	+465.5	+85.2	+16.9
Massachusetts							
Boston	3,024	7,069	9,964	10,247	+238.9	+45.0	+2.8
Brockton	135	402	570	488	+261.5	+21.4	−14.4
Cambridge	572	1,325	[4] 2,127	----------	(3)	(3)	(3)
Fall River	1,178	2,416	2,273	1,232	+4.6	−49.0	−45.8
Holyoke	228	709	792	542	+137.7	−23.6	−31.6
Lawrence	313	891	1,145	1,058	+238.0	+18.7	−7.6
Lowell	517	1,724	2,837	1,903	+268.1	+10.4	−32.9
Lynn	226	501	739	786	+247.8	+56.9	+6.4
Malden [2]	329	948	1,472	1,593	+384.2	+68.0	+8.2
Medford	139	502	694	1,219	+777.0	+142.8	+75.6
New Bedford	718	1,541	1,850	877	+22.1	−43.1	−52.6
Newton	113	291	499	529	+368.1	+81.8	+6.0
Quincy [2]	434	1,063	1,513	1,264	+191.2	+18.9	−16.5
Somerville	387	894	1,926	2,322	+500.0	+159.7	+20.6
Springfield	360	1,233	1,366	806	+123.9	−34.6	−41.0
Worcester [2]	1,491	3,502	4,575	3,682	+146.9	+5.1	−19.5
Michigan [6]	5,328	19,692	44,045	78,375	(3)	(3)	+77.9
Detroit [6]	2,071	7,505	23,526	32,751	(3)	(3)	+39.2
Grand Rapids	656	1,348	1,594	3,153	+380.6	+133.9	+97.8
Minnesota [2]	344	1,391	2,711	9,421	+2638.7	+577.3	+247.5
Mississippi [2]	264	392	659	2,480	+839.4	+532.7	+276.3
Missouri [2]	651	3,366	7,734	25,515	+3819.4	+658.0	+229.9
Kansas City [2]	70	204	938	6,584	+9305.7	+3127.5	+601.9
St. Louis [2]	304	1,969	4,499	12,343	+3960.2	+526.9	+174.3
Montana	0	37	235	1,653	(3)	(3)	+603.4
Nebraska [2]	11	29	1,190	4,298	(3)	(3)	+261.2
Omaha [2]	2	12	1,107	3,916	(3)	(3)	+253.7
New Hampshire [2]	1,180	4,048	5,591	5,601	+374.7	+38.4	+0.2
New Jersey [5]	6,473	20,116	34,173	42,625	+558.5	+111.9	+24.7
Newark [5]	960	3,597	[4] 3,303	----------	(3)	(3)	(3)
New Mexico [2]	6	8	30	76	(3)	(3)	(3)
New York	36,837	68,782	106,374	167,525	+354.8	+143.6	+57.5
Albany	370	633	975	1,113	+200.8	+75.8	+14.2
Binghamton	119	366	619	904	+659.7	+147.0	+46.0
Buffalo	1,970	3,772	5,594	8,620	+337.6	+128.5	+54.1
Mount Vernon	128	194	334	625	+388.3	+222.2	+87.1
New Rochelle	59	111	168	372	+530.5	+235.1	+121.4
New York	24,884	40,077	55,299	84,912	+241.2	+111.9	+53.6
Niagara Falls	110	402	1,477	3,027	+2651.8	+653.0	+104.9
Rochester	865	2,407	5,180	8,377	+868.4	+248.0	+61.7

See footnotes at end of table.

TABLE 6.—*Number of First Regular Employment Certificates Issued for Minors Aged 16 and 17 Years, 1940–43* [1]—Continued

State and city	Number of certificates issued				Percent of change in 1943 as compared with—		
	1940	1941	1942	1943	1940	1941	1942
New York—Continued.							
Schenectady	238	414	771	1,400	+488.2	+238.2	+81.6
Syracuse [2]	746	2,187	2,439	4,048	+442.6	+85.1	+66.0
Troy [2]	212	623	1,154	1,167	+450.5	+87.3	+1.1
Utica [2]	276	470	1,281	1,708	+518.8	+263.4	+33.3
Yonkers	268	531	1,352	1,846	+588.8	+247.6	+36.5
North Carolina	6,028	10,776	17,484	27,999	+364.5	+159.8	+60.1
Charlotte	213	376	597	842	+295.3	+123.9	+41.0
Ohio	----------	22,499	30,347	----------	(3)	(3)	(3)
Cincinnati	1,630	3,086	3,703	----------	(3)	(3)	(3)
Cleveland	4,222	7,223	8,355	----------	(3)	(3)	(3)
Oklahoma	[4] 167	419	722	2,668	+1497.6	+536.8	+269.5
Oklahoma City	62	126	158	498	+703.2	+295.2	+215.2
Tulsa	169	169	247	1,096	+548.5	+548.5	+343.7
Oregon	405	1,105	10,120	14,940	+3588.9	+1252.0	+47.6
Portland	241	602	7,830	11,061	+4489.6	+1737.4	+41.3
Pennsylvania:							
Altoona	85	202	305	1,113	+1209.4	+451.0	+264.9
Bethlehem	246	557	610	702	+185.4	+26.0	+15.1
Chester	285	422	551	1,736	+509.1	+311.4	+215.1
Erie	104	311	859	2,091	+1910.6	+572.3	+143.4
Harrisburg	148	406	951	801	+441.2	+97.3	−15.8
Johnstown	79	121	200	563	+612.7	+365.3	+181.5
Lancaster	186	413	644	779	+318.8	+88.6	+21.0
McKeesport	76	142	357	883	+1061.8	+521.8	+147.3
Philadelphia	6,170	14,074	22,693	26,455	+328.8	+88.0	+16.6
Pittsburgh	953	2,188	5,605	7,412	+677.8	+238.8	+32.2
Reading	414	968	1,596	1,319	+218.6	+36.3	−17.4
Scranton	296	437	911	2,529	+754.4	+478.7	+177.6
Wilkes-Barre	174	296	456	725	+316.7	+144.9	+59.0
York	147	344	501	778	+429.3	+126.2	+55.3
Puerto Rico [2]	----------	734	[5] 709	1,022	(3)	+39.2	+44.1
Rhode Island	1,524	5,467	8,176	10,115	+563.7	+85.0	+23.7
Providence	740	2,340	2,585	4,217	+469.9	+80.2	+63.1
South Carolina [2]	1,768	3,574	6,247	10,016	+466.5	+180.2	+60.3
Tennessee	311	562	2,061	10,435	+3255.3	+1756.8	+406.3
Knoxville	29	100	348	906	(3)	+806.0	+160.3
Nashville	120	129	349	1,160	+866.7	+799.2	+232.4
Texas [2]	[4] 399	1,362	3,599	15,640	+3819.8	+1048.3	+334.6
Utah	434	594	2,199	3,479	+701.6	+485.7	+58.2
Salt Lake City	63	217	860	1,131	+1695.2	+421.2	+31.5
Vermont [2]	281	746	911	3,564	+1168.3	+377.7	+291.2
Virginia [2]	1,361	2,859	5,753	9,724	+614.5	+240.1	+69.0
Richmond [2]	86	225	432	771	+796.5	+242.7	+78.5
Washington	----------	[7] 543	[7] 12,078	[7] 28,096	(3)	+5074.2	+132.6
Seattle	----------	[7] 125	[7] 3,646	[7] 10,248	(3)	+8098.4	+181.1
West Virginia [2]	141	648	1,959	6,798	+4721.3	+949.1	+247.0
Wisconsin	3,358	8,198	18,171	27,965	+732.8	+241.1	+53.9
Milwaukee	1,057	2,750	----------	----------	(3)	(3)	(3)
Wyoming [2]	4	3	241	458	(3)	(3)	+90.0

[1] This table includes all States reporting and selected cities with 50,000 or more population (1940 Census) reporting 50 or more certificates in 1940, 1941, 1942, or 1943.

[2] Regular certificates include certificates issued for work during vacation and outside school hours.

[3] Percent not shown when number of minors was less than 50 in 1940, 1941, or 1942 or when figures were not available or not comparable.

[4] Data not complete for entire year.

[5] Employment or age certificates were required for minors 16 and 17 years of age during at least part of this year and in the following years. Previously they were required only for minors under 16 years of age and were issued only on request to minors 16 and 17. This change in the law became effective in New Jersey in 1940, in Florida and Hawaii in 1941, in Louisiana and Puerto Rico in 1942, and would naturally result in an increase in the number of certificates issued.

[6] Beginning in December 1941, regular certificates in Detroit include certificates issued for work during vacation and outside school hours.

[7] Includes reissued certificates.

YOUTH EMPLOYMENT, 1924–44

All certificates.—The all-time highs of war production and general employment that have been reached during the past 2 years have been accompanied by peaks in the number of young workers entering the labor market. Though the total of certificates issued for boys and girls 14 through 17 years of age going to work had already reached a high point in 1942, it climbed even farther during 1943. For 1944, preliminary and incomplete reports indicate for the country as a whole a leveling off in the number of these young workers similar to that which has taken place in general employment, with comparatively little change in the total numbers of employment certificates issued for young persons of this age group. Table 7 compares the situation in the 3 years 1942, 1943, and 1944, in the areas for which 1944 reports have been received, showing that the total of certificates for both full-time and part-time work was nearly twice as large in 1943 as in 1942 (1,238,078 as compared with 655,851) and, on the evidence of these preliminary reports, remained at approximately the 1943 level in 1944 (1,222,914). The rate of increase for 14- and 15-year-old workers, however, was much larger than for those of 16 and 17. Nearly three times as many of the younger group went to work in 1944 as in 1942 (322,391 as compared with 108,660). This group showed a 16-percent increase in 1944 over 1943; the number of 16- and 17-year-olds, on the other hand, showed a slight decrease of 6 percent for this period.

TABLE 7.—*Employment Certificates Issued to Minors Aged 14 Through 17 Years, During 1942, 1943, and 1944* [1]

[Covers all areas for which reports for 1944 have been received by the Children's Bureau]

Age of minor and type of certificate	1942	1943	1944	Percent of change in 1944 as compared with—	
				1942	1943
Total minors 14 through 17 years	796,314	1,580,874	1,583,591	+98.9	+0.2
Regular and vacation and outside school hours	655,851	1,238,078	1,222,914	+86.5	−1.2
Regular	414,127	742,384	679,959	+64.2	−8.4
Vacation and outside school hours	241,724	495,694	542,955	+124.6	+9.5
Reissued	140,463	342,796	360,677	+156.8	+5.2
14 and 15 years	110,059	282,237	327,344	+197.4	+16.0
Regular and vacation and outside school hours	108,660	278,118	322,391	+196.7	+15.9
Regular	11,653	25,028	29,233	+150.9	+16.8
Vacation and outside school hours	97,007	253,090	293,158	+202.2	+15.8
Reissued	1,399	4,119	4,953	+254.0	+20.2
16 and 17 years	686,255	1,298,637	1,256,247	+83.1	−3.3
Regular and vacation and outside school hours	547,191	959,960	900,523	+64.6	−6.2
Regular	402,474	717,356	650,726	+61.7	−9.3
Vacation and outside school hours	144,717	242,604	249,797	+72.6	+3.0
Reissued	139,064	338,677	355,724	+155.8	+5.0

[1] Figures for 1944 are provisional and incomplete.

In many States and cities, however, there was an increase in 1944 over 1943 (as well as over 1942) in the number of these teen-age children who went to work, as evidenced by the number of certificates issued for full-time or part-time employment during the 3 years (table 8).

Although later reports will of course change the total figures, it is believed that the preliminary reports are representative and give a reliable picture of the situation in the country as a whole.

TABLE 8.—*Minors Aged 14 Through 17 Years Receiving Employment Certificates in Selected States and Cities During 1942, 1943, and 1944*

State or city	Regular and vacation and outside-school-hours certificates					
	14–17 years of age		16–17 years of age		14–15 years of age	
	Percent of increase, 1944 over—		Percent of increase, 1944 over—		Percent of increase, 1944 over—	
	1942	1943	1942	1943	1942	1943
States						
Alabama	292.2	20.5	349.1	14.4	138.4	65.0
Colorado	400.6	62.6	414.2	74.5	378.1	45.0
Florida (11 months)	472.2	41.3	408.4	32.4	788.0	17.0
Iowa (11 months)	392.4	78.0	910.9	121.1	102.4	15.2
Kansas	956.5	33.5	1,129.0	32.2	400.0	44.9
Kentucky	136.0	27.7	83.4	12.6	283.8	55.9
Minnesota	328.9	34.9	373.8	36.4	71.5	15.5
Missouri	254.0	7.1	233.7	1.2	387.9	46.2
Nebraska	313.1	35.6	367.6	29.5	245.0	47.5
New York (8 months)	124.7	4.5	95.3	[1] 2.9	223.9	23.7
North Carolina	59.4	8.7	41.9	2.5	131.5	28.1
Oklahoma	152.7	3.2	172.3	4.1	104.5	.5
Tennessee	504.1	27.6	561.5	31.0	311.1	11.7
Utah	90.3	9.4	85.3	9.4	107.5	9.5
Virginia	89.9	13.9	85.0	9.5	104.3	27.7
West Virginia	480.8	70.3	501.8	73.4	365.6	51.1
Cities						
Atlanta, Ga	497.1	89.9	526.8	81.5	332.5	201.7
Birmingham, Ala	441.2	123.5	652.3	153.1	164.8	55.9
Kansas City, Mo	623.3	11.9	597.5	[1] .6	705.8	72.6
Lawrence, Mass	43.0	26.6	8.5	18.5	322.8	47.9
Louisville, Ky	92.3	25.8	46.1	13.2	229.8	47.4
New York, N. Y. (8 months)	166.9	9.6	120.4	2.3	360.2	27.7
Philadelphia, Pa	64.4	8.0	41.6	5.7	282.6	16.9
Salt Lake City, Utah	53.6	2.5	39.7	[1] 1.2	95.0	11.3

[1] Decrease.

Shifting among jobs.—Under some State laws, an employment certificate is valid only for work for one employer, and must be returned to the issuing office when the child leaves his employ. Subsequent certificates for the same child for other jobs are called "reissued certificates." The certificates reported to the Children's Bureau as "reissued" therefore indicate shifting from job to job by these young workers. In the areas for which reports for 1944 have been received the number of reissued certificates increased 157 percent between 1942 and 1944—from 140,463 in 1942 to 360,677 in 1944, or from 18 percent of the total number of certificates issued in 1942 to 23 percent of the total number issued in 1944. These figures however cannot be regarded as reflecting the total amount of turnover among young workers, because in many States the certificate, once obtained, is good for any employer, and because the reports as to whether the certificate is a "reissued" or a "first" certificate are not always reliable. Even the amount of shifting from job to job that is indicated by these figures, however, is significant, and is corroborated by other studies of teen-age workers. For instance, a report on employed minors in Pennsylvania covering the years 1939–43, stated that in many areas in 1943 more certificates were being issued to minors changing jobs than to those being employed for the first time.

Employment and school attendance.—The trends in the number of regular and vacation and outside-school-hours certificates issued for children of the two age groups represent to some degree, though

more nearly for the 14- and 15-year-olds than for the 16- and 17-year-olds,[14] the extent to which these young people are leaving school for work and the extent to which they are taking part-time or vacation jobs. In both age groups, though the number obtaining regular certificates rose rapidly, the rate of increase was greater for those obtaining certificates for work outside school hours and during vacation. The difference, as would be expected, was more marked for the 14- and 15-year-olds than for the 16- and 17-year-olds. According to the April 1944 Census sample survey (see page 759), of the 2,900,000 young persons 14 through 17 years of age in the labor force at that time, 1,400,000 were both attending school and working; of these, 14- and 15-year-olds accounted for about 600,000, and 16- and 17-year-olds for about 800,000. Many of these student workers, who comprised one-fifth of the total number in the age group 14 through 17 who were attending school, were carrying heavy loads. Forty percent of the 14- and 15-year-olds and 49 percent of the 16- and 17-year-olds had carried more than 48 hours of combined school and work per week.

Sex of Young Workers Receiving Certificates

As has been the case in former years, more boys than girls in the age groups 14 through 17 years obtained employment certificates, though the number of boys and girls of these ages in the population is approximately equal. In 1943, boys constituted 62 percent of all the young persons of these ages obtaining certificates for work. Among the younger group of 14- and 15-year-olds the proportion of boys was slightly higher, being 67 percent, as compared with 61 percent among the 16- and 17-year-old workers. Several factors might account for this difference, one of which is that much of the employment open to 14- and 15-year-olds is in street trades, errand work, or other jobs traditionally held by boys.

Nevertheless, between 1940 and 1943, the percentage of girls in the group obtaining certificates rose from 34 to 38 percent. This upward swing was marked among the 14- and 15-year olds who took jobs during vacation and outside school hours; in 1940 only 7 percent of this group were girls, as compared with 33 percent in 1943.

School Grade Completed

Sixty years ago the educational standards for working children had not advanced beyond the requirement of a few months of schooling in the year the child was employed. Photostatic copies of some old certificates issued in Connecticut in the 1880's recently lent to the Children's Bureau, show that boys and girls under 14 could be legally employed if they had attended school for 60 days out of the year, and of this period only 6 weeks had to be consecutive. Even such a standard was an advanced one at that time.

Changes in public opinion and a realization of the need for more education have brought about a more widespread educational opportunity for teen-age children, and higher child-labor and school-attendance standards. More than half of the States permitting employment of children 14 or 15 during school hours now require that

[14] See footnote to table 4, p. 763.

children under 16 obtaining certificates for work must meet certain educational requirements, usually completion of the eighth grade, before they may legally be employed.

In 1943, three-fourths of the children 14 and 15 years of age obtaining first regular certificates, for whom data on grade completed are available, had finished the eighth or a higher grade (table 9). Roughly 37 percent, however, had gone no farther than the eighth grade, though 38 percent had continued through the first, second, or third years of high school. Although there has been a serious drop in school enrollment at the high-school level during the war, these reports indicate an increase in the proportion staying in school at least through the eighth grade, as between 1940 and 1943 the proportion of 14- and 15-year-olds who had failed to complete the eighth grade before getting their regular employment certificates fell from 30 to 25 percent. Nevertheless a fourth of the 14- and 15-year-olds who had obtained such certificates had less than an eighth-grade education and 11 percent had completed only the sixth grade or less. As already pointed out, not all children obtaining regular certificates actually leave school, but the picture is approximately the same for the States where regular certificates are issued only to children of these ages who do in fact leave school as for all the States from which this information on grade completed is available.

Information on the schooling of 16- and 17-year-old minors receiving regular certificates is not available for 1943, but in the three previous years about 15 percent had completed high school before entering employment.

TABLE 9.—*Highest School Grade Completed by Minors Aged 14 Through 17 Years Receiving First Regular Employment Certificates, 1940–43*

Age and highest grade completed	Number of minors				Percent of minors			
	1940	1941	1942	1943	1940	1941	1942	1943
Minors 14 and 15 years of age	5,205	8,306	16,184	34,311				
Grade completed reported	4,108	6,609	11,591	24,545	100.0	100.0	100.0	100.0
Grade 6 or lower [1]	635	978	1,444	2,686	15.5	14.8	12.5	10.9
Grade 7	600	945	1,687	3,528	14.6	14.3	14.5	14.4
Grade 8 or higher	2,873	4,686	8,460	18,331	69.9	70.9	73.0	74.7
Grade 8	1,297	2,002	3,649	8,954	31.6	30.3	31.5	36.5
Grade 9, 10, or 11	1,555	2,620	4,684	9,238	37.8	39.6	40.4	37.6
Grade 12 or higher	21	64	127	139	.5	1.0	1.1	.6
Grade completed not reported	1,097	1,697	4,593	9,766				
Minors 16 and 17 years of age	103,490	244,014	436,783	(2)				
Grade completed reported	85,371	198,641	330,363	(2)	100.0	100.0	100.0	(2)
Grade 6 or lower [1]	6,182	11,511	16,196	(2)	7.2	5.8	4.9	(2)
Grade 7	5,809	11,851	17,602	(2)	6.8	6.0	5.3	(2)
Grade 8 or higher	73,380	175,279	296,565	(2)	86.0	88.2	89.8	(2)
Grade 8	14,641	29,132	46,128	(2)	17.2	14.7	14.0	(2)
Grade 9, 10, or 11	46,333	113,893	201,106	(2)	54.3	57.3	60.9	(2)
Grade 12 or higher	12,406	32,254	49,331	(2)	14.5	16.2	14.9	(2)
Grade completed not reported	18,119	45,373	106,420	(2)				

[1] Includes ungraded classes.
[2] Data not available.

Industry and Occupation Entered

War demands for labor and new types of job openings have brought about a great change in the industries and occupations entered by young workers obtaining certificates. In general the trend for 14- and 15-year-olds has been away from the typical "children's occupa-

tions," such as errand work, street trades, and housework as the major type of work, into employment in retail stores and wholesale establishments, and for the 16- and 17-year-olds away from the trade and miscellaneous service industries into various types of employment in manufacturing and mechanical establishments.

ALL CERTIFICATES

Information on the industries and occupations in which these boys and girls were working is not available for so many States and cities as furnish information on the total number of certificates issued. Many State and city offices have been unable to report on this point, either because the information was not called for on the certificate form used or because of added wartime pressure of work on issuing officers. The totals shown in tables 10 and 11, therefore, are lower than those in previous tables, which cover certificates issued in all States reporting. Also the totals for certain occupations, such as domestic service in private homes, agricultural work, and (to some extent) street trades, are not representative, because in many States certificates are not required for these types of employment. On the whole, however, the data available are believed to picture, for a large proportion of the young nonagricultural workers of the country, the kinds of work in which they have been engaged.

Children 14 and 15 years of age.—In 1940 nearly 40 percent of the 14- and 15-year-olds for whom regular certificates were issued were employed in domestic service in private homes, usually doing housework or caring for children; in 1943, however, only 8 percent were so employed (table 10). The proportion receiving regular certificates to enter employment in wholesale and retail trade, however, increased from nearly 30 to almost 50 percent, as more and more 14- and 15-year-old boys and girls were hired for delivery or errand work, waiting on customers, as stock boys, as "soda jerkers," or for other jobs in stores and various trade establishments. This rise in employment in wholesale and retail trade was even greater among children obtaining vacation or outside-school-hours certificates.

Another kind of work that seems to have lost its attraction for boys 14 and 15 is that of newsboy. Though under many State laws, employment certificates are not required for this work, 32 percent of the 14- and 15-year-old minors receiving certificates for employment in vacation or outside school hours in 1940 were newsboys, whereas in 1943, when other and more desirable jobs were available, only 2 percent were in newsboy jobs. A similar though much smaller decrease is noted for children 14 and 15 years of age obtaining regular certificates for employment at this occupation.

Coincidently there has been an upward trend in the proportion of these younger workers taking jobs, both full time and part time, in other manufacturing industries—from less than 2 percent in 1940 to 7 percent in 1943. This increase has resulted from the great expansion in manufacturing during the war, and has occurred in spite of both Federal and State laws restricting such employment for young workers. As already pointed out, under the child-labor provisions of the Fair Labor Standards Act, only work in establishments that do not produce goods for shipment in interstate commerce and a small amount of nonproductive work in interstate factories are legal for

children 14 and 15 years of age. In addition, in 15 States there is a basic minimum age of 16 for work in factories, or for all work during school hours. These legal provisions have stood as a bulwark against any extensive employment of children under 16 in factories.

Although in many parts of the country there is much seasonal employment of 14- and 15-year-old children for the harvesting of fruits and vegetables, most States do not require certificates for this type of work, and as a result the certificate figures give no adequate evidence of the extent or trends of employment of young people in agriculture.

TABLE 10.—*Industry Entered by Minors Aged 14 and 15 Years Receiving Regular and Vacation and Outside-School-Hours Certificates in 1940 and 1943*

Industry	1940			1943		
	Total	Regular certificates [1]	Vacation and outside-school-hours certificates [2]	Total	Regular certificates [1]	Vacation and outside-school-hours certificates [2]
All industries	31,058	2,572	28,486	263,690	20,416	243,274
Industry reported	30,812	2,536	28,276	261,138	20,360	240,778
Manufacturing	9,561	181	9,380	22,434	1,943	20,491
Publishing (i. e. newsboys)	9,123	116	9,007	4,065	56	4,009
Other	438	65	373	18,369	1,887	16,482
Wholesale and retail trade	8,557	705	7,852	154,280	9,507	144,773
Domestic service, private home	1,286	990	296	2,611	1,544	1,067
Personal, business, and recreational services [3]	9,036	216	8,820	43,604	2,064	41,540
Transportation, communication, and other public utilities	411	28	383	9,811	1,642	8,169
Other [4]	1,961	416	1,545	28,398	3,660	24,738
	Percentage distribution					
Industry reported	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	31.0	7.2	33.2	8.6	9.5	8.5
Publishing (i. e. newsboys)	29.6	4.6	31.9	1.6	0.3	1.7
Other	1.4	2.6	1.3	7.0	9.2	6.8
Wholesale and retail trade	27.8	27.8	27.8	59.1	46.7	60.1
Domestic service, private home	4.2	39.0	1.0	1.0	7.6	0.4
Personal, business, and recreational services [3]	29.3	8.5	31.2	16.7	10.1	17.3
Transportation, communication, and other public utilities	1.3	1.1	1.3	3.7	8.1	3.4
Other [4]	6.4	16.4	5.5	10.9	18.0	10.3

[1] Includes 29 States, the District of Columbia, and 31 cities in 3 other States.
[2] Includes 28 States, the District of Columbia, and 30 cities in 3 other States.
[3] Excludes domestic service in private homes.
[4] Includes agriculture, forestry and fishing, mining, construction and industries specified as "other" without detail.

Minors 16 and 17 years of age.—During the 4-year period, the 16- and 17-year-old workers were leaving store jobs and the service industries and were going into factories. Fifty-four percent of all the boys and girls of these ages going to work either full time or part time in 1943 went into manufacturing industries (table 11). Many went into war industries—as riveters, painters, assemblers, or sheet-metal workers in aircraft factories, as shipfitters, pipefitters, boilermakers' helpers, lay-out men, and special apprentice welders in shipyards, and in various types of work in plants producing textiles, wearing apparel, food products or other items for military uses. In the railroad industry considerable numbers of certificates were issued for

crew callers, baggagemen, and brakemen. At the same time there was a decrease in the number of 16- and 17-year olds going to work full time or part time as messengers in business offices, as cashiers, bus boys, waiters and waitresses in lunchrooms, as helpers and attendants in filling stations or garages, as pin boys in bowling alleys, and in miscellaneous work in service industries. The percentage in wholesale and retail trade, for instance, dropped from 34 in 1940 to 25 in 1943, and the percentage in the service industries dropped from 21 to 8. Relatively few minors of these ages were engaged in delivery work or in domestic service in private homes, which had been the occupations of a third to a half of this group before the war.

TABLE 11.—*Industry Entered by Minors Aged 16 and 17 Years Receiving Regular and Vacation and Outside-School-Hours Certificates in 1940 and 1943*

[Includes only States and cities issuing 10 or more certificates in either year]

Industry	1940			1943		
	Total	Regular certificates [1]	Vacation and outside-school-hours certificates [2]	Total	Regular certificates [1]	Vacation and outside-school-hours certificates [2]
All industries	129,289	94,670	34,619	901,496	681,321	220,175
Industry reported	127,622	93,568	34,054	884,334	669,331	215,003
Manufacturing	38,600	35,598	3,002	477,227	432,699	44,528
Wholesale and retail trade	43,931	26,956	16,975	222,290	118,569	103,721
Personal, business, and recreational services [3]	26,643	19,421	7,222	69,083	38,924	30,159
Transportation, communications, and other public utilities	8,635	5,866	2,769	48,875	34,943	13,932
Other [4]	9,813	5,727	4,086	66,859	44,196	22,663
	Percentage distribution					
Industry reported	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	30.2	38.0	8.8	54.0	64.7	20.7
Wholesale and retail trade	34.4	28.8	49.9	25.1	17.7	48.3
Personal, business, and recreational services [3]	20.9	20.8	21.2	7.8	5.8	14.0
Transportation, communications, and other public utilities	6.8	6.3	8.1	5.5	5.2	6.5
Other [4]	7.7	6.1	12.0	7.6	6.6	10.5

[1] Includes 34 States, the District of Columbia, and 30 cities in 3 other States.
[2] Includes 10 States, and 27 cities in 3 other States.
[3] Includes domestic service in private homes, as information is not available separately for the age group 16 and 17.
[4] Includes agriculture, forestry and fishing, mining, construction, and industries specified as "other" without detail.

Among the 16- and 17-year-old workers who obtained certificates for employment only in vacation and outside school hours there were more who went into manufacturing in 1943 than in 1940; the proportion going into trade remained nearly constant; and there was a drop in employment in personal, business, and recreational services.

Sex of minors as related to occupation.—In 1940 nearly 90 percent of the girls 14 and 15 years of age who received regular certificates were employed in domestic service in private homes. By 1943, this proportion had dropped to only 20 percent, showing the wider scope of work opportunities open to girls. That many had shifted over to jobs in ten-cent stores, drug stores, groceries, and other trade establishments

is shown by the fact that the proportion in wholesale and retail trade rose from only 7 percent in 1940 to 54 percent in 1943. Among the girls 16 and 17 years old the proportion in manufacturing increased from 38 to 53 percent, while the percentages in trade stayed approximately the same—roughly 28 percent in both 1940 and 1943.

FEDERAL CERTIFICATES

The Federal certificates issued by the Children's Bureau in Idaho, Mississippi, South Carolina, and Texas are primarily for workers covered by the Fair Labor Standards Act, that is, in industries producing goods for interstate commerce. As would be expected, therefore, manufacturing bulked large in the figures showing the industries entered by minors receiving Federal certificates. The proportion of 16- and 17-year-olds entering manufacturing during the years 1940 to 1943 was about 90 percent each year. The large percentage of all workers of these ages obtaining certificates for manufacturing is, however, not noticeably affected by this preponderance, since the number of certificates issued in these 4 States is a relatively small fraction of the total for the country.[15]

[15] Data on evidence of age for all employment certificates issued will be published, together with the aterial in this article, in a forthcoming report.

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Employment Conditions

Labor Conditions in the Philippines[1]

Summary

AGRICULTURE is the chief source of livelihood of more than 80 percent of the inhabitants of the Philippines. Thus, out of a total population of about 16,000,000, according to the 1939 Census, 8,466,493 persons had gainful occupations and of these nearly 7,000,000 were in agriculture and in personal and domestic service. The majority of the latter group were employed on farms. Manufacturing and mechanical industries, on the other hand, employed only 601,335 persons.

Because of the agricultural economy and the close-knit Filipino family groups, their unemployment, in the occidental sense of the word, was neither so acute nor so extensive as it was in Europe and America. In 1939, only 215,246 persons with a gainful occupation were reported as unemployed, and of those 129,335 were usually engaged in agriculture.

In 1939, the 8-hour workday was made general for all workers except farm laborers, employees on piece work, domestic servants, and members of the employer's family. Overtime was to be paid for at the rate of time and a quarter. Wages were fixed largely by contract. In 1936, the Court of Industrial Relations (created in that year) was given control over the establishment of minimum wages and maximum rents.

The average daily wage in 1939 was 0.61 peso (about 30 cents in United States currency). Agricultural workers had the lowest average wage, 44 centavos, and public-service employees the highest, 1.44 pesos. The lowest daily wage (0.12 peso) was paid to female agricultural laborers in Capiz, and the highest to mechanics in Davao, 9.50 pesos.

Labor organizations were patterned after those in the United States, and from the year 1936 were closely regulated by the State. Their total membership in 1938 was 46,456.

Collective bargaining was common in the unionized industries, but the membership of labor organizations included only a small portion of the working population. The settlement of industrial disputes was in the hands of the Court of Industrial Relations, established in 1936. Mediation, conciliation, and arbitration were provided for by a law of 1938.

[1] Prepared in the Bureau's Editorial and Research Division by James R. Mock.

Although the cooperative movement in the Philippines was not large, it included associations of all the principal types—credit, marketing, consumers', and industrial. At the outbreak of the war, the agricultural credit cooperatives numbered 570, were in some 43 Provinces, and had a total membership of about 105,000.

Social insurance provided consisted of accident compensation for workers in industrial and agricultural establishments employing not less than 30 workers, and old-age pensions for teachers, for officers or enlisted men in the Philippine constabulary, and for certain officers and employees of the Public Health Service.

Situation under Japanese occupation.—The Japanese occupation severely disrupted the Philippine economy. The invader changed the emphasis given to various branches of agriculture, mining, and manufacturing. For example, sugar—previously one of the leading products—was deemphasized, and the hitherto unimportant cotton cultivation was stressed; and factory operation was brought to a standstill. As a result of the industry stoppages and the change in agricultural production, unemployment increased greatly.

Instead of continuing the use of minimum wage rates, the Japanese provided a *maximum* wage. In July 1943 this wage was 1.30 pesos per day, which dropped to approximately 0.91 peso if the employer provided meals. Although there are no data regarding the specific number of hours of work, it is known that the number of hours of labor were increased substantially. For overtime, male workers in Manila were to receive payments of 12.5 percent in addition to their regular or basic wage rates.

Pre-invasion labor unions were outlawed, and an organization, called the Central Labor Union, was established in Manila to centralize control of the Filipino labor force.

To serve Japanese objectives, the cooperative framework, as it was under the Commonwealth, was expanded by the invaders with the addition of Japanese technical and financial assistance. With Nippon interested mainly in Philippine agriculture, the farmers' or producers' associations, by February 1944, had become the most numerous of the cooperatives, totaling 206, with a membership of some 87,000. In order to gain the support of the Filipinos, the Japanese likewise encouraged cooperatives in retail businesses which formerly had been controlled by the Chinese.

Labor Conditions Prior to Japanese Occupation

THE LABOR FORCE

In a population of about 16,000,000 in 1939, the Philippine census showed 8,466,493 persons as having gainful occupations, females outnumbering males by 27,937. In terms of occupations, the two largest groups were agriculture, which employed 3,456,370, and domestic and personal service, with 3,478,084 persons, of whom the majority were employed on farms. Of the domestic and personal service group, 3,147,320 or 90.5 percent were housewives or housekeepers. Only 601,335 were employed in manufacturing and mechanical industries. The distribution of gainful workers is shown in table 1.

TABLE 1.—*Gainful Workers 10 Years Old and Over, by General Occupation Group and Sex, in the Philippines, 1939* [1]

Occupation group	Number			Percentage distribution			Percent of total	
	Both sexes	Male	Female	Both sexes	Male	Female	Male	Female
Total	8,466,493	4,219,278	4,247,215	100.0	100.0	100.0	49.8	50.2
Agriculture	3,456,370	2,981,551	474,819	40.8	70.7	11.2	86.3	13.7
Domestic and personal service	3,478,084	123,508	3,354,576	41.1	2.9	79.0	3.6	96.4
Professional service	103,415	65,438	37,977	1.2	1.6	.9	63.3	36.7
Public service (not elsewhere classified)	49,620	48,984	636	.6	1.2	(2)	98.7	1.3
Fishing	180,569	175,841	4,728	2.1	4.2	.1	97.4	2.6
Forestry and hunting	26,820	24,903	1,917	.3	.6	(2)	92.9	7.1
Mining and quarrying	47,019	46,625	394	.6	1.1	(2)	99.2	.8
Manufacturing and mechanical industries	601,335	333,976	267,359	7.1	7.9	6.3	55.5	44.5
Transportation and communication	203,596	202,449	1,147	2.4	4.8	(2)	99.4	.6
Clerical	48,899	44,904	3,995	.6	1.1	.1	91.8	8.2
Trade	270,766	171,099	99,667	3.2	4.1	2.3	63.2	36.8

[1] Data are from Census of the Philippines, 1939, Vol. I, Manila, 1940.
[2] Less than a tenth of 1 percent.

INDUSTRIAL DISTRIBUTION OF WORKERS

Among the 15 leading manufacturing and mechanical industries and occupations—employing more than 490,000 of the 601,335 persons in this category—embroidery and dressmaking (with 113,810), and carpenters (numbering 76,465), head the list. The distribution of Filipinos engaged in the leading manufacturing and mechanical industries appears in table 2.

TABLE 2.—*Gainful Workers in the 15 Leading Manufacturing and Mechanical Industries of the Philippines, by Industry or Occupation, and Sex, 1939*

Industry or occupation	Number of gainful workers		
	Both sexes	Male	Female
All groups	490,039	241,337	248.702
Embroidery and dressmaking	113,810	2,630	111,180
Carpenters	76,465	76,457	8
Native textile manufacture	55,834	1,047	54,787
Laborers (industry not stated)	51,504	48,300	3,204
Mat manufacture	27,318	1,120	26,198
Tailor shops and necktie manufacture	23,723	15,729	7,994
Hat manufacture	23,296	2,848	20,448
Sugar centrals and muscovado mills	22.044	21,762	282
Sawmills and planing mills	21,785	21,747	38
Shoe and slipper manufacture	20,271	14,523	5,748
Miscellaneous manufactures	12.281	7,111	5,170
Nipa manufacture	11,058	5,311	5,747
Cigar and cigarette manufacture	11,027	5,272	5,755
Bakeries	10,374	9,509	865
Rice and corn mills	9,249	7,971	1,278

Source: Census of the Phillipines, 1939, Vol. II, Manila, 1941.

EMPLOYMENT CONDITIONS

Unemployment.—In the Philippines, the unemployment problem was neither so acute nor so extensive as it was in Europe and America. This was due to the lack of widespread industrialization, and to the traditional policy of the Filipino family (which includes all individuals related by blood or marriage), of taking care of its own relief

problems. In the census of 1939, only 215,246 persons with a gainful occupation were listed as unemployed. More than three-fifths (129,335) of that number were usually engaged in agriculture, and in the agricultural group 28,586, or 22.1 percent, were farmers or farm owners. Below is given a distribution of the "unemployed persons 10 years old and over" in 1939, by general occupation group.

	Number
All groups	215, 246
Agriculture	129, 335
Manufacturing and mechanical industries	36, 755
Transportation and communication	13, 885
Fishing	10, 322
Trade	8, 760
Domestic and personal service	8, 342
Professional service	2, 604
Mining and quarrying	2, 123
Forestry and hunting	1, 745
Clerical	851
Public service (not elsewhere classified)	524

In the years immediately preceding the attack on Pearl Harbor, several factors complicated the unemployment situation. There was an uneven distribution of land and people. Also, the unemployed tended to migrate to the cities and especially to Manila. Such migration, combined with the increasing desire among young persons for higher education and white-collar jobs, contributed to the overcrowding of urban industry.

Employment agencies.—An act of 1917 authorized the establishment of public employment agencies by the Bureau of Labor. It also provided that the Director of Labor should have authority to fix the amount of fees and to collect them from the employer, for services performed by the agency in securing workers. By 1938, the employment-service functions had been assigned to offices of public defenders (who were representatives of the Philippine Department of Labor) in 35 towns and Manila.

Private employment agencies were not regulated by the State until 1932, when a law placed them under the supervision of the Director of Labor. The measure also prohibited the establishment of such agencies except under license from that official. Fees from applicants were limited to 20 percent of the first year's wages.

WAGES, HOURS, AND WORKING CONDITIONS

Hours of Labor

An act of June 1939 made the 8-hour workday applicable to all industrial or occupational employees except farm laborers, workers on a piece-work basis, domestic servants, and members of the employer's family. The law also directed that workers should receive time and a quarter for overtime and for work on Sundays and legal holidays. Also, in the event of a national emergency, the Government was authorized to establish rules and regulations for the operation of plants and factories and to determine wage rates therein. A statute of September 1939 authorized the President of the Philippines to suspend the 8-hour law, but he did not make use of that authority.

Workers' Wages

Fixing of wages.—Philippine labor was overwhelmingly rural, and comparatively unacquainted with a money economy. Wages generally were fixed by "customary contracts" or by "the Pakiao system."

The customary contract was a series of implied annual covenants, which were inferred from (*a*) limited verbal agreements, and (*b*) relations of one party to another which had existed for generations either in the community or on the estate involved. The Pakiao system was, in brief, a form of contract labor under which the employer agreed to furnish the employee with land, shelter, subsistence, and materials; the other party to the agreement contracted to obtain all the workers the employer needed.

By 1926, the principle of wage fixing through collective bargaining was in operation in those industries and occupations in which the workers were organized.

In 1932, the State began to intervene in matters dealing with wages. The employee was not to be compelled to purchase commodities from the employer, nor was any part of his wages to be paid in other than legal-tender currency of the Philippine Islands; in addition, the employer was to pay his workers on the fifteenth and last day of every month, or on every Saturday. (The principle of bimonthly payments was reaffirmed by a law of 1938, which further stated that no employee was to be compelled to purchase his commodities from his employer's store.) In 1936, the Court of Industrial Relations was created, with power to determine the necessity and justice of fixing a minimum wage or a maximum rental.

General level of wages.—In 1939, the latest period for which data are available, the average daily wage, all gainful occupations combined, was 0.61 peso (about 30 cents in United States currency), and the average monthly salary was 29 pesos (roughly $14.50 in United States currency). In the individual industries, average daily wages ranged from 44 centavos in agriculture to 1.44 pesos in public service. In domestic and personal service the average monthly salary was 9 pesos, and in professional service 74 pesos per month. The average daily wage and average monthly salary in 1939, of persons reporting from the various industry groups, were as follows:

	Average daily wage (in pesos)	*Average monthly salary (in pesos)*
All industries	0.61	29
Agriculture	.44	14
Domestic and personal service	.53	9
Professional service	----	74
Public service (not elsewhere classified)	1.44	50
Fishing	.57	16
Forestry and hunting	.75	24
Mining and quarrying	1.22	56
Manufacturing and mechanical industries	.80	30
Transportation and communication	1.03	36
Clerical	1.38	58
Trade	.66	37

Minimum daily wages in various Provinces of the Philippines, in April 1939, were as low as 0.12 peso [2] for female agricultural laborers in Capiz and as high as 1.50 pesos for hemp classifiers and mechanics in Davao. Maximum daily wages for the same month ranged from 0.20 peso for female agricultural workers and for industrial and commercial workers in Capiz to 9.50 pesos for mechanics in Davao. The minimum, maximum, and average wages per day in these and other designated Provinces are shown in table 3, which was compiled from data in the Philippine Labor Bulletin (Manila), May 1939.

[2] Peso=about 50 cents.

TABLE 3.—*Daily Wages in the Philippines, by Province, Industry, and Occupation, April 1939*

Province, industry, and occupation	Wages or earnings per day		
	Minimum	Maximum	Average
Albay, Sorsogon, and Catanduanes:			
Agriculture:	*Pesos*	*Pesos*	*Pesos*
Abacá strippers	0.15	0.40	0.25
Rice planters			(1)
Rice plowmen			(2)
Industrial labor:			
Abacá	.25	.60	.40
Abacá classifiers	.80	1.25	1.00
Copra dryers	.70	1.00	.80
Copra loaders			.80
Commercial workers	[3] 9.00	[3] 30.00	[3] 15.00
Bataan:			
Agricultural laborers	.50	1.00	.80
Industrial laborers	1.00	1.30	1.10
Commercial workers	.50	.90	.60
Batangas:			
Agricultural workers	.60	1.30	.80
Sugar centrals, common laborers	.70	1.20	
Sugar centrals, skilled laborers	1.45	3.00	
Cagayan:			
Agricultural laborers	.50	1.00	.70
Industrial workers	.72	2.00	1.00
Commercial laborers	[3] 6.00	[3] 45.00	[3] 15.00
Camarines Norte (José Panganiban): Mining employees	1.00		
Camarines Sur:			
Agriculture:			
Abacá cleaners	.30	.80	.50
Coconut planters	[4] .25	[4] .40	
Rice-field common laborers:			
Without implements and water buffalo	[4] .25	[4] .50	
With implements and water buffalo	.50	1.00	
Industrial workers:			
Lumber industry:			
Large enterprises, common labor	.80		1.20
Small enterprises	.60	1.70	.80
Mining industry:			
Surface labor	.70		1.40
Underground labor	1.00		1.40
Rice-mill laborers	[4] .50	[4] .80	
Tobacco manufacture, laborers	.20	.70	.50
Capiz:			
Agricultural laborers, female	[5] .12	[5] .20	
Agricultural laborers, male	[5] .20	[5] .30	
Industrial workers	.15	.20	
Commercial laborers	[6] .10	[6] .20	
Cavite:			
Agricultural workers	.80	1.00	.70
Industrial and commercial workers	.70	.80	.75
Cotabato:			
Agricultural laborers	.40	.80	
Industrial workers	[3] 12.00	[3] 30.00	[3] 20.00
Commercial establishments, small, laborers	[3] 8.00	[3] 35.00	[3] 15.00
Davao:			
Common laborers	.40	1.00	
Industrial workers, mechanics	1.50	9.50	
Commercial workers, hemp classifiers	1.50	2.50	
Ilocos Norte:			
Carpenters, skilled	[4] .50	[4] .80	
Construction workers (private)	[4] .25	[4] .35	
Iloilo and Antique:			
Agricultural workers	.40	.70	.60
Industrial workers	1.00	2.00	1.50
Commercial workers	.70	1.50	1.10
Isabela:			
Agriculture: Farm laborers	[7] .50	[8] 1.00	
Public works: Laborers on "pakiao" [9] system			.80
Lumber industry: Sawyers	.80	1.00	
Lanao: Industrial common laborers	.67	1.23	.75
La Union, Abra and Southern Ilocos Sur	.40	1.00	.60

[1] Prevailing wage 0.15 peso per day with 2 meals.
[2] Prevailing wage 0.50 peso per day with 0.25 peso additional if they use their own water buffalos (*carabaos*).
[3] Per month.
[4] With 2 meals.
[5] With free board.
[6] Per hour.
[7] With subsistence.
[8] Without subsistence.
[9] Group contract.

TABLE 3.—*Daily Wages in the Philippines, by Province, Industry, and Occupation, April 1939*—Continued

Province, industry, and occupation	Wages or earnings per day		
	Minimum	Maximum	Average
Leyte:	*Pesos*	*Pesos*	*Pesos*
Agriculture, private, laborers	0.30	0.50	0.40
Industrial workers	.50	.70	.60
Commercial workers (laborers)	.50	.80	.65
Negros Oriental:			
Agricultural laborers	.40	1.50	.55
Industrial laborers	.50	1.50	.70
Commercial workers	.40	1.00	.50
Nueva Ecijá:			
Agricultural laborers	.35	.75	.65
Industrial laborers	.60	1.50	1.00
Government project laborers	1.00	1.50	1.20
Pampanga: Common laborers, male and female	.30	1.25	----------
Surigao and Agusan:			
Agriculture: Coconut huskers	1.00	2.00	1.50
Industrial laborers	.60	2.00	----------
Commercial establishment, small, laborers	.25	1.00	----------
Romblón:			
Agricultural common laborers	.20	.30	.25
Industrial workers	.50	.70	.60
Commercial workers	.50	.70	.60
Tayabas: Laborers	[10] .85	[10] 1.20	[10] 1.00
Zambales:			
Agricultural common laborers	.30	.40	.35
Industrial common laborers	.85	1.50	.85
Commercial common laborers	.80	1.00	.85
Zamboanga, City of:			
Agricultural laborers	.40	1.00	.60
Industrial laborers	.40	1.20	.80
Commercial laborers	.50	1.00	.75

[10] Those receiving under 1 peso usually are provided with free board.

VACATIONS WITH PAY

There was no uniform practice concerning vacations with pay. Paid vacations were more commonly provided for salaried employees than for the wage earners, as the latter were usually employed in seasonal occupations in which regular vacations were not considered necessary. Among minor office employees, also, there were so many informal leaves of absence that regular vacations were not common. The upper clerical group, however, generally had annual vacations ranging from 15 days to a month, and usually with full pay, although some received half pay only.

LABOR ORGANIZATIONS

Prior to the Japanese invasion, labor unions in the Philippines were patterned after similar organizations in the United States, with higher wages and better working conditions as their objectives. In 1938, it was reported that four organizations accounted for most of the unionized workers. These were the Philippine Labor Federation, the Federación Obrera de la Industria Tabaquera de Filipinas, the National Labor Union, Inc., and the Philippine Labor Union. The membership of these was drawn, respectively, from the employees of the sugar centrals; the tobacco industry; the cordage, transportation, communications, iron works, lumber, embroidery, and general mer-

chandising industries; and the sugar centrals, mining, coconut, embroidery, transportation, and cigar and cigarette industries.

As of December 31, 1938, the membership and branches of the 80 registered labor organizations were as follows:

	Number of branches	*Total membership*
Total, all organizations	108	46, 456
Confederated Workers' Alliance	1	207
Federación Obrera de Filipinas KMP	9	5, 626
Federación Obrera de la Industria Tabaquera de Filipinas	6	2, 405
Kapisanan Ng Mga Manggagawa sa Manila Railroad Co	14	1, 104
National Federation of Chauffeurs	1	320
National Labor Union, Inc	44	8, 490
National Workers' Brotherhood	5	843
Philippine Labor Union	28	8, 265
Other independent unions (72 organizations)		19, 196

Labor unions came under the supervision of the Philippine Government in 1936. A law of that year required them to register, and to submit annually a list of their members and the minutes of their meetings, but provided that no employee was to be prevented from joining, or dismissed for having joined, any registered legitimate labor organization. The law also recognized the unions' right of collective bargaining with employers to obtain better working and living conditions, fair wages, shorter working hours, and the promotion of the material, social, and moral well-being of their members.

INDUSTRIAL RELATIONS

Collective Agreements

Up to the time of the Japanese invasion, although collective bargaining had developed at least moderately in the unionized industries, the labor organizations included only a small portion of the working population. Moreover, the collective agreements that were made did not necessarily apply to an entire union. They often were negotiated between an employer and a small group of workers in his plant, or between an employer and certain members of a union. Although there is no available record of the total number of collective agreements, those that resulted from the settlement of industrial disputes in 1939 and 1940 were reported by the Philippines Department of Labor. During those years, 214 such agreements, affecting 19,725 workers, were concluded.

Conciliation and Arbitration

A law of 1938 related to disputes between landlords and tenants as well as to those between employers and employees. When no settlement could be reached by the parties, special Government mediators were to invoke mediation and conciliation procedures. If this step failed, arbitration was the next resort—if the disputants were agreeable to the idea. In that event, a board was created, which consisted of one of the special mediators as chairman, one representative of the landlords or employers, and one chosen by the tenants or employees. Board findings were to be submitted to the Court of First Instance of the Province in which the controversy arose, and the court was

given 10 days in which to render its decision. Appeal could be made to the Philippine Supreme Court.

State action in industrial disputes was also provided for by an act of 1936, which created the Court of Industrial Relations. The presidentially appointed judges of this court were to be assisted by local boards of inquiry composed of not more than 6 members each from lists prepared by employer and employees, and not more than 3 experts in sociology, welfare work, labor problems, or industrial and agricultural economics and administration. Cases to be heard by the court had to be certified to it by the Philippine Department of Labor or by the party or parties concerned, and had to relate to such points as wages, hours, or conditions of work, involving more than 30 persons. Once a case had been submitted to the court—only after the failure of all efforts to bring about an extrajudicial accord—the parties involved were required to comply with all orders which the court issued.

While a case was pending, the employer was not to hire substitute workers without permission of the court, and in the event of a strike, no strikebreakers were to be employed within 15 days after its inception. On the other hand, if a strike had not already occurred at the time the case was taken by the court, employees were forbidden to resort to such action. Appeal from the court's decision could be made to the Supreme Court.

Labor Disputes

From 1929 to 1940, strikes, threatened strikes, and lockouts that were registered in the Philippines totaled 900. The greatest number, 222, occurred in 1939, and involved 28,104 workers. Among causes for disputes, wages stood first, with 556 cases. Of the 900 industrial differences, 543 were settled in favor of the workers, 203 in favor of the employers, and 154 were referred to the Court of Industrial Relations. Labor disputes were on the increase prior to 1940, but in that year a noticeable drop occurred which may possibly be explained, in part, by a ruling of the Philippine Supreme Court. The Court held that workers did not have the right to strike; that the provisions of the Constitution for compulsory arbitration of labor disputes were for the purpose of avoiding strikes; and that the act creating the Court of Industrial Relations was intended to supply an "adequate instrumentality to forestall strikes."

COOPERATIVE MOVEMENT

Cooperatives of the modern type have existed in the Philippines since early in this century, and were introduced from the States. The Philippine Government became interested and took the lead in promoting and encouraging such associations. The principal types now found in the Commonwealth are, in order of the date of their introduction, agricultural credit, farmers' marketing, consumers', industrial, and credit. The Government has also encouraged the formation of private dealers' cooperatives.

In 1916, although the Bureau of Agriculture established agricultural credit cooperatives for farmers, to help them get out of debt to their landlords and to the Chinese (who were the traders and who also controlled the transportation system), these organizations gradually

became inactive. The task of reviving the agricultural credit cooperatives was delegated to the Bureau of Commerce in 1933. At the outbreak of World War II, the revitalized credit associations numbered 570 and were found in some 43 Provinces. They had a total membership of about 105,000 and a circulating capital of 3,300,000 pesos.

The cooperative marketing movement was started in 1923, by the Bureau of Commerce and Industry. The Bureau's efforts led to enactment of the cooperative marketing law of 1927, one of the chief purposes of which was to shorten the route of agricultural products between producer and consumer insofar as it could be done efficiently. The Bureau of Commerce and Industry was given supervision over cooperative marketing associations. Under the Bureau's leadership, 185 such associations were registered from 1928 to 1940.

Starting in January 1938, the Bureau of Commerce organized and promoted consumers' cooperative associations and organizations of Filipino retailers for cooperative buying. Later, the Consumers Cooperative League of the Philippine Islands was formed. In 1940, consumers' cooperative associations numbered 68, with a total membership of some 7,000. These cooperatives were largely urban, and were found especially in Manila and in Cavite.

Among the more recent types of cooperatives organized by the Government were the Cooperative Association of Shoe Manufacturers in Mariguina, Rizal; the associations among the abacá planters in the Bicol region; the Buenavista Cooperative Marketing Association, composed of farmers and tenants of the Buenavista estate in the Province of Bulacan; and the various cooperatives organized by the Land Settlement Administration in Mindanao. There is a cooperative college in the Philippines—Union College of Manila, established under the auspices of the Evangelical churches of the Philippines. The members of the college association elect the board of directors of the college, and they in turn elect the administrative officers of the institution. The Emmanuel Cooperative Hospital, the first medical cooperative in the Islands, was opened in Manila in 1936. Its primary object was to enable families of moderate means to obtain the best available medical care at rates they could afford, and to have access to medical advice at any time. The following reductions on operations and treatments were allowed to members: 10 percent on amounts less than 100 pesos, 15 percent on amounts from 100 to 150 pesos, and 20 percent on those of more than 150 pesos. Likewise, for members, bed fees were 15 percent less than the average in other hospitals of the same class. By 1940, the membership consisted of 644 families.

The first credit union in the Philippines was organized by a missionary from the United States in 1938. By 1941, there were 23 parish credit unions with 1,800 members, 40,000 pesos in share capital, and 60,000 pesos outstanding in loans to members. There were also 2 educational credit unions, 2 Government employees' credit unions, and 2 which had been formed by the members of consumers' cooperatives.

SOCIAL INSURANCE

The economic, political, and social situation in the Philippines has not been conducive to the rapid growth of social insurance in many of its occidental forms. Traditionally, each family group has per-

formed those functions associated in western countries with pensions, insurance, and care of the aged and the sick. Consequently, the State confined itself to enacting laws governing accident compensation in industrial and agricultural matters and to providing pensions for certain classes of the population. Consideration of the possible effects of Philippine independence upon the economy and upon the Government revenue of the Islands has worked against the creation of social-insurance organizations dependent upon State support. According to reliable authority, the Government has preferred to postpone the enactment of such legislation until the national income has become adjusted to the post-independence influence of the world market.

Workmen's compensation.—By 1939, employers of 30 or more workers in any industrial, commercial, or agricultural establishment were required by law to provide free emergency medical and hospital facilities for those employees whose monthly salary or wage did not exceed 50 pesos. In the event of personal injury, illness, or death arising out of performance of duty, the employer paid compensation or death benefits, and provided the required medical, surgical, and hospital services and supplies during disability.

Legislation required the employer, in event of the employee's total disability, to pay compensation—after the first 7 days—of from 4 to 18 pesos, for not more than 208 weeks. Partial disability called for payment of up to 10 pesos weekly for not longer than 208 weeks. In the event of death resulting from the occupational activity of the employee, the employer was obligated to pay up to a maximum of 100 pesos for burial expenses, and pensions ranging from 25 to 50 percent of the average weekly wages of the deceased, to the latter's surviving dependents. These pension payments were to continue for not more than 208 weeks.

Pensions for public employees.—During the period 1916–29, the Philippine Government established pensions for certain classes of persons. Thus, teachers after 20 years of service were entitled to pensions ranging from 40 to 80 percent of their average compensation for the 3 years preceding retirement, but not to exceed 6,000 pesos. The fund from which these payments were made was supported by a contribution of 3 percent of the teachers' monthly basic salaries and an annual State appropriation equal to 3 percent of the total annual appropriation for teachers' salaries.

Under the pension law of 1924, any officer or enlisted man of the Philippine Constabulary, 55 years of age and with 20 or more years of service, was entitled to an annual pension equal to 2.5 percent of the total pay received by him during his period of service, but not exceeding 75 percent of his annual salary at the time of his retirement. In 1924, the Government also provided a contributory pension plan for certain officers and employees of the Public Health Service, after 20 or more years of service and after completion of 10 full years' contribution at the rate of 3 percent of salary. Such employees were to receive an annual pension equal to 2.5 percent of their salary, at time of retirement, for each year of active service, but not exceeding 75 percent of such salary.

Labor Conditions Under Japanese Occupation

Because of Japanese control and censorship policies, very little detailed information is available regarding labor conditions in the Philippines since the Japanese occupation of the Islands early in 1942. However, a fairly good picture of the major trends in matters affecting labor can be formed from certain confidential sources and from a judicious interpretation of various Japanese-controlled broadcasts.

GENERAL EFFECTS OF INVASION

The Japanese occupation disrupted the Philippine economy severely. All Americans and nationals of other belligerent countries were interned. Practically all business houses were closed. In addition, factory operation in the occupied areas was brought to a standstill because the invaders either stripped the factories of their supply of oils and basic materials or failed to grant permits enabling the mill owners to obtain necessary materials. Further economic dislocation resulted from the shift of emphasis, under the Japanese, among agriculture, mining, and manufacturing industries. Sugar production (one of the leading industries of the Philippines) was relegated to the background and its place was taken by the cultivation of cotton. The mining of copper became more important than gold mining. The soap, tobacco, and liquid-fuel industries were stimulated.

Another unsettling factor of prime importance was the introduction of paper money. Japanese military notes (which were placed in circulation to an amount of 100,000,000 to 150,000,000 pesos) were decreed to be the legal tender of the Philippines, although the Philippine peso was also allowed to circulate. The Japanese military peso has had a greatly depreciated value in purchasing power, in terms of the former Philippine peso (valued at 50 cents in United States money).

EMPLOYMENT

The invasion's effects on labor were first evident in the field of employment. The stoppage of industry and changes in agricultural production resulted in throwing large numbers of persons out of work. As a result, many government agencies, and various projects, were established by the Japanese to provide work. Relief projects, including work on military construction and such industries as toothbrush manufacture, were inaugurated. The authorities transferred from Japan to the Philippines machinery for the textile industry, and this action, according to the Japanese, provided considerable employment in the cotton-raising areas. In addition, many Filipino prisoners of war were inducted into the Philippine Constabulary. In many instances, when urban employment could not be found, the unemployed were transported back to their original homes in the Provinces.

Some idea of the extent of the employment problem can be gained from the fact that two agencies were said by the Japanese to have placed more than 117,000 persons during the period from the middle of 1942 to September 1943. There are many indications that these figures included not only the persons who were seeking employment, but also those who were forced to work. That the Japanese resorted

to forced labor is evident from various sources, among them an item in the Manila Tribune of September 21, 1943, which stated that in the previous month more than 200 ex-soldiers and an equal number of war widows and orphans had been drafted into service in the relief projects. If employment was available, the Filipino was compelled to accept it. This practice was legalized in the constitution of the puppet Republic of the Philippines, which declared it to be the duty of every citizen to engage in a useful calling, occupation, or profession.

WAGES AND HOURS

It seems clear that it was a definite policy of Japan to reduce wage standards in the Philippines to the general level prevailing on the Continent of Asia. The Japanese reversed the wage and hour trend that the Philippine Commonwealth had inaugurated. Under the Commonwealth, a minimum daily wage of 1 peso in the Provinces and 1.25 pesos in Manila had been established, and the legal workday was 8 hours in length. The invaders repealed all laws which provided for minimum daily wages and maximum hours of labor. A maximum daily wage of 80 centavos for unskilled male workers was ordered for the city of Manila. In the Provinces the maximum was set at 64 centavos. Later (in July 1943), as a result of greatly increased living costs, the maximum wage for workers was raised to 1.30 pesos per day unless the employer provided meals. In that case, the wage was to be approximately 0.91 peso.

It is known that the length of the workday was increased substantially, both in private enterprise and in Government offices, but no data are available as to the exact number of hours per workday. For overtime, male workers in Manila were to receive time and an eighth.

COST OF LIVING

That the cost of living, by November 1943, was out of control, at least in Mamila, was indicated by statements made at that time by a radio commentator. Speaking from Manila, and alluding to the rise in prices, he was quoted as having said "the main problem today is not how to live, but how to exist. This is what is happening to our middle-class people, and what the conditions of the poor people are is not difficult to imagine." The Manila radio was, of course, Japanese controlled, and it is not clear how this statement escaped the usual censorship. Similar comments were made by an authoritative source late in 1943. It was stated that the position of workers and salaried employees was extremely bad. Even with increases dictated by the Government, the income of such persons was said to be insufficient to cover the cost of absolute necessaries. In the flourishing black market, by September 1943 the cost of living (measured in terms of the Japanese military peso) had increased to at least 5 times its pre-war level, while many commodities were priced at 10 times their pre-war prices.

Attempts were made to control prices. The scale of rents in Manila was reduced, and all rents there were frozen at the lower level. Commodity after commodity was placed under "control" at a fixed price; usually, the result was that such products became difficult to obtain. However, in the case of rice, which is the basis of the Philippine diet,

the Japanese established both price control and rationing, and its distribution was placed under the control of the Filipino Rice Co., founded by the Military Administration. Later, the price of fish, the other principal food, was controlled, but in the meantime price increases of from 66⅔ to 250 percent had already taken place.

CONTROL OF LABOR

As in other Axis-dominated countries, the Japanese placed all labor under the direct surveillance of the Government. Pre-invasion labor unions were outlawed, and all the activities generally associated with such organizations either were taken over by the authorities or were abolished. To take the place of the former unions and pave the way for centralized control of the labor force, a "labor front"—the Central Labor Union— after the German model was created in Manila.

COOPERATIVE MOVEMENT

Imitating the Axis pattern employed in several other occupied lands, the Japanese maintained the outward semblance of the Philipine cooperative movement. The cooperative framework, as it had existed under the Commonwealth, was continued and expanded, with the addition of Japanese technical and financial assistance but adapted to serve Japanese objectives.

Cooperatives were encouraged in those lines in which increased production was especially desired by the military authorities. Thus, with the Japanese interested mainly in Philippine agriculture, by February 1944, the most numerous types of these organizations were the farmers' or producers' cooperatives, of which there were 206, with a membership of some 87,000 farmers.

Also, as a measure to gain the good will of the Filipinos, the Japanese encouraged cooperatives in retail businesses which formerly had been controlled by the Chinese.

Working Conditions and Cost of Living in Chile, 1937–44[1]

ALTHOUGH employment conditions generally were satisfactory in Chile to the end of 1944, the Chilean Congress of that year considered a 6,600,000,000-peso public-works project to absorb post-war unemployment, and in the autumn the General Labor Office released a study on possible unemployment after the war. Of 2,000 firms surveyed by the Office, 24 reported that they expected to close down or decrease personnel when the war ends, the total of such estimated reductions in employment amounting to 16,000. Employment in the mining industry declined about 7 percent between July 1943 and July

[1] Data are from Chile, Dirección General de Estadística, Estadística Chilena (Santiago), vols 10, 12, 14, 15, 16, and 17 (1937, 1939, 1941, 1942, 1943, and 1944); Censo industrial y comercial, año 1937, Santiago, 1939; Minería e industria, año 1938 (Santiago, 1940); Minería e industria, año 1939 (Valparaiso, 1942); Anuario de industria, año 1940, Valparaiso, 1943; Minería, años 1940 y 1941, Valparaiso (pp.68–70); Anuario de Comercio Exterior, 1942, Santiago, 1944 (pp. xx–xxi, 136); Diario Oficial (Santiago), May 22, 1943; Muestras de Legislación Social Americana, Washington, Oficina de Información Obrera y Social, Unión Panamericana, 1943 (pp. 29–35); and report from Lee M. Hunsaker, United States vice consul at Concepción, December 6, 1944; and reports of the United States Embassy at Santiago, by Joel C. Hudson, April 24, 1944, Sidney N. Milliken and Joel C. Hudson, October 23, 1944; and Daniel L. Horowitz, attaché and labor reporting officer October 25, and December 5, 19, 21, and 28, 1944.

1944, and discussion of the future of the copper and nitrate industries was appearing in the press. The Government's figures on unemployment, which had reached an all-time low in 1942, increased in 1943 and 1944. Wages rose rapidly in the early 1940's, as did also the cost of living.

Employment and Wages 1937–43

Employment in the Chilean mining industry as a whole declined 13 percent from 1937 to 1943. The greatest increase (22.5 percent) was shown in coal mining, and copper mining increased its labor force by nearly 9 percent (table 1). Gold mining declined sharply and there was some decline in nitrates. In manufacturing, in all but 2 of the 10 industries for which data are available, the number of persons employed showed a rising trend, with some decreases in 1941 and 1942. During the 6-year period State railroad employment increased by 19.8 percent.

Rapidly rising daily wages were shown in all of the 10 manufacturing industries.

TABLE 1.—*Workers and Wages in Certain Chilean Industries, 1937–43*

Industry	1937	1938	1939	1940	1941	1942	1943
	Number of workers						
Mining industry	68,803	65,487	61,837	62,323	60,506	59,462	59,864
Nitrate mining	22,390	20,231	19,323	21,383	19,943	20,672	19,949
Copper mining	18,885	19,395	18,674	18,390	18,327	19,612	20,550
Coal mining	13,518	13,909	14,416	13,758	14,707	15,634	16,858
Iron mining	405	432	485	417	424	296	212
Gold mining, placer	13,605	11,520	8,939	8,375	7,105	3,248	2,295
Selected manufacturing industries	17,914	19,456	19,645	22,093	23,606	22,821	22,814
Beer	2,466	2,412	2,417	2,530	2,605	2,457	2,525
Cement	1,484	1,577	1,664	1,845	1,914	1,850	2,000
Cotton goods	1,664	2,762	2,900	3,043	3,373	3,909	4,423
Electricity	2,658	2,656	2,646	3,755	4,623	3,578	3,281
Gas, tar, and coke	1,058	1,088	970	1,238	1,339	1,472	1,425
Matches	564	565	560	655	600	512	508
Paper and cardboard	1,385	1,655	1,554	1,710	1,784	2,051	1,550
Sugar	1,179	1,228	1,369	1,664	1,588	1,347	1,368
Tobacco	1,572	1,815	1,441	1,340	1,329	1,086	1,236
Woolen goods	3,884	3,698	4,124	4,313	4,451	4,559	4,498
Railroads, State	14,834	----	16,225	17,154	----	----	17,770
	Average daily wages (in pesos)						
Selected manufacturing industries	12.60	14.35	16.61	20.20	24.98	32.67	36.35
Beer	11.40	12.80	14.56	17.46	19.39	25.62	30.95
Cement	18.20	22.00	25.08	28.95	35.85	42.06	52.12
Cotton goods	8.60	11.08	11.34	13.83	17.65	23.61	27.89
Electricity	12.90	14.18	16.34	19.85	25.58	41.14	37.84
Gas, tar, and coke	16.60	17.71	20.49	22.19	25.08	30.80	38.23
Matches	6.90	7.62	11.24	15.91	15.80	20.00	25.47
Paper and cardboard	18.70	21.78	30.25	36.63	39.13	46.70	54.75
Sugar	15.40	16.51	17.22	20.86	30.72	36.60	41.39
Tobacco	8.30	8.70	11.11	11.88	17.64	20.01	24.53
Woolen goods	10.40	11.90	12.85	17.65	23.02	27.11	32.09

The same rising trend that was evidenced in average daily wages took place in annual earnings as revealed by the industrial censuses. Average annual earnings for the various large industry groups are shown for the years 1938–40 in table 2, which also gives for the year 1937, the aggregate weekly pay rolls and employment for the 18,328 establishments covered.

TABLE 2.—*Employment, Pay Rolls, and Average Annual Earnings in Chilean Industries in Specified Years*

Industry	1937				Average annual earnings		
	Number of establishments	Number of wage earners	Amount of weekly pay rolls	Average weekly pay	1938	1939	1940
			Pesos	*Pesos*	*Pesos*	*Pesos*	*Pesos*
Total	18,328	145,803	12,234,226	83.91	3,933	4,511	5,192
Beverages	330	3,258	197,554	60.64	3,661	3,971	4,587
Chemicals	860	7,932	438,959	55.34	3,430	4,048	4,565
Clothing	2,657	9,474	453,718	47.89	2,742	3,299	3,790
Food industries	4,732	24,126	1,740,824	72.16	4,286	4,623	5,302
Glass	36	2,773	184,546	66.55	3,131	3,407	4,173
Hides and rubber	3,027	12,369	750,956	60.71	3,215	3,992	4,982
Metallurgy and mechanics	3,427	18,938	1,708,563	90.22	4,066	4,976	5,711
Music and entertainment	31	330	17,731	53.73	3,946	4,984	5,397
Paper and printing	700	8,181	778,026	95.10	5,675	6,901	8,259
Public utilities	453	29,176	4,025,136	137.96	5,019	6,178	6,975
Stone and earths	393	5,662	478,339	84.48	4,566	4,935	5,666
Textiles	372	14,410	895,554	62.15	3,623	3,910	4,322
Tobacco	23	1,757	86,611	49.29	3,007	4,372	5,270
Woodworking	1,287	7,417	477,709	64.41	3,146	3,633	3,970

The nitrate industry.—A recent census of the Chilean nitrate industry showed that it supported, as of December 31, 1943, a total of 64,714 persons, or slightly less than 1.3 percent of the Nation's population, and that in 1942 it provided 12.8 percent of the total value of Chilean exports. Average employment in the industry in 1943 was 19,949 persons. The average for the first half of 1944 was 16,872. In the nitrate, as in the copper industry, however, the economic importance of the industry is greater than the numbers employed indicate. In 1942 exports of nitrate and of electrolytic copper in bars constituted 50 percent of the value of all exports from Chile.

The number of establishments, operating and inactive, and total numbers of salaried employees and wage earners and of their dependents supported by the nitrate industry of Chile, as of December 31, 1943, are shown by Provinces, in table 3.

The average monthly salary in the nitrate industry in 1941, according to one source, was 1,439.00 pesos, and the average daily wage 25.46 pesos—rates which represented increases of 5.0 and 17.2 percent over the rates of 1939. By 1942 the increases above 1939 were 56.6 and 48.0 percent, respectively.

TABLE 3.—*Total Numbers of Employees in Chilean Nitrate Plants, and Their Dependents as of December 31, 1943, by Provinces*

Province	Number of establishments	Total population reported	Employment			Dependents of employees
			Total	Salaried employees	Wage earners	
Total all establishments	25	64,714	20,852	2,181	18,671	43,862
All operating establishments	18	62.920	20,131	2,117	18,014	42,789
All inactive establishments	7	1,794	721	64	657	1,073
Tarapacá	17	29,051	9,538	710	8,828	19,513
Operating	12	28,124	9,173	684	8,489	18,951
Inactive	5	927	365	26	339	562
Antofagasta	8	35,663	11,314	1,471	9,843	24,349
Operating	6	34,796	10,958	1,433	9,525	23,838
Inactive	2	867	356	38	318	511

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Copper industry.—The copper industry of Chile employed about 27,000 persons in 1943, with a pay roll of 489,000,000 pesos. The daily wage ranged from 20.00 to 68.00 pesos and averaged 49.50 pesos. In 1943 the copper industry employed 3.0 percent more wage earners than the nitrate, the next largest employer in the extractive industries. Table 4 shows the numbers of salaried employees and workers employed in the Chilean copper industry from 1937 to 1943.

TABLE 4.—*Employment in the Copper Industry in Chile, 1937–43*

Year	Total number of workers	Salaried employees			Wage earners			
		Total number	Chileans	Foreigners	Total number	Metallurgical plants	Mines	Transportation
1937	22,020	3,135	3,010	125	18,885	11,315	7,013	557
1938	22,815	3,421	3,282	139	19,394	11,945	6,915	534
1939	22,196	3,522	3,391	131	18,674	11,562	6,567	545
1940	21,943	3,553	3,433	120	18,390	11,443	6,438	509
1941	21,954	3,627	3,512	115	18,327	11,159	6,654	514
1942	23,502	3,890	3,762	128	19,612	12,284	6,738	590
1943	[1] 23,597	[1] 4,047	3,936	121	20,550	12,764	7,147	639

[1] Not the exact sum of items but as shown in source.

The total pay roll for wage earners in the copper industry in 1943, according to one source (which places employment figures slightly above those in table 4), was 343,079,355 pesos. In a few regions the average daily wage was below 30 pesos, but elsewhere it ranged from 31 to 68 pesos. Payments to salaried employees amounted to 146,169,341 pesos, or about one-third of the total pay roll; these workers constituted about one-sixth of all persons employed in the industry.

Unemployment in Chile

The annual average of unemployment in Chile, as recorded by the General Labor Office, dropped from 9,416 in 1939 to 2,523 in 1942, but rose to 3,620 in 1943, and to 4,060 by November 1944. In the latter month, the percentage of applicants placed was 24.7, as compared with 26.9 in October and 28.2 in November 1943.

Unemployment statistics for Chile are compiled from records of work applications and placements in the offices of the Employment Department of the General Labor Office in Santiago and Valparaiso and from records in the offices of the labor inspectors in the Departments and Provinces. Although such records do not measure all unemployment, especially short-term unemployment, they do indicate trends over a period of time.

Table 5 shows the number of applicants for work registered at the Government labor exchanges and the number of placements for the years 1932–43 and the months of 1944, by employment groups.

TABLE 5.—*Applications and Placements of Workers, Reported by Public Employment Offices in Chile, 1932–44*

Period	Number of applications				Number of placements				
	Total	Wage earners	Salaried employees	Domestic employees	Total	Percent of applications	Wage earners	Salaried employees	Domestic employees
1932	107,296	86,954	15,162	5,180	4,765	4.4	4,572	30	163
1933	71,805	51,957	14,392	5,456	5,401	7.5	5,001	180	220
1934	30,055	20,510	7,988	1,557	3,495	11.6	3,078	211	206
1935	10,673	7,181	3,058	434	1,200	11.2	1,014	30	156
1936	6,474	4,836	1,374	264	1,539	23.8	1,279	110	150
1937	3,203	2,455	520	228	900	28.1	740	39	121
1938	4,578	2,233	1,968	377	1,100	24.0	918	18	164
1939	9,416	4,951	4,246	219	1,093	11.6	692	285	116
1940	8,551	4,876	3,289	386	1,243	14.5	745	434	64
1941	4,117	2,193	1,598	326	906	22.0	514	320	72
1942	2,523	1,011	1,189	323	665	26.4	321	255	89
1943	3,620	1,462	1,791	367	867	24.0	420	342	105
1944:									
January	4,175	1,214	2,624	337	1,128	27.0	398	598	132
February	4,441	1,565	2,584	292	961	21.6	330	523	108
March	4,633	1,653	2,696	284	1,103	23.8	428	584	91
April	4,662	1,703	2,683	276	1,293	27.7	409	774	110
May	4,667	1,870	2,526	271	1,092	23.4	481	510	101
June	4,738	1,807	2,693	238	1,297	27.4	654	563	80
July	4,480	1,499	2,729	252	1,085	24.2	423	576	86
August	4,310	1,384	2,689	237	1,155	26.8	475	578	102
September	4,094	1,288	2,613	193	1,006	24.6	439	508	59
October	4,194	1,323	2,659	212	1,129	26.9	542	493	94
November	4,060	1,243	2,614	203	1,002	24.7	424	504	74

After 1932 when the average number of applicants for work totaled 107,296, the average dropped annually by numbers ranging from 40,000 to 3,000 until in 1937 it was only 3,203. In 1942 registered unemployed averaged 2,523, a decrease of 21.2 percent from the figures of 1937. The average for 1943 was 3,620, and for the first 11 months of 1944 it was 4,408. In November 1944, salaried employees made 64.4 percent of all applications at the Government offices and received 50.3 percent of all placements.

Cost of Living of Worker's Family in Santiago

The cost of living of a workers' family of 4 in Santiago, as recorded by the General Statistics Office, increased by 8.2 percent in the first 6 months of 1944 and by 12.3 percent in the following 4 months. Though the general index for October 1944 was 18.6 percent higher than that for October 1943, the greatest increase (25.4 percent) from one October to the next since the outbreak of World War II occurred from 1941 to 1942. The general index, which stood at 193.0 (1928=100) in October 1939, had reached 436.1 by October 1944. By December it had dropped to 412.7.

Indexes of cost of living from 1939 to October 1944 for a worker's family in Santiago, Chile, are shown in table 6.

TABLE 6.—*Indexes of Cost of Living of Worker's Family in Santiago, 1939–September 1944*

[1928=100]

Period	All items	Food	Housing	Heat and light	Clothing	Miscellaneous
1939	186.7	210.4	157.7	162.6	199.9	146.1
1940	210.3	244.8	171.3	181.9	218.3	155.8
1941	242.3	280.6	184.1	218.1	277.5	170.0
1942	304.3	366.7	224.8	252.3	350.4	182.6
1943	353.9	433.7	246.7	292.1	395.6	225.4
1944:						
January	364.5	438.7	249.9	286.9	418.8	262.2
March	367.9	441.7	258.0	292.5	418.8	261.8
June	388.2	442.3	266.2	313.3	523.0	271.4
September	419.9	504.1	266.2	317.2	533.3	288.4
October	436.1	538.8	266.2	315.7	536.4	289.8
November	435.5	524.4	266.2	316.5	574.9	289.8
December	412.7	470.6	266.2	314.2	586.1	289.8

The index on which the above figures are based was constructed in 1928, to measure the expenditures of a workingman's family of two adults and two children under 10 years of age (or of three adults), with an income of 600 pesos per month.

The Commissariat General of Subsistence and Prices raised ceiling prices on certain living essentials in the autumn of 1944, an action which was followed by popular protests and threatened strikes by the butchers. The price-control authorities then established a National Food Council in the Ministry of Economy, to operate as a planning agency, and the Cabinet decided to place all departments dealing with food prices under the control of the Minister of Economy.

Working Conditions in the United Kingdom in 1944

CONTINUED need of industry for manpower in the United Kingdom resulted in a further reduction in the number of unemployed persons during 1944. Other notable developments in the labor situation were the increases in wage rates, cost of living, and industrial disputes. These facts are disclosed in a year-end survey by the Ministry of Labor and National Service.[1]

Unemployment

The number of persons registered with employment offices as wholly unemployed averaged 85,392 in 1944, those persons classified as unsuitable for ordinary employment being excluded. Persons temporarily out of work totaled 2,332 and unemployed casual workers 1,865 for the year. Volume of unemployment in each of these three categories was lower than in any previous war year, as shown in table 1, and much lower than in any year for which similar statistics are available.

[1] Ministry of Labor Gazette (London), January 1945 (pp. 7–11).

TABLE 1.—*Number of Unemployed Persons Registered With Employment Offices in the United Kingdom, 1939–44*

Year	Average number of—		
	Wholly unemployed	Temporarily out of work	Unemployed casual workers
1939	1,308,212	220,990	60,599
1940	829,458	165,962	39,252
1941	314,507	62,124	14,890
1942	[2] 125,311	8,615	5,346
1943 [1]	[2] 93,408	2,825	2,842
1944 [1]	[2] 85,392	2,332	1,865

[1] For 1943 and 1944 the figures are averages for only 4 dates, at quarterly intervals, instead of for 12 dates at monthly intervals.
[2] The total excludes the number of persons classified as unsuitable for ordinary employment.

Level of Wage Rates

In most industries for which data on wage rates are compiled by the Ministry, the rates continued to rise during the year. For example, agricultural labor in Scotland benefited from an advance in the minimum weekly wage rate from 60s. to 65s., under the Agricultural Wages Regulation Act. Increases in pay were authorized for other classes of farm labor in Scotland and for agricultural labor in Northern Ireland. No change occurred in the statutory minimum in England and Wales, the minimum weekly rate for men engaged as ordinary agricultural workers having been raised to 65s. in December 1943. By an award issued in January 1944, minimum wages of men in the coal industry were raised from 83s. to 100s. a week for underground workers, and from 78s. to 90s. for surface workers. In the cotton-textile industry, a general advance of 4s. weekly for those employed in adult occupations and 2s. a week for juvenile workers was authorized in January.

For all industries and services concerning which statistics are collected by the Ministry of Labor, the estimated net weekly increase in wages of workers averaged £1,870,000 in 1944, affecting 8,133,000 individuals. Certain large groups, notably agricultural workers, are not covered by the series from which the foregoing statistics were taken and therefore the totals may not be regarded as affording more than a general indication of the movement in wage rates. However, during the war period, 1939–44, the amounts of increase in weekly rates of wages were much greater than in any previous year between 1925 and 1938.

Cost of Living

The general level of working-class costs of living rose in 1944 to an index of 201 (based on July 1914 as 100) as compared with an average of 199 in 1943. Rents (including local taxes) remained stable in the 2 years, clothing declined, and costs of food, fuel and light, and other items advanced. The index numbers of living costs are shown by items in table 2 for the years 1939 through 1944.

TABLE 2.—*Index of Working-Class Cost of Living in the United Kingdom, 1939–44*

Year	Indexes (July 1914=100) of cost of—					
	All items	Food	Rent (including local taxes)	Clothing	Fuel and light	Other items
1939	158	141	162	214	184	179
1940	184	164	163	285	210	208
1941	199	168	164	369	227	227
1942	200	161	164	399	235	255
1943	199	166	164	351	244	282
1944	201	168	164	345	256	291

Variation was slight in the composite cost-of-living index from 1941 through 1944, as rises in certain groups were counteracted by reductions in others. In the course of the entire war period through 1944, the advances in costs have been greatest for clothing. The downward trend in clothing costs, reflected in the reduction of the index from 399 in 1942 to 351 in 1943, was caused chiefly by the replacement of "nonutility" clothing by "utility" clothing which is tax exempt. In 1944, this process of substitution had ceased in large part and the prices of such nonutility clothing as was on sale did not change radically, and the index dropped only 6 points during the year to 345.

Industrial Disputes

Industrial disputes in the United Kingdom in 1944 caused more stoppages of work and involved a larger number of workers and days of idleness than in any previous year of the war. Table 3 summarizes the statistics for the years 1939 to 1944.

TABLE 3.—*Industrial Disputes in the United Kingdom, 1939–44*

Year	Stoppages beginning in year		Man-days of idleness, all stoppages
	Number	Number of workers involved	
1939	940	337,000	1,360,000
1940	922	299,000	940,000
1941	1,251	360,000	1,080,000
1942	1,303	457,000	1,530,000
1943	1,785	557,000	1,810,000
1944	2,185	[1] 820,000	3,710,000

[1] In addition, about 5,000 workers were involved in stoppages which began in 1943 and continued into 1944.

After reaching a low point in 1940, industrial disputes increased in 1941 and continued upward through 1944, when the aggregate number of days of idleness caused by disputes was greater than in any year since 1932. The principal disputes in 1944 were in the coal industry, which accounted for over half of the stoppages and two-thirds of the aggregate number of days of idleness; and in the metal, engineering, and shipbuilding industries which were responsible for more than a fourth of the total number of stoppages and of the man-days idle.

Ruling on "Fringe" Wage Adjustments

THE Director of Economic Stabilization issued a directive to the National War Labor Board placing tight ceilings on major "fringe" adjustments,[1] or, in other words, on such matters as shift differentials, reclassifications and job evaluations, merit and automatic progression plans, and vacations. Previously, the Director had stated [2] that his office was working with the National War Labor Board to fashion a better means to attain the objective of the President's "hold the line" order (Executive Order No. 9328, April 8, 1943). That order had established the policy of preventing inflation by stringent controls on most wage and price adjustments. Moreover, according to the Office of Economic Stabilization, in the particular matter of "fringe" wage adjustment, it established an objective in regard to the relationship between wages and prices, by providing that reasonable "fringe" wage adjustments could be made only if they did not result in increases in prices.

In issuing this latest directive, the Director of Economic Stabilization stated that previously "there were no fixed ceilings on 'fringe' wage adjustments, but the price prohibition prevented or limited such adjustments in certain cases." In emphasizing the price consequences in this type of case, the Executive order permitted some unevenness and instability in wage adjustments and it was therefore possible for some workers to receive wage adjustments that others could not receive because of the circumstances of their respective employer's earnings. The present directive will accomplish the stabilization objective of the President's order "by setting definite, firm ceilings on these fringe increases in all wage cases."

* * * In doing this, we are following the policy which has been the practice in regard to basic wage-rate adjustments. Basic wage-rate increases under the substandard criterion, the "Little Steel" formula, and the minimum sound and tested going rate principle, are all controlled by definite standards. In regard to minor "fringe" adjustments there has not been sufficient experience or the problems occur only in isolated and special circumstances, so that at present it is not proper or wise to establish fixed ceilings. Accordingly, these "fringe" adjustments remain subject to the price prohibition in the President's Executive order. The major "fringe" wage adjustments, however, are covered by this directive.

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[1] Office of Economic Stabilization, Press release (72120), March 8, 1945.
[2] Idem, Press release (OWI 4045), February 12, 1945.

Wartime Salary Control in Canada[1]

UNDER an amendment of December 21, 1944 (P. C. 9505), the wartime control on salaries in Canada was eased to permit correction of "gross inequities," thereby making the restrictions more similar in principle to wage control. The order stated that, because of the greater difficulties in defining and classifying established salary positions, wartime salary control proved more severe in its restriction than were the various measures controlling wages. In addition, persons subject to salary control were, in a number of cases, receiving only as much as and, in some instances, less than the wage earners whom they were supervising. The Minister of National Revenue was therefore authorized to permit specified increases. Under the amendment, all persons earning less than $250 per month were included under the wage-control order.

The December 1944 amendment provided for three major changes. An adjustment may be authorized in the salaries paid to supervisors of wage earners who have received a general increase in wage rates to the extent that the wage-salary relationship resulting from such increase constitutes a gross inequity. Increases also may be authorized by the Minister of National Revenue within established ranges of salaries for the position which the official occupies. Finally, the Minister may in exceptional circumstances permit increases in salaries paid to individuals whose duties and responsibilities have changed substantially but who have not received formal promotions.

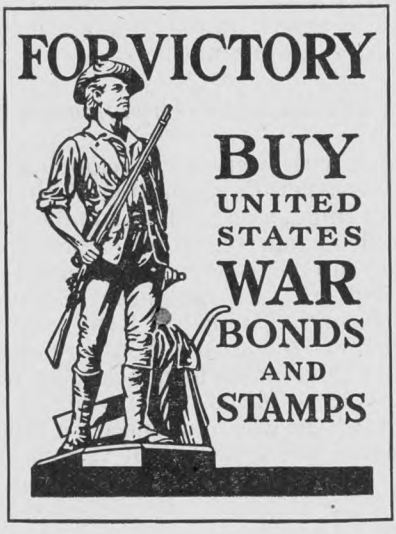
P. C. 9505 amended an order of February 27, 1942 (P. C. 1549), which consolidated and amended previous salary-control orders.[2] Under the 1942 controls as amended prior to December 1944, salaries (including those paid to directors) were frozen at the rates established and payable before November 7, 1941. If an individual was not employed before that date, the rate must be that of employees performing comparable work in the establishment or (if no such persons were employed) in a similar business; such new employees were to receive no increase above the rate first paid to them. A gratuity or share in profits which was provided for as a contractual right might be paid at the same percentage fixed for the position prior to November 7, 1941. Coverage of the 1942 order as amended included persons receiving $250 monthly or more. Before P. C. 9505 was issued, however, the War Labor Board decided whether persons receiving from $195 to $250 per month were under the jurisdiction of the salary-control order or the wage-control order.

Before the December 1944 amendment, increases could be authorized only for salaried officials receiving a promotion on or after January 1, 1941. However, a specified number of periodic increases might be paid to persons newly appointed or promoted if the policy of the establishment was not to pay the full salary immediately. To prevent serious interference with and loss of production in war industries, special exceptions were made for employers producing, repairing, or servicing munitions of war or ships. Such employers might grant

[1] Data are from Canada, Proclamations and Orders in Council Relating to the War, volumes 5, 6, and 7, Ottawa, 1942; Canadian War Orders and Regulations, volume I of 1944 and IV of 1945, Ottawa, 1944 and 1945; and Montreal Gazette, December 23, 1944.

[2] For details of the salary-control order of November 27, 1941 (P. C. 9298), see Monthly Labor Review for January 1942 (p. 52).

one increase to officials whose duties had increased owing to new or additional production for war, to officials whose pay was unduly low in relation to the prevailing rate for similar services, to officials engaged between January 1, 1940, and January 1, 1941, at a probationary rate, and to foreigners in jobs requiring special qualifications. Cost-of-living bonuses were eliminated by a March 1944 amendment (P. C. 79/1385), although such a bonus established before February 15, 1944, was to be incorporated into the salary; persons whose salaries were under $3,000 had been entitled to such bonuses, and, if an employer paid a cost-of-living bonus to wage earners receiving over $3,000 (exclusive of the bonus), he might also pay it to salaried workers receiving from $3,000 to $4,200.



Post-War Reconstruction

Reconstruction Planning in India [1]

CONSIDERATION of post-war reconstruction in India was advanced in 1944 through the publication of plans by a group of industrialists and also by organized labor. Although the Government did not outline a definite program, public bodies were making studies on specified post-war problems and were publishing reports on progress and urgent needs. All groups have been directing their efforts toward raising agricultural output and extending industrialization as a means of raising national income, standards of living, and social welfare. The differences in the plans are in regard to the relative parts to be played by the State and private enterprise; the proportions of labor and capital that should be devoted to individual branches of production; and the length of time required to develop the program, taking financing arrangements into account.

Administrative Organization

Problems connected with post-war development of India were first dealt with by a reconstruction committee of the Executive Council of the Government of India, assisted by a number of other committees having strong nonofficial representation. Specially appointed development officers drew up plans for electrification, industries, roads, irrigation, and agriculture. In the spring of 1944, a member was appointed to the Executive Council to form a Department for Planning and Development. Being free from responsibility for the administration of other governmental policies, he was in a position to concentrate on post-war problems. Formation of the Department of Planning and Development was announced on June 1, 1944, its function being to coordinate the activities of various departments of the Indian Government and of the Provinces regarding post-war planning and reconstruction. The Department superseded the post-war reconstruction committee. Its work is carried out by expert committees for agriculture, civil aviation, education, hydroelectric development, public health, scientific research, telecommunications, and transport.

Progress of Governmental Planning

The findings in a general survey of reconstruction problems were presented by the reconstruction committee (of the Executive

[1] Data are from Government of India, Reconstruction Committee of Council, First Report on the Program of Reconstruction Planning, March 1, 1944; Great Britain, House of Commons, Debates, July 28, 1944; International Labor Review (International Labor Office, Montreal), September and November 1944; People's Plan for Economic Development of India (Indian Federation of Labor Post-War Reconstruction Committee, New Delhi, 1944); report from Clayton Lane, secretary in charge, Office of the Personal Representative of the President, New Delhi (No. 963); and Public Policy Digest (Washington), September 1944.

Council) in its first report, issued March 1, 1944. The committee stated that it was too early to estimate the exact form and magnitude of India's post-war problems and that world conditions (not only those in India) complicate the task. Nevertheless, financial and other implications of post-war planning should be assessed in advance as far as possible. According to the committee, two sets of problems will exist after the war, namely those directly arising from hostilities and, more important, the long-term problem of raising living conditions which is not directly connected with hostilities.

Reference is made to the effect of the war in creating probably the largest volume of employment ever attained in India. Even if employment is not reduced, a shift of labor will be inevitable when peace is restored. To furnish adequate statistical information for resettling and reemploying ex-service and other personnel, data concerning skills, etc., have already been collected regarding individual servicemen and workers. A questionnaire has been issued to all industries to enable the Government to estimate their labor force (by skills) which will become surplus when war orders cease. From the situation these industrial reports will disclose, it is expected that the Government will be able to prepare plans for the suitable employment of as many of the surplus industrial and technical workers as possible. A plan to establish employment agencies in larger towns is under consideration; some offices are already functioning and assisting in placement.

According to the reconstruction committee, governmental policy in disposing of surplus war goods is to be directed, as far as possible, toward insuring that such commodities will be used to make up serious shortages in the civilian market. The success of the plan will depend upon the closest cooperation between countries. Preparation is being made to insure the termination of contracts and the change-over to peacetime production with maximum speed.

Consideration of public utilities and public works was still in the general planning stage when the report was issued. For example, study was being made of the coordination of road and rail transport; the development of national, provincial, and district highways; irrigation; electric power; town planning; and slum clearance.

A questionnaire was sent to industrial and commercial associations in India and to local governments to obtain information on the existing structure of industrial organization. Meanwhile, to expedite the development of industry and trade, estimates of post-war requirements of heavy plant and machinery have been requested for submission as soon as possible. The importance of scientific and industrial research is fully appreciated, and plans for a broadened program are under way.

Assistance to agriculture will require long-term planning and State provision for conserving resources and securing greater efficiency. India must provide adequate nutrition for a growing population. In setting the target, technological possibilities of improved agricultural production must be kept in view, the committee stated.

Several committees are making factual surveys of public education and social services, and are to recommend reorganization and expansion in these fields. At the time the reconstruction committee's report was prepared it was believed that the broad policy regarding the development of social services would be decided before the close of hostilities. The problem of education was expected to be simpler

than those concerning the other social services. An educational plan had been worked out, based on long study by the central advisory board of education. In the field of health, special groups have been formed to inquire into the general problem and certain of its phases.

Plan of Private Industry

In January 1944, eight industrialists issued the Bombay plan (also called Tata after the Tata Iron & Steel Co., one of whose officers signed it). The plan calls for a 15-year program of economic development involving an estimated capital expenditure of Rs. 100,000 million.[2]

Proposals are based on the assumption that the plan would be executed by a National Government and that the country would be treated as a single economic unit. In the opinion of the authors, enforcement should be gradual over three 5-year periods of increasing intensity. Emphasis should be placed on mobilizing national resources, labor, capital goods, and managerial ability, giving priority to certain types of development, and avoiding undue strain on the national economy in the early stages. The stated aim of the plan is to double the per capita income in India within the 15-year period. Accomplishment of this, allowing for a 5-million increase in population annually, would require tripling the existing aggregate national income. To obtain such a rise in national income, the industrialists propose that net agricultural output should be a little more than doubled and industrial output (in large and small industry) should be increased by five times the existing amount.

During the initial stages of operation, primary attention should be given to establishing industries for the production of power and capital goods. However, the plan stresses that the manufacture of the most essential consumers' goods should not be neglected. Consolidation of land holdings, dealing with rural indebtedness and soil erosion, and extension of areas under cultivation are proposed to improve the yield per acre and increase agricultural output. Development of electricity is a prerequisite for industrial expansion and agricultural reorganization. The industrialists support a 50-percent rise in railway mileage and a 100-percent increase in road mileage in British India.

Funds to meet total expenditures would be obtained from the following sources: Rs. 3,000 million from the mobilization of privately held wealth in India; Rs. 10,000 million from sterling securities accumulated during wartime; Rs. 6,000 million from favorable trade returns; Rs. 7,000 million from external loans; Rs. 40,000 million from savings; and Rs. 34,000 million by the issue of currency. Means of raising capital will be more clearly indicated when the plan is ready for execution.

Early in 1945, the Bombay industrialists, with the exception of the member who had become the planning and development member of the Government of India, issued a second part of their plan in which it was attempted to solve questions of the distribution of income and to determine the role of the State in economic activity.

Conceding that the existing system of free enterprise had failed to bring about satisfactory distribution, it was advocated that the system

[2] Average exchange rate of the British Indian rupee in first 8 months of 1944=30.1 cents.

should be changed to the extent necessary to insure a minimum income essential for a reasonable standard of living for everyone and to correct gross inequalities. Use of the price mechanism was advocated as the chief method for allocating productive resources, subject to the following limitations: Minimum wages; "cheap money"; ceiling on profits that will not remove the incentive to efficiency; and taxes that will remedy gross inequalities in income. Lack of employment being the major cause of poverty, measures were suggested for providing the maximum employment volume, namely by a comparatively low rate of capital intensification, the encouragement of small-scale industry, and the organization of industrial cooperatives. As the idleness of agricultural labor for from 3 to 6 months annually is a large source of unemployment, the industrialists proposed mixed farming, cultivation of more than one crop a year, and subsidiary employment such as weaving, etc., for agriculturists. Emphasis was placed on the attainment of the desired ends gradually. This was particularly stressed with respect to the institution of basic minimum wages, with well-established industries making a beginning and gradually revising the rates until a reasonable standard is reached. The scheme presented does not offer complete security of income and freedom from want, even for industrial workers. Additional protection is therefore recommended under a comprehensive social-insurance program.

In the opinion of the industrialists, the gulf between capitalism and socialism is steadily narrowing, and future organization will be a combination of the two. To preserve the scope of individual enterprise while at the same time adequately safeguarding community interests, the State must take a positive stand in the administration of controls. Temporary controls suggested were the control of (1) production through the allocation of resources and the prevention of overproduction, (2) distribution through priorities in the release of raw materials, (3) consumption in the early stages by means of rationing, (4) investment to prevent inflation, (5) foreign trade and exchange with the idea of preventing the wastage of exchange and of protecting domestic industries, and (6) wages and working conditions. After full employment is achieved, the role of the State would be centered around the nature and scope of its ownership, control, and management of economic enterprises. State control was considered more important than ownership or management, as legal ownership would lose some of its essential attributes under such control.

Plan of Federation of Labor

The plan advanced by the Indian Federation of Labor laid greater stress on agricultural and social reform than does that of the Bombay industrialists. The Federation proposes an expenditure of Rs. 150,000 million in 10 years. Progressive improvements in the standard of living of the people during the operation of the plan would bring about a rise in per capita income in agriculture from Rs. 29 during the first year of operation to Rs. 121 during the tenth year; for the urban population the corresponding improvement is calculated at from Rs. 57 to Rs. 172 a year. The net improvement would be over 300 percent for the rural population and 200 percent for the urban. As the existing level of per capita income is much lower for rural than for urban dwellers, the gap between the two groups would be reduced by the

faster rate of increase in income for the rural than for the urban population. Combining the two sets of figures, the Indian Federation of Labor stated that the average per capita income would be Rs. 33 in the first year and Rs. 128 in the tenth, representing a fourfold improvement as a result of the plan. The agricultural output, it was stated, would be increased by 400 percent and industrial production by 600 percent. In combination with the development of social services for health, housing, and education, the plan would be the foundation for the cultural development of the people.

As agriculture is the main pursuit of the Indian people, on which nearly 70 percent of the total depend for subsistence, it is expected to provide employment for a major portion of the population, whatever may be the industrial development in a 10-year period. Therefore, the Federation's report stated agriculture must be made more productive. Suggested measures are the nationalization of land to remove it from the jurisdiction of noncultivators; payment of rural indebtedness to free the people from usurers; extension of the area under cultivation; introduction of modern machinery and soil conservation; and provision of adequate fertilizers and improved seeds. The authors believed that the success of their plans for increasing productivity could be aided materially by introducing a system of collective farms, to replace the tiny holdings.

Special stress was placed on building up the consumer-goods industries, among which are listed textiles, leather goods, sugar, paper, drugs and chemicals, tobacco, oil, furniture, and glass. Enlargement of such production would necessitate a substantial increase and development of the basic industries in the country. During the 10-year plan, it was suggested that priority should be given to hydroelectric power, mining and metallurgy, iron and steel, heavy chemicals, machinery and machine tools, cement, and railway engines and vehicles. In every case the new industries would be financed by the Government to insure the fullest return to the people; privately owned industries would be under public control.

As the development of both agriculture and industry would lead to a large increase in the movement of goods between urban and rural areas, extended railway and other transportation facilities would be needed. The plan includes educational, housing, and health facilities.

Total recommended expenditures spread over 10 years are:

	Rupees (in millions)
Total	150, 000
Agriculture	29, 500
Industry	56, 000
Communications	15, 000
Health	7, 600
Education	10, 400
Housing	31, 500

Those presenting the plan assumed that financing would be covered in large part by reinvesting most of the surplus accumulation from operations. Approximately 2 years, it was estimated, would be spent in preparatory planning. For 3 years after commencement of the 10-year plan, the initial capital expenditure would total Rs. 16,000 million; thereafter the operations would be self-sustaining.

Industrial Injuries

Industrial Injuries in the Fourth Quarter of 1944

THE volume of work injuries in manufacturing declined sharply during the last quarter of 1944. In comparison with an average frequency of 19.4 disabling injuries per million employee-hours worked during the first 9 months of the year, the all-manufacturing injury-frequency rate for October was 17.8. For November the rate was 16.8 and for December it was 15.9. As a result of this sharp decline at the end of the year, which appears to have some seasonal aspects, the preliminary all-manufacturing injury-frequency rate for the year 1944 was 18.8,[1] as compared with the final average of 20.0 for the preceding year.

Injury reports for the last 3 months of 1944 were received from over 11,400 manufacturing establishments. On the basis of these reports it is estimated that 54,600 manufacturing workers were disabled by injuries experienced in the course of their employment during October, 51,000 in November, and 47,800 in December. The full cost of these injuries in terms of manpower cannot yet be computed because many of the disabilities will continue far into the future. The immediate losses during the fourth quarter of 1944, however, may be estimated conservatively as equivalent to 3,068,000 man-days of productive effort. This manpower loss is as great as would arise from the withdrawal of 117,000 workers from productive activity for a full month.

The fourth quarter decline in injury-frequency rates was quite general among the individual manufacturing industries surveyed. Practically all of the industry classifications showed some frequency-rate reduction, and 46 of the 89 listed groups recorded their lowest monthly rates of the year during this period. Three industries had their lowest rates of the year in October, 18 reached their lowest point in November, and 28 were lower in December than during any other month of the year. In contrast, however, there were seven industries which had their highest monthly rates of the year during the last quarter. Three of these industries—small-arms ammunition, motor vehicles, and military tanks—were war industries in which there had been some curtailment of production in the earlier part of the year. The urgent demand for greater production in these industries, as a result of changed military conditions in the latter part of the year, may have had some bearing upon the rise in their frequency rates. Two of the other industries which had higher rates in the last quarter of the year—confectionery and canning and preserving—are strongly affected by seasonal factors and their trend to higher fre-

[1] Subject to revision on the basis of the more comprehensive annual survey now in progress. The injury-frequency rate represents the average number of disabling injuries for each million employee-hours worked.

quency rates may also reflect expanded activities toward the end of the year. There was no indication, however, that the industries which achieved lower frequency rates in the last quarter had had any curtailment in their activities.

Although the 12-month cumulative frequency rates for the various industry classifications must be considered as preliminary rates for the year, subject to revision on the basis of the more comprehensive annual survey now in progress, they do serve as good indicators of the general level of safety conditions prevailing in each industry during the period and permit a tentative evaluation of the 1944 accident records of the different industry groups. The lowest of the 87 listed 12-month frequency rates was 5.7 for the women's clothing industry. The rates of the explosives industry (6.1) and the rayon and allied products (chemical) industry (6.6), however, were only slightly higher. Other industries with 12-month rates of less than 10 were small-arms ammunition (7.7), sighting and fire-control equipment (8.0), radios and phonographs (8.2), aircraft (8.9), iron and steel (9.4), and soap and glycerin (9.4).

The highest of the recorded 12-month frequency rates for 1944 was 54.5 for the sawmill industry. The wooden-container industry also had a rate of over 50 (51.6), while five other industries had rates of over 40. These were plate fabrication and boiler-shop products (48.2), planing mills (46.0), foundries (42.9), enameling and galvanizing (41.3), and sheet-metal work (40.9).

Despite the fact that the 12-month cumulative frequency rate for all-manufacturing industries in 1944 (18.8) was 6 percent lower than the 1943 annual rate, comparison between the 1944 rates for the individual industries and their corresponding 1943 rates reveals no significant general trend. Nine of the individual industries had preliminary 1944 rates which were 5 or more frequency rate points lower than their 1943 annual rates, while 9 others had 1944 rates which were five or more points higher than their 1943 averages. Most important among the reductions, from the standpoint of their effect upon the total volume of injuries, were those achieved in the slaughtering and meat-packing and the shipbuilding industries. It is pertinent to note, in this connection, that intensive safety campaigns were conducted in both of these industries during 1944. In the slaughtering and meat-packing industry the safety drive was sponsored by the division of Labor Standards of the United States Department of Labor and was conducted through the cooperation of the meat industry, the National Committee for the Conservation of Manpower in War Industries, various State agencies, and the insurance companies which write workmen's compensation insurance. In the shipbuilding industry an average reduction of about 25 percent in the injury-frequency rate, as compared with the preceding year, was achieved through the continuing safety program, sponsored by the United States Maritime Commission and the Navy Department.

In contrast to these industries which had pronounced frequency-rate reductions during 1944, it is significant that the group of industries for which the more substantial frequency-rate increases were recorded in 1944 included three of the ordnance industries, i. e.,

ammunition, 20-millimeters and over; small-arms; and miscellaneous ordnance and accessories.

The almost even balance between increases and decreases in frequency rates was also maintained in the group of industries for which less important changes were recorded. Twenty-two of the individual industries had 1944 preliminary rates which were from 1 to 5 frequency-rate points lower than their 1943 averages and 21 industries had similar increases in their 1944 rates. No significant groupings were observed among the industries which registered these changes in their frequency rates, except that 15 of the 22 which showed improvement during 1944 had 1943 rates of less than 20, while only 9 of the 21 which showed increases had 1943 rates of less than 20.

Industrial Injury-Frequency Rates [1] for Selected Manufacturing Industries, Fourth Quarter of 1944, With Cumulative Rates for 1944

Industry [2]	Fourth quarter of 1944					Frequency rate	
	Number of establishments, December 1944	Frequency rate for [3]—				Cumulative, January–December 1944 [3]	1943: Annual [4]
		October	November	December	Fourth quarter		
Chemical products:							
Chemicals, industrial	288	14.5	11.8	12.4	12.9	14.8	18.3
Drugs, toiletries, and insecticides	69	20.4	16.4	17.1	18.0	19.5	18.5
Explosives	62	5.7	4.9	3.9	4.8	6.1	5.3
Paints and varnishes	73	14.9	14.5	15.2	14.9	18.2	19.0
Rayon and allied products (chemical)	22	7.1	6.0	5.4	6.2	6.6	10.5
Soap and glycerin	11	8.1	10.7	10.2	9.6	9.4	11.4
Synthetic rubber	11	3.1	1.0	2.1	2.0	(5)	(5)
Not elsewhere classified	67	14.5	14.4	13.7	14.2	12.5	17.1
Food products:							
Canning and preserving	43	19.5	24.8	35.0	25.4	25.7	25.3
Confectionery	7	20.5	18.8	17.0	18.8	17.1	19.4
Distilleries	39	20.4	28.0	16.0	21.3	(5)	(5)
Flour, feed, and grain-mill products	8	30.0	14.6	16.9	20.8	22.7	30.2
Slaughtering and meat packing	547	40.7	33.2	36.6	36.8	36.0	47.6
Not elsewhere classified	33	25.8	21.3	28.8	25.3	26.6	31.2
Iron and steel and their products:							
Bolts, nuts, washers, and rivets	35	23.3	22.1	17.7	21.1	27.5	21.7
Cutlery and edge tools	32	28.4	23.8	24.5	25.5	26.6	25.9
Enameling, galvanizing, etc	12	37.7	35.5	38.9	37.4	41.3	36.1
Fabricated structural steel	97	29.1	27.1	26.2	27.6	33.5	34.7
Forgings, iron and steel	138	36.6	36.8	33.2	35.5	35.4	40.8
Foundries, iron and steel	521	44.2	39.1	37.4	40.3	42.9	43.4
Hardware	33	16.9	13.9	11.6	14.1	18.2	20.2
Heating equipment, not elsewhere classified	48	32.8	30.9	22.5	28.7	30.8	36.3
Iron and steel	192	8.6	8.3	8.4	8.4	9.4	10.0
Plate fabrication and boiler-shop products	96	35.4	30.9	27.7	31.5	48.2	44.3
Plumbers' supplies	15	16.1	16.4	16.2	16.2	17.8	21.9
Screws and screw-machine products	70	24.0	18.4	19.9	20.8	24.3	19.2
Stamped and pressed metal products	230	21.5	22.6	20.8	21.6	32.4	28.8
Steam fittings and apparatus	51	27.5	20.1	17.6	21.7	24.2	30.5
Tin cans and other tinware	18	14.3	12.8	11.8	13.0	17.7	17.3
Tools, except edge tools	60	26.4	23.1	23.7	24.4	25.7	25.5
Wire and wire products	143	21.9	21.4	16.9	20.1	22.6	21.4
Not elsewhere classified	268	21.8	20.9	20.9	21.2	26.8	26.4
Leather and its products:							
Boots and shoes, other than rubber	274	12.4	12.4	10.6	11.9	14.1	11.8
Leather	27	29.6	27.7	27.3	28.2	29.2	29.4
Lumber, lumber products, and furniture:							
Furniture, except metal	56	27.2	35.1	21.2	27.9	27.7	27.0
Planing mills	43	42.8	36.8	33.8	37.9	46.0	44.2
Sawmills	40	50.6	54.7	50.2	51.8	54.5	58.4
Wooden containers	42	46.9	35.6	43.2	41.9	51.6	48.8
Not elsewhere classified	43	34.5	36.1	37.6	36.0	39.3	37.1

See footnotes at end of table.

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Industrial Injury-Frequency Rates [1] for Selected Manufacturing Industries, Fourth Quarter of 1944, With Cumulative Rates for 1944—Continued

Industry [2]	Fourth quarter of 1944					Frequency rate	
	Number of establishments, December 1944	Frequency rate for [3]—				Cumulative, January–December 1944 [3]	1943: Annual [4]
		October	November	December	Fourth quarter		
Machinery (not transportation):							
Agricultural machinery and tractors	42	23.0	23.6	24.0	23.5	22.8	19.9
Commercial and household machines	47	19.4	16.1	10.3	15.2	18.6	18.0
Construction and mining machinery	108	26.6	23.6	25.4	25.2	27.4	29.5
Electrical equipment and supplies	536	11.0	9.2	9.1	9.8	10.6	10.9
Engines and turbines	50	8.8	8.8	8.9	8.8	11.4	18.2
Food-products machinery	22	32.9	36.9	32.2	33.9	32.3	27.2
General industrial machinery	615	21.2	21.1	17.6	20.0	22.6	23.0
Machine shops, general	186	16.6	14.6	15.3	15.5	20.9	25.3
Metalworking machinery	613	16.3	14.2	13.2	14.6	17.3	19.2
Special industry machinery, not elsewhere classified	79	24.9	23.0	26.5	24.8	24.1	24.6
Textile machinery	10	12.3	16.2	8.9	12.4	21.0	14.6
Paper and allied products:							
Paper	266	25.5	31.3	26.5	27.8	29.7	31.5
Paper boxes and containers	381	20.3	20.9	20.5	20.6	24.8	22.7
Paper and pulp (integrated)	98	22.9	21.0	24.1	22.7	25.3	25.5
Pulp	23	35.6	28.4	29.9	31.3	35.1	32.6
Not elsewhere classified	41	19.3	18.4	16.3	18.0	20.5	26.9
Printing and publishing:							
Book and job	41	9.7	8.2	8.6	8.8	11.0	10.5
Rubber and its products:							
Rubber boots and shoes	11	19.8	23.3	12.0	18.4	13.8	10.7
Rubber tires	35	16.3	15.7	13.2	15.1	14.7	14.5
Not elsewhere classified	89	20.2	18.2	17.6	18.7	17.3	19.7
Stone, clay, and glass products:							
Concrete, gypsum, and plaster products	108	31.5	25.0	34.0	30.1	35.2	40.8
Glass	33	18.7	12.2	15.2	15.4	17.5	20.2
Pottery	32	16.7	15.0	15.1	15.6	17.9	19.5
Not elsewhere classified	75	15.9	15.4	20.1	17.0	15.8	19.3
Textile and textile-mill products:							
Clothing, men's	474	10.1	9.5	8.4	9.4	10.7	7.6
Clothing, women's	349	4.9	4.8	6.1	5.3	5.7	4.6
Cotton goods	196	15.3	13.4	10.8	13.1	14.7	16.7
Dyeing and finishing	44	14.0	13.4	16.4	14.6	22.8	23.6
Knit goods	71	9.9	7.2	9.1	8.8	11.0	8.3
Silk and rayon products, not elsewhere classified	50	12.7	13.5	15.4	13.9	14.3	13.9
Woolen goods	152	19.3	18.3	15.7	17.8	18.9	19.8
Not elsewhere classified	151	17.1	14.4	16.2	15.9	18.3	20.6
Transportation equipment:							
Aircraft	40	7.4	7.7	6.4	7.2	8.9	9.7
Aircraft parts	249	11.2	11.1	10.1	10.8	12.3	11.7
Motor vehicles	84	22.8	20.7	18.6	20.6	14.4	13.6
Motor-vehicle parts	73	22.6	25.9	20.2	22.9	25.4	22.0
Railroad equipment	47	19.2	19.2	17.1	18.6	22.0	25.0
Shipbuilding	228	20.6	20.5	19.6	20.3	23.7	31.5
Ordnance and accessories:							
Ammunition, small-arms	14	20.7	12.1	16.2	16.4	7.7	5.1
Ammunition, 20-mm. and over	320	23.1	22.6	21.8	22.5	24.3	19.0
Guns and related equipment	89	18.0	17.9	15.7	17.2	17.1	15.5
Sighting and fire-control equipment	32	7.7	5.8	6.0	6.5	8.0	9.3
Small arms	56	14.5	13.4	11.5	13.1	14.1	8.6
Tank parts, military	38	25.0	23.6	21.4	23.3	21.0	16.2
Tanks, military	14	18.0	15.1	18.8	17.3	14.5	12.2
Not elsewhere classified	35	22.9	23.6	21.2	22.5	22.7	14.0
Miscellaneous manufacturing:							
Nonferrous metal products	501	23.3	22.4	20.3	22.0	26.0	25.0
Radios and phonographs	188	7.4	7.0	6.5	7.0	8.2	7.9
Sheet-metal work	41	34.4	37.2	29.3	33.7	40.9	26.5
Not elsewhere classified	361	11.3	10.1	10.9	10.8	14.4	14.2

[1] The frequency rate represents the average number of disabling industrial injuries for each million employee-hours worked.

[2] A few industries have been omitted from this table because the coverage for the month did not amount to 1,000,000 or more employee-hours worked.

[3] Computed from all reports received for the month; not based on identical plants in successive months.

[4] Based on comprehensive annual survey.

[5] Not available.

Social Security

Increase in Unemployment Benefits in Great Britain[1]

INCREASES in unemployment-insurance benefits went into effect in Great Britain on November 2, 1944, by the terms of the new Unemployment Insurance (Increase of Benefit) Act. The new legislation, which was presented to Parliament by the Government on September 27 and received Royal assent on October 26, 1944, was immediately put into force by order of the Minister of Labor and National Service.

This new act is designed merely as an interim measure to increase benefits under the existing acts (1935–40) in the transition period from war to peace. It is not a substitute for the unemployment-insurance provisions contained in the Government's comprehensive proposals for an enlarged and unified system of social insurance (outlined in its White Paper issued late in September 1944 and subsequently presented to Parliament).[2] The latter plan was conditioned upon a peacetime economy and was to be brought into operation under a Minister of Social Insurance, who would be responsible for the legislative and other preliminary work necessary for gradually implementing so extensive a system. Shortly after the new Unemployment Insurance (Increase of Benefit) Act went into effect, the Ministry of Social ("National") Insurance[3] was created, and Sir William Jowitt became Minister to the post he had been holding without portfolio.

During the debates on the bill, it was reported that the increased rates of benefit provided for in the new measure could be met if unemployment did not exceed 8 percent, and that an increase above this average was not anticipated during the first 2 years of its operation; also that employment conditions during the war had resulted in a steady increase of the Unemployment Fund, which currently stood about £290,000,000.[4] The increased benefit rates were therefore passed without increasing the existing rates of contribution, "taking into account the short-term nature" of the legislation.

Increased Benefits Under the New Law

The new measure retains the categories of persons eligible for benefit under existing Unemployment Insurance Acts (1935–40). The various

[1] Great Britain. Laws, statutes, etc. Unemployment Insurance (Increase of Benefit) Act, 7 and 8, Geo. 6 (Session 1943–44), ch. 42; Ministry of Reconstruction, Social Insurance, Parts I and II, London, 1944 (Cmd. 6550 and 6551); Parliamentary Debates, September 27 to November 17, 1944; Ministry of Labor Gazette (London), November 1944; also, Economist (London), October 7, 1944.

[2] For a description of these provisions, see Monthly Labor Review, December 1944 (p. 1183).

[3] The title of the Ministry was changed from Ministry of Social Insurance to Ministry of National Insurance, during the passage of the bill creating the new office.

[4] Average exchange rate of pound (20 shillings) in 1944=$4.035.

beneficiaries continue to qualify for insurance under one of two plans—the general scheme or the agricultural scheme.

Under the general scheme, the weekly rates of benefit are increased by 4s. for men and single women who are over 21, and for those married women who are wholly or partly supporting invalid husbands, or who are living apart and can obtain no financial assistance from their husbands. In the case of other married women 21 and over, the increase is 2s. Under the agricultural scheme, men receive 4s. increase and women 3s.

Under both systems an increase of 3s. is granted to young men and young women from 18 to 20 years of age, and to boys and girls 17 years of age. An increase of 1s. is granted to boys and girls aged 16.

For a wife or other adult dependent an increase of 6s. is granted under the general scheme, and an increase of 5s. under the agricultural system. For each dependent child, an increase of 1s. is allowed under both systems.

Under the agricultural scheme the maximum weekly benefit is raised 13s. (from 41s. to 54s.).

The revised rates are as shown in the accompanying table.

Unemployment Benefits in Great Britain Under Law of October 26, 1944

Class of beneficiary and of benefits	Weekly rate of benefit	
	General scheme	Agricultural scheme
	s. d.[1]	s. d.[1]
Benefits:		
Men (aged 21 and over)	24 0	22 0
Single women (aged 21 and over)	22 0	18 0
Married women (aged 21 and over, supporting invalid husband, or living apart without his support)	22 0	
Other married women (aged 21 and over)	20 0	
Young persons:		
Young men (aged 18–20)	19 0	18 0
Young women (aged 18–20)	17 0	15 0
Juveniles:		
Boys (aged 17)	12 0	10 6
Girls (aged 17)	10 6	9 0
Boys (aged 16)	7 0	6 0
Girls (aged 16)	6 0	5 0
Dependents' allowances:		
For adult dependent	16 0	14 0
For first or second dependent child	5 0	5 0
For each additional dependent child	4 0	4 0
Maximum weekly benefit (including dependents' allowances) payable under the agricultural scheme	----------	54 0

[1] Average exchange rate of shilling (12 pence) in 1944=20.2 cents.

In accordance with the rates shown above, a married man with a wife and two children will receive 50s. instead of 38s. a week, under the general scheme, and 46s. instead of 35s., under the agricultural scheme.

In the case of adult dependents' allowances and the rates for men over 21 and "other married women," the new rates, under the general scheme, reach the full standard of the social security proposals. However, those persons coming under the agricultural system have the most to gain by the passage of the social security proposals.

Social Insurance in Panama, 1943–44[1]

A SYSTEM of compulsory social insurance providing sickness, maternity, death, disability, and old-age benefits for all persons in public employment and certain persons in private employment was instituted in Panama by a law of March 21, 1941, and revised by a law of April 27, 1943. The system is administered through the Social Insurance Fund, under the direction of a manager and governing body, and is financed by an 8-percent tax on the remuneration of employed persons (payable 4 percent by the employed and 4 percent by the employer) and certain State grants and taxes, and other resources. During the first year of operations under the new act, receipts amounted to 3,070,872 balboas; and expenditures, mainly on benefit payments, to 610,964 balboas. The largest part (44.2 percent) of the payments went for 13,141 cases of sickness and maternity benefits, and the smallest part (1.6 percent) on 216 death benefits.

Coverage of Social-Insurance System

Insurance of the types named above is required for all persons employed by the State, the Provinces, municipalities, and autonomous and semi-autonomous public bodies, for persons employed by private individuals or enterprises (applicable to the districts of Panama and Colón), and for independent workers with annual income of less than 1,200 balboas. Wives, and children under 16 years of age, of compulsorily insured persons may be insured in the system voluntarily, as may also persons working on their own account with an annual income above 1,200 balboas, provided they prove that they are not suffering from any disease which may give rise to disability.

The actual number of workers covered under the act of 1943 has been reported as 40,000 in May 1944. The number of public and professional workers in Panama, according to the census of September 1940, however, was some 10,000, and employment in the various commercial and industrial establishments in Panama and Colón was given as about 45,000, exclusive of the 25,000 persons employed in the Canal Zone who are not covered by the act.

Benefits for Various Risks

Sickness and maternity benefits.—Sickness and maternity benefits are payable, under the act of 1943, to persons who have contributed to the insurance fund for at least 39 weeks during the 12 calendar months preceding the claim. If contributions have been suspended because of involuntary unemployment for not more than a period of 2 months following the end of employment, or for as much as 26 weeks because of reasons of health, the insured person retains his eligibility for benefits. Sickness benefits include medical attendance, medicaments, laboratory examinations, and surgical, dental, and hospital treatment, within cost limits which may be fixed by the governing body of the Fund in relation to the moneys available. In some cases, only part of the expenses is paid. The maximum period of 26 weeks for attend-

[1] Data are from Estadística Panameña (Contraloría General de la República, Dirección General de Estadística, Panama), May, August, and October 1944; and Social Insurance Act, No. 134, April 27, 1943, Republic of Panama [Laws, statutes, etc.].

ance and treatment may be increased to 52 weeks in individual cases with the consent of the governing body. In addition to the sickness benefits described, maternity insurance provides 50 percent of the average weekly earnings for 6 weeks preceding and 6 weeks following confinement.

Disability benefits.—An insured person is eligible for disability benefits (1) if he has paid into the Fund at least 156 weekly contributions and has a contribution ratio of not less than half during the 3 years preceding the beginning of disability, (2) if, in consequence of sickness or accident, he is unable to earn by work suited to his strength, capacity, and occupational training remuneration equal to at least one-third of the remuneration habitually earned in the same district by a physically sound employed person of the same sex and similar capacity and training, and (3) if he has been declared disabled by a board of 3 medical practitioners appointed by the Social Insurance Fund. An applicant must be under 55 years of age when disability begins, if a woman, and under 60, if a man. A disability pension may not be paid to an insured person, even if he satisfies the conditions above, if compensation by his employer is payable under statutory provisions relating to industrial accidents and occupational disease.

The pension consists of 50 percent of the basic monthly wage, plus 2 percent of this amount for every 52 weekly contributions in excess of 1,040, but may not exceed 200 balboas per month. After a provisional period of 5 years, the disability pension may become "definitive."

This part of the plan is only beginning to go into effect, only 2 percent of the expenditures in 1943–44 having been for this purpose.

Old-age pensions.—Old-age pensions are payable to women over 55 years of age and men over 60, at rates fixed in the same way as disability pensions, provided the recipient has made at least 1,040 weekly contributions and has made not less than half of his normal contributions during the 10 years preceding the beginning of the pension. For persons who cannot meet these requirements, the Fund provides for the granting of annuities based, with various restrictions, on total contributions paid.

Death benefits.—Death benefits consist of a payment (fixed by the governing body) for funeral expenses, if the insured has made 26 or more weekly contributions in the year preceding death.

Administration of Fund

The Social Insurance Fund created by the act of 1941 and continued by the act of 1943 is an autonomous institution responsible for the management of the insurance system under the guidance of a manager and a governing body. The latter consists of the Minister of Finance and the Treasury, the Governor of the National Bank, the Comptroller-General of the Republic (without right to vote), and 3 other members representing respectively persons in public employment, those in private employment, and employers of persons in private employment. The members as well as the manager are appointed for 6-year terms by the President of Panama, subject to the approval of the National Assembly.

The act of 1943 provides for substitutes for the members of the governing body and for the remuneration of the manager, and specifies the duties of the governing body and the manager. In addition to other duties, the governing body is empowered to draw up and amend the general regulations for the Fund and to fix the mortality and invalidity tables to be used for the assessment of annuities. The manager's duties include general administration, imposition of penalties, submission to the governing body annually of a detailed report on the year's activities and estimates of expenditures for the next year, the management of investments, and the making of contracts and agreements to insure economical and efficient administration of sickness and maternity benefits.

Financing the Fund

The act of March 21, 1941, stipulated that the system of benefits should be financed by (1) a premium of 5 percent on the remuneration of insured persons, (2) an initial contribution of 100,000 balboas from the Nation, (3) certain production, advertisement, and other taxes, fines and bequests, and (4) the assets and liabilities of the Retirement Pensions Fund created by Act No. 7 of 1935. Income from these sources proved to be insufficient to cover the benefits provided, as the pensions carried over from legislation between 1924 and 1935, alone, absorbed much of the total available. The Social Insurance Act of April 27, 1943, consequently provided that the old-age pensions granted under the act of 1941 and certain other pensions dating back to 1924 were to be paid by the National Treasury through the Social Insurance Fund.

The resources of the Fund established by the act of 1943 consist of (1) contributions payable by employed insured persons and by employers, each equal to 4 percent of the remuneration of the employed persons; (2) contributions payable by insured persons working on their own account, amounting to 5 percent of their income or profits; (3) a State subsidy equal to three-fifths of the contributions of persons working on their own account, and a State grant amounting to 0.8 percent of the remuneration of employed insured persons and of the income or profits of persons working on their own account; (4) contributions for family insurance, equal to 5 percent of the remuneration of the head of the family; (5) a production tax on spirits, wines, and beers, as defined in legislative decree No. 4 of September 3, 1941; and (6) certain interest, bequests, and legacies, and the proceeds of certain fines and taxes.

Disability and old-age pensions, under the act of 1943, are to be paid from a Joint Pension Fund (*Fundo Común de Pensiones*) which consists of a sum (allocated annually), equal to 7.6 percent of the remuneration of employed insured persons and of the income or profits of insured persons working on their own account, on which contributions have been levied during the year. Sickness, death, and maternity and administrative expenses are paid from the resources of the Social Insurance Fund not allotted to the Joint Pension Fund, with certain exceptions.

Operations Under the Fund

Table 1 shows the receipts of the Social Insurance Fund and expenditure on the various types of benefits and on administration for the year July 1, 1943, to June 30, 1944.

TABLE 1.—*Income and Expenditures of Social Insurance Fund of Panama, July 1, 1943–June 30, 1944*

Item	Amount	Item	Amount
	Balboas		*Balboas*
Total receipts	3,070,872	Total expenditures	610,964
Contributions	2,696,829	General fund	545,571
Private employment	1,766,136	Sickness	269,887
Governmental employment	930,693	Maternity	64,778
Taxes	227,056	Death	9,920
State contribution	103,401	Administration	200,986
Fines and refunds	10,362	Joint Pension Fund	51,599
Interest	33,224	Invalidity	12,729
		Old age	38,870
		Organization fund	13,794

The table indicates that the newly established 8-percent quota on remunerations of employed persons provided 87.8 percent of the total income of the Social Insurance Fund, taxes levied under the act 7.4 percent of the fund, and the State contribution 3.4 percent. About two-thirds of the quota on remunerations came from persons employed in private enterprises and their employers.

Sickness and maternity benefits.—The number of insured persons who received various forms of sickness and maternity compensation from the Social Insurance Fund during the year from July 1, 1943, to June 30, 1944, is indicated in table 2. On the basis of an insured coverage of 40,000, it appears that 1 of every 3 insured persons received sickness or maternity benefit during the year.

TABLE 2.—*Sickness and Maternity Benefit Cases Under Social Insurance Fund, Panama, July 1, 1943–June 30, 1944, by Sex and Monthly Earnings Group*

Average monthly earnings of benefit recipients	Number of benefit cases		
	Total	Males	Females
All groups	13,141	8,035	5,106
Under 25.00 balboas	861	323	538
25.00–49.99 balboas	3,267	1,609	1,658
50.00–74.99 balboas	4,088	2,441	1,647
75.00–99.99 balboas	2,387	1,512	875
100.00–124.99 balboas	800	657	143
125.00–149.99 balboas	550	479	71
150.00–174.99 balboas	271	240	31
175.00–199.99 balboas	239	218	21
Over 200.00 balboas	366	332	34
Unclassified	312	224	88

Types of illness treated.—An analysis of the data on the 13,141 medical cases cared for during the first year of operations under the act of 1943 shows that men accounted for almost two-thirds of all cases, and in a distribution by class of illness accounted for similarly large

proportions of all classes except three. According to the census of 1940, there are approximately 3 males to each female in the gainfully occupied population in the cities of Panama and Colón.

Table 3 shows the number of cases treated in 1943-44, by sex of patient and type of illness.

TABLE 3.—*Number of Medical Cases Under Social Insurance Fund of Panama, July 1, 1943–June 30, 1944, by Sex and by Type of Illness*

Class of illness[1]	Number of cases		
	Total	Male	Female
All classes of illness	13,141	8,035	5,106
Infective and parasitic diseases	1,143	896	247
Cancer and other tumors	104	64	40
Rheumatism, diseases of nutrition, and of the endocrene glands, other general diseases, etc	167	94	73
Diseases of the blood and chronic poisoning and intoxications	275	119	156
Diseases of the nervous system and organs of sense	1,973	1,343	630
Diseases of the circulatory system	177	137	40
Diseases of the respiratiory system	841	552	289
Diseases of the digestive system	3,310	1,959	1,351
Diseases of the genito-urinary system, etc	560	239	321
Deliveries and complications of pregnancy, childbirth, etc	537		537
Diseases of the skin	252	170	82
Diseases of the bones and organs of movement	148	112	36
Senility and old age	6	4	2
Injuries and accidents	22	15	7
Ill-defined and unindicated diseases	3,626	2,331	1,295

[1] According to the International List of Causes of Death.

The largest group of cases of an identified disease listed in the table (about one-fourth of all cases) consisted of those treated for diseases of the digestive system, the second largest group (more than one-sixth of all) diseases of the nervous system and organs of sense, and the third largest group (about one-twelfth of all) infective and parasitic diseases.

In examining data on these cases, it should be borne in mind that the number of cases may be greater than the number of individuals receiving benefits, because one insured person may appear twice or more in the total of 13,141 cases. When an eligible, insured person applies for benefit, the Social Insurance Fund Office approves the case and provides payment on a scale already established for the different types of illness. In addition to these records, the Fund has issued details on the different types of orders granted in the care of the 13,141 cases. Of 25,787 such orders, more than one-quarter were for medical attention, more than one-quarter for medicines, about one-tenth were for dental attention, slightly less than one-tenth for hospitalization, and the remainder for optical, surgical, laboratory, and other treatment.

Death benefits.—During the year the Fund provided death benefits for 216 insured persons. Diseases of the circulatory system accounted for the death of 22.7 percent of the cases, and infective and parasitic diseases for 18.7 percent.

Industrial Relations

Extent of Collective Bargaining and Union Status, January 1945 [1]

Union Agreement Coverage

SOME 14⅛ million workers were employed under collective-bargaining contracts in January 1945. An analysis by the Bureau of Labor Statistics indicates that these workers included approximately 47 percent of all workers employed in industries and occupations in which unions are actively engaged in obtaining written agreements with employers.[2] During the year 1944 there was an increase in agreement coverage of over half a million workers, which was equivalent to a 4.5-percent rise in the proportion of employed workers covered by agreements.

Manufacturing.—Approximately 65 percent (more than 8¾ million) of all production wage earners [3] in manufacturing industries were employed under the terms of union agreements at the beginning of 1945, representing an increase during the year of 8 percent in the proportion of employees working under union agreements.

The largest increases in the proportion of workers under agreement were in the tobacco and chemical industries and, to a less extent, in the canned and preserved foods industry. Agreements were negotiated for the first time with several large aircraft and petroleum-refining companies, as well as with a number of meat-packing, shoe, leather-tanning, and rubber companies.

The degree of union organization at the beginning of 1945 varied considerably among the manufacturing industries, although not so much as among nonmanufacturing industries and trades. Over 90 percent of the production wage earners were working under union agreements in the aluminum, automobile, basic steel, brewery, fur, glass, men's clothing, rubber, and shipbuilding industries, in contrast to only a little more than 10 percent in the dairy-products industry.

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[1] For similar data for previous years see Monthly Labor Review, April 1944, February 1943, May 1942, and March 1939.

[2] It is estimated that approximately 30¼ million workers were employed in occupations in which unions are actively engaged in organizing and seeking to obtain written agreements. In most industries this includes all wage and salary workers except those in executive, managerial, and certain types of professional positions. It excludes all self-employed, domestic workers, agricultural wage workers on farms employing fewer than 6 persons, all Federal and State government employees, teachers, and elected and appointed officials in local governments.

It should be noted that the number of workers covered by union agreements is not the same as union membership. Except under closed- or union-shop conditions, agreements cover nonmembers as well as members employed within the given bargaining unit. On the other hand, some union members may be working in unorganized plants and many civil-service employees and teachers are members of unions but are not employed under the terms of bilateral written agreements.

[3] Clerical, professional, service, and construction workers, foremen, and truck drivers connected with manufacturing are treated as occupational groups under nonmanufacturing employees.

Proportion of Wage Earners Under Union Agreements in January 1945

MANUFACTURING INDUSTRIES

80–100 percent	60–80 percent	40–60 percent	20–40 percent	1–20 percent
Agricultural equipment. Aircraft and parts. Aluminum. Automobiles and parts. Breweries. Carpets and rugs, wool. Cement. Clothing, men's. Clothing, women's. Furs and fur garments. Glass and glassware. Meat packing. Newspaper printing and publishing. Nonferrous metals and products. Rubber products. Shipbuilding. Steel, basic. Sugar, beet and cane.	Book and job printing and publishing. Clocks and watches. Coal products. Electrical machinery, equipment, and appliances. Leather tanning. Machinery and machine tools. Millinery and hats. Paper and pulp. Petroleum refining. Railroad equipment. Rayon yarn. Tobacco products. Woolen and worsted textiles.	Baking. Canning and preserving foods. Dyeing and finishing textiles. Flour and other grain products. Furniture. Gloves, leather and cloth. Hosiery. Jewelry and silverware. Knit goods. Leather luggage, handbags, novelties. Lumber. Pottery, including chinaware. Shoes, cut stock and findings. Steel products. Stone and clay products.	Beverages, nonalcoholic. Chemicals, excluding rayon yarn. Confectionery products. Cotton textiles. Paper products. Silk and rayon textiles.	Dairy products.

NONMANUFACTURING INDUSTRIES

Actors and musicians. Airline pilots and mechanics. Bus and street car, local. Coal mining. Construction. Longshoring. Maritime. Metal mining. Motion-picture production. Railroads—freight and passenger, shops and clerical. Telegraph service and maintenance. Trucking, local and intercity.	Radio technicians. Theater—stage hands, motion-picture operators.	Bus lines, intercity. Light and power. Newspaper offices. Telephone service and maintenance.	Barber shops. Building servicing and maintenance. Cleaning and dyeing. Crude petroleum and natural gas. Fishing. Hotels and restaurants. Laundries. Nonmetallic mining and quarrying. Taxicabs.	Agriculture.[1] Beauty shops. Clerical and professional, excluding transportation, communication, theaters, and newspapers. Retail and wholesale trade.

[1] Less than 1 percent.

Nonmanufacturing.—About 33 percent (slightly more than 5½ million) of all nonmanufacturing workers were employed under the terms of union agreements at the beginning of 1945, representing an increase during the year of 6 percent in the proportion of employees working under agreement.

Over 95 percent of the coal-mining, maritime and longshoring, and railroad employees, including clerical and supervisory personnel, and over 90 percent of the employees in the iron-mining and telegraph industries were employed under union agreements.

Nearly 25 percent of the employees in service occupations and slightly less than 20 percent of the clerical and professional employees were under union agreements. A major portion of the clerical and professional workers in the transportation, communications, and public utilities industries and practically all actors and musicians were employed under collective-bargaining agreements. In manufacturing, financial, and business service establishments, and in wholesale and retail trade, only about 13 percent of the clerical and professional employees were under agreement.

Union Status

GENERAL TYPES

The union-status provisions in employer-union agreements can be classified into five general types according to their union-membership requirements and privileges, as well as to the presence or absence of check-off arrangements. The various degrees of union recognition or union security are commonly referred to as closed shop, union shop with or without preferential hiring of union members, maintenance of membership, preferential hiring with no membership requirements, and sole bargaining with no membership requirements. Check-off arrangements are of two kinds, usually referred to as automatic check-off and check-off by individual authorization.

Under closed-shop agreements all employees are required to be members of the appropriate union at the time of hiring, and they must continue to be members in good standing throughout their period of employment. Most of the closed-shop agreements require employers to hire through the union unless the union is unable to furnish suitable persons within a given period, in which case the persons hired elsewhere must join the union before starting to work.

In contrast to closed-shop agreements, a union-shop agreement provides that employers have complete control over the hiring of new employees and such persons need not be union members when hired. They must, however, become members within a specified time, usually 30 to 60 days, as a condition of continued employment. When a union-shop agreement, in addition to requiring that all employees join the union within a specified probationary period, states that union members shall be given preference in hiring, it differs very little in effect from the closed-shop agreement In a few cases, employees hired before a closed- or union-shop agreement is signed are exempt from the union-membership requirement.

A maintenance-of-membership agreement requires all employees who are members when the agreement is signed, and all who choose later to join the union, to retain their membership for the duration of

the agreement. The maintenance-of-membership provisions established by order of the National War Labor Board allow 15 days during which members may withdraw if they do not wish to remain members for the duration of the agreement.

Some agreements provide for preferential hiring without union-membership requirements. In other words, union members must be hired if available, but otherwise the employer may hire nonmembers and such persons need not join the union as a condition of continued employment.

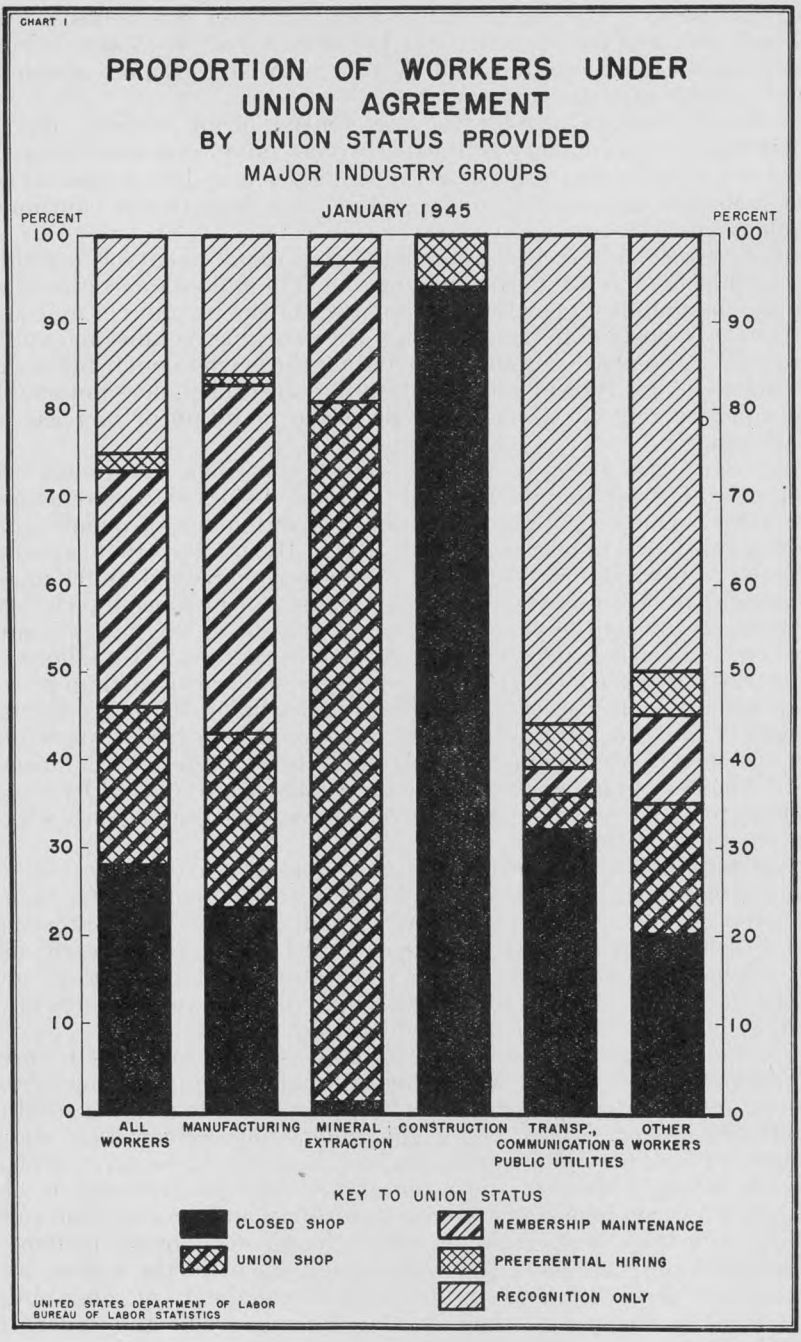
Some agreements include no membership requirements as a condition of hiring or continued employment. The union is recognized as the sole bargaining agent for all employees in the bargaining unit and is thus responsible for negotiating the working conditions under which all workers are employed, including those who do not belong to the union. This type of agreement, unlike the others, does not enable the union to rely on employment per se to maintain or increase its membership.

Extent of various types of union-status provisions.—Although the proportion of workers under closed- and union-shop clauses remained about the same, the proportion under maintenance-of-membership clauses continued to increase during 1944. By January 1945, approximately 27 percent (3¾ million) of all persons employed under union agreements were employed under maintenance-of-membership clauses, an increase during the year of almost 23 percent in the proportion of workers under such agreements. About 28 percent (4 million) of all workers under agreement were employed under closed-shop provisions and about 18 percent (2½ million) under union-shop agreements. (About 7 percent of the latter were covered by agreements which also specified that union members should be given preference in hiring.) Only 2 percent of all workers under agreement were covered by union preferential clauses, whereas 25 percent were under agreements which provided recognition only.

The proportion of workers under agreement covered by various types of union status in January 1945 is shown by chart 1, for major industry groups. All clerical, professional, and service workers are included in the group "other workers." All trucking and warehousing workers are included in "transportation, communication, and public utilities." Except for these occupational groups, workers have been included in the industry in which they are employed.

Manufacturing.—In January 1945, closed-shop provisions covered approximately 23 percent of all workers under manufacturing agreements, and union-shop agreements 20 percent—or together a total of about 3¾ million workers. Of the union-shop agreements, about 10 percent also provided that union members should be given preference in hiring. Most of the wage earners under agreement in the bakery, brewery, men's and women's clothing, and printing and publishing industries were employed under closed- or union-shop clauses. Substantial proportions of those under agreement in the hosiery and canned and preserved foods industries, and a majority of those under agreement in the paper, shoe, shipbuilding, and silk and rayon industries, were working under closed- or union-shop provisions.

About 3½ million workers in manufacturing industries were employed at the beginning of 1945 under maintenance-of-membership clauses. They included 40 percent of all workers under manufacturing



agreements, representing an increase of about 14 percent during the year in the proportion employed under such agreements. The greatest increase over the previous year in the proportion working under maintenance-of-membership clauses occurred in the nonferrous-metals alloying, rolling and drawing industry (from less than 15 percent to over 50 percent), but there were very substantial increases in the machinery and machine-tool, nonferrous-metals smelting and refining, tobacco, woolen and worsted textile, and electrical-machinery industries. At the beginning of 1945 maintenance-of-membership clauses covered most of the employees under agreement in the basic steel industry, a substantial proportion of those in the agricultural and railroad equipment and meat-packing industries and a majority of those under agreement in the aluminum, automobile, electrical-machinery, machinery and machine-tool, rubber, tobacco, woolen and worsted textile industries and in the nonferrous-metals alloying, rolling, drawing, smelting and refining industries.

Only about 1 percent of all manufacturing workers under agreement were employed under preferential-hiring provisions with no union-membership requirements. In only one manufacturing industry, pottery, were such clauses common.

About 16 percent of the workers under agreement in all manufacturing industries were employed in plants which recognize the union as sole bargaining agent but do not require union membership as a condition of hiring or continued employment. In the rayon-yarn industry slightly more than half of those under agreement were covered by such clauses and between a third and a half of those in the cotton textile, petroleum and coal products, nonferrous-metals alloying, rolling, and drawing, aircraft, and glass industries.

Nonmanufacturing.—Approximately 36 percent of all workers under agreements in nonmanufacturing industries and occupations were covered by closed-shop provisions and about 16 percent by union-shop provisions—a total of more than 2¾ million workers. Only a few of the union-shop agreements also provided that union members should be given preference in hiring. The closed shop was provided in almost all agreements in building construction and trucking and in many of the agreements covering service and trade employees such as barbers and employees in building service, laundry, dry cleaning, and food establishments. Coal miners and a majority of the organized bus and street-railway employees were under union-shop agreements.

About 6 percent of the nonmanufacturing workers under agreement were employed under membership-maintenance clauses. The greatest increase over the previous year in the proportion working under such clauses occurred in wholesale and retail trade, metal mining, and crude petroleum and natural gas; in the two last-named industries the majority of the employees were covered by such clauses.

Only 4 percent of all nonmanufacturing workers under agreement were employed under agreements with preferential-hiring provisions but no union-membership requirements. Only in maritime and longshoring are such clauses common.

About 38 percent of the workers under agreement in all nonmanufacturing industries and occupations were employed under contracts which recognized the union as sole bargaining agent but

included no membership requirements. More than half of these workers were employed in the railroad industry, where virtual union-shop conditions prevail, although the agreements do not provide for union-shop arrangements.

Check-Off Arrangements

During 1944 there was an increase of about 28 percent in the proportion of workers under agreements who were covered by some form of check-off provisions. Almost 6 million workers, or more than 40 percent of all employees under agreement, were covered by check-off provisions in January 1945. About half were covered by clauses providing for the automatic check-off of all members' dues and the other half by clauses which provide for check-off only for those employees who file individual written authorizations with the employer. Under some of the latter agreements the authorizations, once made, continue in effect for the duration of the agreement; under others they may be withdrawn whenever the employee desires. (If working under a closed- or union-shop or maintenance-of-membership agreement, however, the employee must personally pay his dues to the union if he cancels his check-off.) Although most of the check-off clauses provide that all dues and assessments levied by the union shall be collected, some specify "regular dues only" or check-offs not to exceed a given amount.

Manufacturing.—Almost 4½ million workers, or more than half of all workers under agreement in manufacturing industries, were employed at the beginning of the year under agreements which provide for check-off. Slightly fewer manufacturing workers were covered by automatic check-off arrangements than by provisions for check-off upon individual authorization.

During 1944 the proportion of workers under check-off arrangements increased about 38 percent. Most of the increase in the proportion under agreement with check-off arrangements took place in shipbuilding, although there were considerable increases in the railroad-equipment and nonferrous-metals alloying, rolling, and drawing industries. Over 90 percent of the workers under agreement in the basic steel, railroad-equipment, and hosiery industries were covered by check-off provisions, and the great majority of those in the cotton-textile, meat-packing, nonferrous-metals alloying, rolling, and drawing, shipbuilding, silk and rayon textile, and woolen and worsted textile industries.

Nonmanufacturing.—About 1½ million, or 26 percent of the workers employed under agreements in nonmanufacturing industries, were covered by some form of check-off arrangement. Most of these check-off clauses, including those covering coal miners, specify that the employer is to deduct the union dues and assessments from the wages of all members. The agreements for about a third of the nonmanufacturing employees covered by check-off clauses provided for check-off only upon authorization of individual employees.

Industrial Disputes

Strikes and Lockouts in February 1945

PRELIMINARY estimates of the Bureau of Labor Statistics indicate 310 strikes and lockouts in February 1945, involving 109,000 workers and 412,000 man-days of idleness. Idleness was 0.06 percent of the available working time.

Strikes and Lockouts in February 1945, with Comparative Figures for Earlier Periods

Month	Strikes and lockouts beginning in month		Man-days idle in month	
	Number	Workers involved	Number	Percent of available working time
February 1945[1]	310	109,000	412,000	0.06
January 1945[1]	240	44,000	228,000	.03
February 1944	340	146,438	458,604	.06
February 1943	200	38,841	117,279	.02
February 1942	181	58,122	357,333	.06
February 1941	257	71,875	1,134,531	.20

[1] Preliminary estimates.

Briggs and Chrysler strikes.—In the Detroit (Mich.) area two large strikes involved more than 20,000 workers and accounted for over 85,000 man-days idle. The first, at the Briggs Manufacturing Co., Detroit, involved a question of job classifications for certain workers, members of the U. A. W.–C. I. O. The second and largest strike in February occurred at the Chrysler Corporation. Dissatisfaction with increased production quotas was the underlying cause of the strike, although the immediate cause was the discharge of a small number of workers for alleged failure to meet these quotas.

On February 23 a strike began at the Dodge main plant, and on March 2 workers at the DeSoto-Warren plant struck in sympathy. Officers of the International Union, U. A. W.–C. I. O., immediately took steps to get the men back to work. When these failed, as did efforts of the Detroit War Labor Board, union and company officials were summoned to a show-cause hearing on March 3 before the National War Labor Board in Washington. At the hearing, agreement was reached to resume work—all striking employees to be returned to their jobs without discrimination, the question of discharges to be handled through the established grievance machinery, and that of production quotas to be submitted to arbitration. On March 4 the local union officially voted to return to work on March 5.

Todd Galveston, Todd Pacific, and Ingalls shipbuilding strikes.—About 12,000 workers were involved in three strikes in the shipbuild-

ing and ship-repair industry and caused almost 60,000 man-days of idleness. A 6-day strike occurred at the Todd Galveston Dry Docks, Inc., Galveston (Tex.), when 8 workers were given notices of disciplinary action contemplated by the company. In addition, the unions involved, members of the Metal Trades Council, A. F. of L., claimed an accumulation of unsettled grievances. The men returned to work when the company agreed to take all workers back—disciplinary action to be taken up through regular grievance procedure—and when a joint company-union meeting was scheduled to consider all pending grievances.

A strike involving 10 unions, members of the Pascagoula Metal Trades Council, A. F. of L., occurred at the Ingalls Shipbuilding Corporation in Pascagoula (Miss.) in late February. The underlying causes of the strike were a renewed demand for a closed shop, which had been denied by the WLB Shipbuilding Commission several months earlier, and alleged difficulty in settling grievances through the established machinery. The workers returned on March 1, upon orders of their international union, pending a WLB hearing on all issues in dispute.

A 17-day strike at the Todd Pacific Shipyards, Inc., and Todd Shipyards Corporation, Seattle (Wash.) Division, involved about 1,400 workers and caused nearly 12,000 man-days of idleness. The strike was precipitated when the company, which has a closed-shop contract with the Seattle Metal Trades Council, A. F. of L., covering all local union affiliates, discharged 6 welders not in good standing with the International Brotherhood of Boiler Makers, Iron Shipbuilders and Helpers of America. Members of the United Brotherhood of Weldors, Cutters and Helpers of America, an independent union which had several times petitioned the NLRB for elections to determine jurisdiction over welders in the plants, went out in protest. They returned to work with the understanding that the National War Labor Board would make an investigation.

Textile workers strike.—About 14,000 man-days of idleness resulted from a strike of members of the United Textile Workers of America, A. F. of L., at the American Enka Corporation (Enka, N. C.) in protest against the company's noncompliance with orders of the War Labor Board. On February 5 the company had filed a petition in the Federal Court in Asheville to restrain the union from taking any steps to make the orders effective; the court issued an order to that effect and the men struck. The NWLB assumed jurisdiction and when the strike continued referred the case to the President. The plant was taken over under Presidential order on February 18, and the men returned to work.

Activities of U. S. Conciliation Service, January 1945

DURING the month of January 1945, the U. S. Conciliation Service disposed of 1,957 situations, as compared with 2,042 situations in December 1944. During January 1944, 1,931 situations were closed.

Of the 204 strikes and lockouts handled, 182 were settled successfully; 22 cases were certified to the National War Labor Board in which strikes occurred during negotiations, but in 15 cases a Commissioner of Conciliation had effected a return-to-work agreement prior to certification of the case. The records indicate that 169 situations were threatened strikes and 1,384 were controversies in which the employer, employees, or other interested parties asked for the assignment of a conciliator to assist in the adjustment of disputes. During the month, 473 disputes were certified to the National War Labor Board, and in no cases did agencies other than the National War Labor Board assume jurisdiction. The remaining 200 situations included 99 arbitrations, 10 technical services, 13 investigations, and 78 requests for information, consultations, and special services.

Cases Closed by U. S. Conciliation Service, January 1945, by Type of Situation and Method of Handling

Method of handling	Total	Strikes and lockouts	Threatened strikes	Controversies	Other situations
All situations	1,957	204	169	1,384	200
Settled by conciliation	1,284	182	145	957	
Certified to National War Labor Board	473	[1] 22	24	427	
Referred to State and local agencies				2	
Decisions rendered in arbitration	99				99
Technical services completed	10				10
Investigation, special services	91				91

[1] Of these, 15 were settled prior to referral.

Labor Laws and Decisions

Recent Decisions of Interest to Labor[1]

Decisions on National Labor Relations Act

NLRB's grievance rules changed by court.—The Hughes Tool Co., in a review obtained by it from the Fifth Circuit Court of Appeals, procured alteration of the order of the National Labor Relations Board which had incidentally outlined the scope of a union's duty and interest in regard to grievances and the employer's obligation toward the union in such matters.[2]

The court drew a distinction as to a union's right of exclusive representation between bargaining as to rates of pay, wages, hours, and other conditions of employment, which will fix for the future the rules of employment for everyone in the unit, and "grievances" which are usually claims of individuals or small groups for infringement of their rights under the existing bargain or agreement. The court said that while grievances are a part of the business of the union under section II (5) of the act, section 9 (a) does not give the union the exclusive right to handle grievances. If the grievance involves only some question of fact or conduct peculiar to the employee and not affecting the unit, the union has no right of exclusive participation unless the questions raised involve bargaining for the unit or an interpretation of the bargain.

In general, the court continued, section 9 (a), in giving the individual employee or group of employees the right to present grievances, intended full presentation, including the taking of evidence and making argument. The court decided that an inexperienced worker may, as to his grievance, ask a more experienced friend to assist in presentation, but that such a worker may not present his grievance through any union except his elected representative. The designated union, when not asked to present the grievance but being on hand to safeguard its contract, cannot exclude the complaining worker, withdraw his complaint, or prevent consideration of his grievance.

Specifically, the agreement of the certified union provided for an employee's discussing trivial matters directly with a foreman, with or without the presence of the representative of the certified union or for his presenting his complaint to the grievance committee of the union. That committee then investigates the merits and, if judged substantial, presents the grievance for adjustment. Appeals and

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[1] Prepared in the Office of the Solicitor, Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law 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] For N. L. R. B. decision *In re Hughes Tool Co.* see Monthly Labor Review, October 1944, p. 800.

further procedures as provided in the agreement were suitable whether the individual or the grievance committee presented the grievance.

Under such an agreement there is no leeway for the employer to deal with a rival union on grievances. The court, however, did not consider that this action of the employer in dealing with the rival union constituted a refusal to bargain. The outcome of the case was modification of the Board's order so as to require the company in future to cease adjusting grievances through noncertified unions and to cease adjusting grievances not presented by the grievance representative of the certified union without notice to that representative; this will give the union opportunity to decide whether the grievance requires bargaining as to interpretation or change of the agreement and whether the union desires to participate. The special type of purely individual case in which the agreement provided for summary adjustment with the foreman was excepted from the requirement of notice.

Order vacating representation election not appealable.—The United States Supreme Court refused an employer's petition for review of a decision rendered in *Onam* v. *National Labor Relations Board* (145 Fed. (2d) 328), in which the Circuit Court of Appeals had decided that it was without power to review an order of the National Labor Relations Board, setting aside a representation election for unfair labor practices preceding an election.

"Company union" properly excluded from ballot.—The Circuit Court of Appeals for the Fourth Circuit in *Madden* v. *Brotherhood of Transit Employees* [3] reversed a United States District Court [4] and approved the position of the National Labor Relations Board.[5] The Board had held that it has the power to investigate employer domination in determining what unions may be on the ballot in a representation election; and that it is not necessary for the Board to delay an election to await a full-dress hearing and decision on a charge of unfair labor practice, consisting of the employer's sponsoring, favoring, or dominating the objectionable union, or as an alternative leave such a union on the ballot. The court said that the Wagner Act gave the district court no authority to enjoin officers of the Board from carrying out their official duties and no power of review. In the field in which review is permitted, that of unfair labor practice, Congress placed jurisdiction upon the circuit courts of appeals.

Anti-union letter to employees in the service called unfair.—An intemperate attack on unions, written by an employer to employees in the service, when considered with other improper efforts to influence an election, was held to have constituted illegal interference with the election. The men addressed remain employees, although in the armed services. Such employees are often included among eligible voters in representation elections; or certifications are made subject to review on the return of a sufficient number of servicemen to the employment. The principle of freedom of speech neither isolates the letters from other expressions or actions of the employer nor

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[3] —— Fed. ——, January 29, 1945.

[4] For earlier decisions, analyzed under the name of the Baltimore Transit Co. see Monthly Labor Review, January 1945, p. 125.

[5] Cf. *Employees Protective Assn. of Norfolk* v. *National Labor Relations Board*, —— Fed. (2d) —— (C. C. A. 4), January 29, 1945, where the decision was that no court has power to review the proceedings conducted under section 9 (c) of the act except where a final order, under section 10 (c) is based in whole or in part upon facts certified following an investigation pursuant to section 9 (c).

wipes out the essential bias and unfairness. (*In re Shartle Brothers Machine Co.*, 60 N. L. R. B. , February —, 1945.)

Board refusal to prejudge employer's conduct.—The National Labor Relations Board, during the period before an election, will not decide for the employer the legality of proposed conduct, such as taking a private poll as to the employees' wishes on union representation. Such polls have under certain circumstances been violations of the act. The Board held that prejudgment would be useless, since the Board cannot prevent a union from preferring charges of unfair labor practies if the union thinks the charges warranted. (*In re Hi-Alloy Castings Co.*, 60 N. L. R. B. , February —, 1945.)

Election ordered to settle union affiliation.—When an existing union contract with a closed-shop clause fails to state the union's affiliation and a dispute arising from an attempt to change affiliation has left the affiliation in doubt, an employer's refusal to negotiate without a new certification raises a question as to the identity of the bargaining agent which the National Labor Relations Board will solve through an election.[6] The Board said it was not disturbing or invalidating the agreement but was instituting a necessary proceeding to learn who should enforce it.

Persons who may be included in "cease and desist order."—The Supreme Court of the United States, in *Regal Knitwear Co.* v. *National Labor Relations Board*,[7] decided that the National Labor Relations Board in its "cease and desist order," and a circuit court of appeals in enforcing such an order, may properly include the successors or assigns of an employer corporation. The result is not to enlarge the scope of the order but to describe persons who may actively participate in future violations.

A dissenting opinion took the view that just as injunctions are confined to prohibiting only violations of a type which occurred in the past, so these injunctive orders should be confined to the persons proved to have committed violations. This opinion further said that it is not the function of the Board or of the courts to make unwarranted threats against innocent third persons, i. e., the successors and assigns, or to impose the penalty of reducing the salability of the business.

Economic strike becomes lockout.—The proved facts, in *National Labor Relations Board* v. *St. Mary's Sewer Pipe Co.*,[8] were that a union had brought a charge of discrimination before the Labor Relations Board against an employer in regard to five employees who had been discharged. Before this could be heard, the union called a strike as to wages, which had no relation to the five employees. A settlement of the wage issue was reached, but after it was ratified by the union the employer refused to carry it out by taking back the strikers, unless the union withdrew its charge of discrimination. Imposing this condition was held an unfair labor practice by the National Labor Relations Board. The court of appeals affirmed the Board's order.

National War Labor Board Decisions

No escape clause in renewal contract if none in original.—A union had successfully bargained for maintenance of membership without any escape clause in its last prior agreement. An order of the Regional

[6] *In re Register & Tribune Co.*, —— N. L. R. B. ——, February 2, 1945.
[7] —— U. S. ——, January 29, 1945.
[8] 146 Fed. (2d) 995 (C. C. A. 3), January 19, 1945.

War Labor Board, directing maintenance of membership with the usual escape clause in a new contract, was revised by the National War Labor Board by striking out the escape clause. The considerations involved included the fact that the union had been found to be a responsible and democratic organization. (In re *Conestoga Transp. Co. and Amalgamated Assn.*, Case No. 111–5159–D, December 15, 1944.)

Preferential-hiring clause awarded.—In the seasonal fruit-packing industry, the Tenth Regional War Labor Board awarded a preferential-hiring clause in a first union agreement, because it found that exceptional circumstances made such a clause the equivalent of a maintenance-of-membership clause for an industrial union as to the protection afforded (*California Citrus Packers*, Case No. 111–9580–D, November 10, 1944). In *L. S. Klatscher Co.* (Case No. 111–9922, December 22, 1944), the Board weighed the facts—that the union's membership had been dissipated by the employer's unfair labor practices during the attempts of the National Labor Relations Board to obtain compliance—and found the situation so exceptional as to justify a preferential-hiring clause in addition to maintenance of membership.

Increases from substandard pay retroactive to expiration of prior agreement.—The National War Labor Board approved the expiration date of a prior agreement as the retroactive date for wage increases in a dispute case involving substandard wages. In this case (*In re Pal Blade Co.*, Case No. 111–4208, December 21, 1944), the regional board had previously been ordered to work out brackets for sound and going wage rates for the area and to apply them to the individual employees. When this had been done, the employer appealed as to the retroactive date, arguing that the pay should go back no farther than the regional board's order applying the bracket rates. In deciding to the contrary, the Board distinguished this case from the mere revision by the Board of brackets previously established, a situation in which the date of revision is the proper starting date. Since the correction of substandard wages has been part of the stabilization program from the beginning, the increase here should be governed by the general rule as to a new contract, that the retroactive date of any adjustment directed by this Board should, in the absence of a differing agreement, be the expiration date of the prior contract.

Certification of guard unit honored by War Labor Board in absence of court action.—The Sixth Circuit Court of Appeals in Cincinnati set aside the National Labor Relations Board certification of a union of plant guards in the Otis works of the Jones & Laughlin Steel Corporation on the ground that such a union was against public policy and violated the National Labor Relations Act. When a similar situation was brought before the National War Labor Board, it refused to review the order of its regional board fixing employment conditions for a similar union at the employer's Pittsburgh plant. In the appeal (*In re Jones & Laughlin Steel Corp.*, Case No. 111–6230–D, December 22, 1944), the War Labor Board distinguished between the union locals, the plants, and the issues (the Sixth Circuit case involved unfair labor practices) in justifying its refusal to disturb the action of the regional board.

The War Labor Disputes Act requires that certification by the National Labor Relations Board of an exclusive bargaining agent for a specified bargaining unit must be accepted by the War Labor Board

for the purpose of its work in a dispute case. Only a court decision destroying the certification of the particular local as bargaining agent at the particular plant, or equivalent action by the National Labor Relations Board, could relieve the War Labor Board of its duty in this regard. As to the matter of public policy, the court noted that the War and Navy Departments have not officially opposed the organization of plant-protection employees who are auxiliary police, if they are represented by a bargaining union which does not include production and maintenance workers.

Decisions Relating to Fair Labor Standards Act

Homework lawfully prohibited in embroidery industry.—On February 26, 1945, the Supreme Court of the United States, in an opinion by Mr. Justice Rutledge, upheld the power of the Administrator of the Fair Labor Standards Act to prohibit homework in a wage order for the embroideries industry, on the basis of his finding that the prohibition was a term and condition necessary to protect and safeguard the 40-cent minimum rate established by the wage order for that industry (*Gemsco, Inc.* v. *Walling*).[9]

It was argued that the Administrator could not do this, as the act nowhere gave him explicit power to regulate or prohibit industrial homework, either generally or in connection with a wage order. The Court reasoned that the employer's argument amounted to a contention that Congress intended the act to be a dead letter in any industry where homework happens to exist. To the argument that the prohibition of homework was not a method of enforcement but a form of experimental social legislation, the Court answered that the Administrator's duty to make the rate effective embraces all means found by him to be necessary for the purpose and does not exclude any means merely because they may have other social or economic consequences.

Mr. Justice Roberts filed a dissenting opinion which was concurred in by Mr. Chief Justice Stone. Mr. Justice Frankfurter filed a separate opinion concurring with the result reached by the majority.

Child labor no less illegal because unprofitable.—Violation of the child-labor provisions of the Fair Labor Standards Act by a bakery corporation must be terminated, and entry of an injunction against the employer is required as the only proper exercise of the court's discretion, when the employer, after a warning that there are violations, continues or repeats the violation or fails to supply an assurance that the violation will not be continued (*Lenroot* v. *Interstate Bakery Corp.*, 146 Fed. (2d) 325). The lower court had refused an injunction because it considered the violations "not seriously and injuriously" against the public interest and found the corporation gained no "advantage or special profit" from employing the children who were hired by agents in its branch plant, contrary to the "declared policy" of the employer. The appellate court said the duty of a large corporation does not end with issuing orders to its foremen; the management must inquire into conditions and must carry out its responsibility for avoiding violation. The court's discretion must be exercised in the light of the public interest, which is seriously involved, in putting an end to the evil of oppressive child labor.

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[9] 65 Sup. Ct. 605, February 26, 1945.

Subpena power of Wage-Hour Administrator, as applied to newspapers.—Two United States Circuit Courts of Appeals, the tenth in *Oklahoma Press Publishing Co.* v. *Walling*[10] and the third in *Walling* v. *News Printing Co., Inc.*,[11] recently held (1) that it is not a violation of freedom of the press to require a newspaper publisher to produce his records of hours worked by his employees and wages paid to them, pursuant to an administrative subpena issued under the Fair Labor Standards Act and (2) that such subpena should be enforced by the court without requiring proof from the Administrator that the newspaper is covered by the act. Both courts noted that Congress supplied the Administrator with subpena power to aid him in the investigation of what the newspapers erroneously claimed must be *proved as a condition* for use of the subpena.

Mechanics of automobile service company within Wage and Hour Law.—Mechanics of a service company, who grease, repair, and maintain equipment of another business which uses this equipment for the interstate movement of automobiles and Army matériel, are within the Fair Labor Standards Act and are not exempt, according to the decision in *Foutell* v. *Walling*.[12] They are not in an exempt service establishment, because the greater part of their work is not done in intrastate commerce. On the contrary, in servicing vehicles which move in interstate commerce, they are part of that commerce. On the other hand, in addition to being in interstate commerce, their work affects safety of operation; but as their employer is neither a common, contract, nor private carrier, the motor carrier exemption is inapplicable.[13] The Interstate Commerce Commission has jurisdiction over workers doing such work only when they are employees of carriers, and its jurisdiction fixes limits for the exemption.

Effect of Wage and Hour Law on coal distributors.—A United States District Court in Tennessee, in *Walling* v. *West Kentucky Coal Co.*,[14] resolved a number of dubious points as to coverage and exemption in a complicated coal-distribution business. From coal mines in Kentucky owned by the employer, coal is transported, on a railroad owned by it and barges operated by it, to other States, including a depot in Tennessee. The employees of that depot were involved in this enforcement action of the Administrator of the Fair Labor Standards Act. The Court decided that—

1. Employees ordering, receiving, unloading, and screening coal coming from other States and doing equivalent work on coal before its out-of-State shipment are within the coverage of the act because they are engaged in interstate commerce.

2. Employees engaged in screening coal and in activities involved in supplying coal to consumers (even within the State), where the coal is consumed in producing goods for interstate commerce, are within the act as engaged in activities necessary to the production of goods for interstate commerce.

3. As to the retail establishment, the exemption of section 13(a) (2) was held inapplicable. The court so held (a) because the establishment made a substantial amount of its domestic sales to nonretail purchasers, such as peddlers, commercial and industrial consumers, institutions, and Government agencies, and such sales were larger in

[10] —— Fed. (2d) ——, February 15, 1945.
[11] —— Fed. (2d) ——, March 5, 1945.
[12] — Fed. (2d) — (C. C. A. 6), February 14, 1945.
[13] 29 U. S. C., sec. 213 (b) (1).
[14] —— Fed. Supp. ——, December 1, 1944.

quantity and less in price than the retail sale to a domestic consumer, (b) because an establishment in which work is done on goods sold is not a retail establishment regardless of the nature of the sales, if the work is not merely incidental to such retail sales as are made there, and (c) because the application of the exemption to an establishment cannot be determined by the trade meaning given to "retail dealers" in the coal business or by Government agencies dealing with the coal business, as such, when to do so would produce a result peculiar to the coal industry, since retail establishments in all industries are equally to be exempt or nonexempt on the basis of uniform tests.

4. As to other exemptions, the court determined that during any workweek, truck drivers, although crossing State lines, if they spend the major portion of hours worked delivering coal intrastate to industrial consumers who need the coal to produce goods for commerce, were engaged in "production" and not in "commerce" within the scope of the motor carrier exemption, section 13 (b) (1). However, employees of tugboats performing commercial tug service for boats and barge fleets in interstate commerce were seamen, exempt under section 13(a) (3). Employees generally, who perform covered work and exempt or noncovered work during the same workweek, come within the act on a workweek basis.

Refrigeration-truck mechanic within Fair Labor Standards Act.—An employee, whose work consisted entirely of servicing equipment used in the hauling and selling of ice cream and who did his work on the trucks moving across State lines and while they were at depots from which they would be sent across State lines, was engaged in interstate commerce and entitled to the benefits of the Fair Labor Standards Act. The exemption as to employees of motor carriers whose work affects safety of operation was held inapplicable because the connection between the refrigeration equipment and safety of operation of trucks is remote. Further, the exemptions for the first processing of milk or cream, the handling of agricultural commodities in their raw or natural state, and the making of dairy products were inapplicable. (*Colbeck* v. *Dairyland Creamery Co.*, 17 N. W. (2d) 262.)

Class action open for other employees.—After service employees brought suit for unpaid overtime for themselves "and other employees similarly situated,"[15] a California court had refused to permit an amendment by which 38 of their co-employees would be included in the action. The reason for refusal was that these new claimants might not be "similarly situated" because the date of the original suit might be within the time limit for such actions but not the date at which the additional employees joined the proceedings. In reversing the lower court, the Circuit Court of Appeals, in *Culver* v. *Bell & Loffland, Inc.* (146 Fed. (2d) 29), decided that Congress intended to avoid a multiplication of suits and for this purpose a liberal construction of the law must be adopted. The new claims must be treated as if they had been expressly made in the action as originally brought.

The same principle of liberal interpretation was applied in *Distelhorst* v. *Day & Zimmerman* (58 Fed. Supp. 334) by the United States District Court in Iowa, which said that courts in considering who is "similarly situated" should not be governed by how much or what degree of similarity there may or may not be but should permit class actions if there is any similarity. On this principle, the court per-

[15] 29 U. S. C., sec. 216 (b).

mitted an action by a building foreman to be joined by his fellow-employees who did very different classes of work, but each of whom was a foreman or the equivalent.

Bonuses included in regular rate of pay.—In the business under consideration, in *Walling* v. *Richmond Screw Anchor Co.*,[16] the employer had, since 1933, paid a bonus of 10 percent on the base salary of employees, distributed monthly in accordance with a decision of its board of directors. The bonus was subject to discontinuance if the company's finances became depleted. In the instant case the Administrator of the Fair Labor Standards Act succeeded in enjoining, as a violation of law, the employer's failure to include the bonus in the base pay upon which overtime was paid under that act. In granting the injunction, the court incidentally decided that the claims that the bonus is a mere gift and that there is no binding obligation on the employer to pay the bonus do not decide the case, because the bonus was actual and legal compensation. Regardless of existence of a legal right to claim the bonus, the test is whether the bonus regularly and actually reaches the employee's pocket. The purpose of the act, to discourage overtime work by making it costly, is evaded if employer and employee can agree on compensation at a rate satisfactory to both and then agree that overtime shall be based on a smaller scale. The court also decided that an incentive bonus paid in relation to production is part of the "regular" rate of pay. Though the employer and employee had not intended to evade the act in this case, the court said that the situation was governed by the decision of the Supreme Court in *Walling* v. *Helmerich & Payne* (326 U. S. 37)[17] and not by *Walling* v. *Belo Corp.* (316 U. S. 624).

New time limitation not applicable to employee suits.—In Iowa, an act passed in 1943 provided that "in all cases wherein a claim has arisen pursuant to the provisions of any Federal statute, where no period of limitation is prescribed, the holder of such claim * * * may commence action within * * * 6 months after the accrual of such claims."[18] In *Keen* v. *Mid-Continent Petroleum Corp.*,[19] it was decided that under Iowa decisions, contracts implied in law are regarded as "founded on written contract" as far as the period of limitation is concerned; that the action under the Wage and Hour Law is essentially contractual; therefore, either the Iowa statute relating to unwritten contracts or that relating to written contracts will control and not the new statute.

Another district court in Iowa, in *Kaplen* v. *Republic Pictures Corp.*,[20] dealt with this same 1943 statute of limitation,[18] and held that it was not a general statute of limitations but one directed to the provisions of a Federal statute and therefore invalid. This court said that acts of Congress within the sphere of delegated authority of the United States are supreme and the Iowa Legislature has no right to add, to a Federal statute, provisions limiting rights granted therein by Congress.[21] This is true, said the court, though in the absence of a congressionally stated time limit, the general statute of the State guides

[16] —— Fed. Supp. —— (D. C. N. Y.), January 13, 1945.
[17] For full discussion, see Monthly Labor Review, January 1945, p. 121.
[18] C. 267, 50 G. A. I. sec. 1.
[19] —— Fed. Supp. —— (U. S. D. C. Northern Iowa), January 11, 1945.
[20] —— Fed. Supp. ——, February 8, 1945.
[21] Compare decisions in *Kurth* v. *Clarke Lumber Co.* and *Fullerton* v. *Lamm* on the Oregon statute discussed in the Monthly Labor Review for March, 1945, p. 593.

the court as to the period within which a litigant must commence action.

Labor Decisions in State Courts

Union member's rights not hurt by union war fund against anti-closed-shop amendment.—An injunction was asked by plaintiff in the California State Court in the case of *DeMille* v. *American Federation of Radio Artists*,[22] to prevent plaintiff's suspension or expulsion by a local and national union of artists for nonpayment of an assessment. The suspension would prevent his fulfilling a radio contract because of a union rule under which other artists would not work with him if he were not in good standing with the union. The assessment which he refused to pay was one legally voted by the board of the local to finance opposition to a proposed constitutional amendment which would have outlawed the closed shop. Plaintiff had received due notice and explanation of the purpose of the assessment and he had refused to pay.

In denying the injunction, the court applied the following reasoning: (1) The California courts have recognized the closed shop as a valued tenet of organized labor in furtherance of which it may lawfully strike or picket; (2) the amendment which would have made it unlawful to "abridge" the right to work by requiring the closed shop or maintenance of membership was of vital interest to the union; (3) it is well known that some persons who are union members under closed-shop agreements are anti-closed shop and even anti-union and pay dues merely to obtain work; (4) the union assessment did not interfere with plaintiff's freedom of speech or his right to vote according to his individual views at the election; (5) the opposition to impairment of trade-unionism by a constitutional amendment is not a political activity like an attempt to elect or defeat a candidate for office; (6) the use of the money was not a violation of the Federal Corrupt Practices Act merely because the amendment was submitted in an election in which Federal officials were also being elected; (7) it was not beyond the power of the union to spend its ordinary funds in such cases for the betterment of its members; (8) the constitution and bylaws of the local union plus other fundamental documents constitute a contract binding on its later acquired members, and in this case they grant power to levy assessments and automatically operate to suspend a member who fails to pay such assessment, without any requirement of notice or hearing; and (9) this method of discipline, being part of the contract, infringes no rights and affords no ground for complaint.

State court acts when National Labor Relations Board has not acted.—A candy manufacturer who bought raw materials and sold his products in interstate commerce asked the court, under the State's Declaratory Judgment Act, to determine whether he was bound by a closed-shop agreement. The employer claimed that he signed the agreement under threat of picketing, not only against him but against his customers for dealing with him, during the period when he shipped his Christmas stock. At the time the contract was signed, the union did not represent a majority of the employees.

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[22] —— Pac. (2d) —— (Calif. Sup. Ct.), January 24, 1945.

The court of appeals reversed the action of the court below and directed it to proceed to a hearing and decision of the case. (*Pearson Candy Co., Ltd.*, v. *Waits.*)[23] In the absence of a paramount act of the Federal Government depriving the State court of power, the power exists under the State Declaratory Judgment Act to consider the binding effect of the agreement. The union had itself applied to the National War Labor Board which, suggesting that the question of representation was one for the National Labor Relations Board "or other tribunal of competent authority," directed that the contract be carried out until its invalidation or normal end. The State court considered itself a competent tribunal such as the Board mentioned.

Intra-union dispute decided under union-control law.—Members of a union local and its international, for the benefit of their fellow members and the local, asked a Texas court for a receiver and audit for the union local, claiming that the following had occurred in violation of the union constitution and bylaws: (1) Local officials had committed financial irregularities and refused audit. (2) After informal complaint the international president had made an informal inquiry and then taken over the property of the local and appointed as manager for it one of the suspected local officials. (3) The latter, acting as manager and claiming to have been ousted as an official, usurped the paid elective office of business agent, discharging the regularly chosen business agent. (4) As business manager, he coerced and threatened to bar from employment union members, including the plaintiff, compelling them to submit to his domination. (5) Meetings and elections were prevented by the manager, and the union had ceased to function under its basic laws and as a union. (6) Formal appeal to the international union had been rejected and, without court intervention, any resistance by members would cost them their union standing and their jobs.

The lower court had acted on the principle of noninterference in internal affairs of labor unions. However, the Texas Court of Civil Appeals, in *Lundine* v. *McKinney*,[24] reversed the decision, saying that the noninterference doctrine has an exception when the members' property rights or right to earn a living are involved; in that situation a court will inquire whether the proceedings within the union followed its laws and rules and whether they violated the laws of the land. The court will protect rights from damage by appointing a receiver if necessary, acting under the union-control law.

Declaratory judgment not proper in representation case under State Labor Relations Act.—In regard to a representation election for chain-store employees, requested by a union which was challenged by a rival, the Supreme Court of New York decided[25] that sections 704 and 706 of the State Labor Relations Law deal with "unfair labor practices," an entirely different type of activity from the investigation under section 705 to certify representatives for collective bargaining, and that the former but not the latter is subject to review (section 707). Accordingly, a declaratory judgment will not be rendered on a representation question.

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[23] 154 Pac. (2d) 913 (Calif.), December 28, 1944.
[24] —— S. W. (2d) ——, September 22, 1944.
[25] —— N. Y. Supp. ——, January 1, 1945.

Miscellaneous Decisions

Roadhouse entertainers held in peonage.—In reviewing a conviction of peonage, which consists of holding a person in compulsory service based on a real or pretended debt, the Fifth Circuit Court of Appeals, in *Pierce* v. *United States* (146 Fed. (2d) 84), upheld the finding of guilty. The testimony was that defendant procured the release from jail of young women convicted as "vagrants" by paying their fines, in some instances with an express agreement that they would repay him by working in his roadhouse. Shortly after their release and while they were working in the roadhouse, defendant bought clothing for the girls and thereafter refused to let them leave because they were in debt to him, telling them that they had to stay until the debt was paid. The girls tended bar, acted as waitresses and hostesses, and engaged in other activities at the roadhouse. These facts were held to constitute the crime of peonage on the part of the owner of the roadhouse. A dissenting opinion was filed as to those girls who had not actually agreed to work out debts but who remained because of fear of physical violence. The majority of the court, however, did not consider that the claim was related to the amount of the debt or the method of coercion. The crime exists when a person is held against his will and made to work to pay a debt.

Employer liable for neglect of helpless and stricken worker.—A track-maintenance worker had heat prostration on the job. The foreman told him to quit work and had part of the work gang take him home. There was no one at home and the worker was in no condition to summon help and died after he was left alone there. In *Szabo* v. *Pennsylvania R. R. Co.* (40 Atl. (2d) 562), an action to recover for the death caused by lack of due care, the Court of Errors and Appeals in New Jersey reinstated a jury verdict allowing recovery for the death, and rejected the defense that the employer had no duty toward the worker and that the foreman was acting on his own responsibility, so that the railroad was not responsible for what he did or left undone. The court said that although in the absence of a contract or statute, the employer has no duty to provide medical service or means of care to an injured employee even if the employer's carelessness caused the injury, there is a recognized exception. When an employee at work suffers sickness or injury, whether or not through the master's fault, to such an extent as to be helpless to provide for his own care, the master must put in his reach such medical care and other assistance as the emergency requires. The duty arises out of strict necessity and expires with the emergency. Whether adequate provision was made under all the facts is a jury question.

Wage and Hour Statistics

Hourly Earnings in the Ammunition-Loading Industry, 1944[1]

Summary

A BUREAU of Labor Statistics wage survey in ammunition-loading plants reveals that the straight-time average earnings of workers in representative key jobs amounted to 77 cents an hour in shell- and bomb-loading plants and to 71 cents an hour in bag-loading plants.

Among occupations studied in shell- and bomb-loading plants, average earnings ranged from 51 cents an hour for janitresses to $1.47 an hour for class A tool and die makers. Occupations with average earnings ranging between 65 and 75 cents an hour accounted for well over half of the workers, while slightly less than a third were in occupations averaging between 75 and 90 cents an hour.

In bag-loading plants, occupational earnings ranged from 48 cents for janitresses to $1.31 for class A pipe fitters. Nearly 87 percent of all the workers studied in this branch of the industry were employed in occupations in which the average hourly earnings ranged from 60 to 80 cents.

The ammunition-loading industry is outstanding for the large percentage of women it employs. These workers accounted for nearly three-fifths of the entire labor force of the plants covered by the survey. The employment of women is somewhat greater in bag-loading plants than in bomb- and shell-loading plants. Nearly two-thirds of the employees in bag loading were women. In contrast to the situation in many other manufacturing industries, the employment opportunities for women in ammunition loading are not limited to a few specialized jobs. Aside from certain indirect jobs which involve either very heavy work or long experience, women were found in nearly every occupation selected for study.

Wartime Development of the Industry

To supply the facilities needed for loading bombs and artillery ammunition on a scale commensurate with other wartime operations has required the building of an entire industry in a period of less than 5 years. In this branch of the ordnance industry, unlike many others, private production facilities could not be converted from other industries because of the highly specialized type of plant and equipment needed. During peacetime, the few existing Government owned and

[1] Prepared in the Bureau's Division of Wage Analysis by Edith M. Olsen, under the supervision of Victor S. Baril. For comparison with earnings in the explosives manufacturing industries, see Monthly Labor Review, March 1945 (p. 603).

operated manufacturing arsenals were able to load ammunition in sufficient quantity to meet the relatively small requirements of the Army and Navy. Although some expansion of these arsenals was possible, their production has been completely overshadowed by the large new plants built by the Government since September 1939. All of these new loading plants, although owned by the Government, are operated by private companies. Although many of these companies had had no experience in either the explosives or the ammunition industries prior to the war, they did have the managerial experience needed for large-scale production of war materials.

The ammunition-loading industry is widely scattered geographically. Only five States—Illinois, Indiana, Texas, Massachusetts, and Pennsylvania—had more than two plants in operation at the time of the present survey. The few plants in the Northeastern States are relatively small. In line with the Government's general policy of decentralizing the war industries for strategic reasons, the loading plants built during this war are scattered throughout the interior States of the country. Other factors which entered into the selection of plant sites for the new loading plants were reasonable proximity to other plants in the munitions program, such as those manufacturing the high explosives, gunpowder, and metal components of ammunition; availability of natural resources, transportation and housing facilities, and labor supply; and safety of surrounding communities. Consequently, these plants are typically located at some distance from already crowded industrial centers, and have normally been built on large tracts of land in isolated rural areas.

Nature of the Industry

The information contained in this report is based on a Bureau of Labor Statistics survey of privately operated plants loading aircraft bombs and artillery ammunition. The study included the loading into bags of propellent charges for large-caliber weapons, as well as the loading of component shell and bomb parts, such as fuzes, "boosters," primers, and detonators. For the purposes of this study, artillery ammunition is defined as ammunition used in cannon of all calibers or, more specifically, in weapons of 20 mm. or more.

The two basic types of explosives used in military ammunition are propellants and high explosives. The distinction between the two is made largely on the basis of the speed with which explosion occurs after the charge has been set off. Propellants are relatively mild explosives whose rate of combustion is comparatively slow and which build up pressure gradually. The principal function of the propellent charge is to exert enough pressure on the projectile to propel it from the gun at the required rate of speed. Smokeless powder is at present used almost universally as a propellant.

High explosives burn with such extreme rapidity that they cause almost instantaneous reaction. There are numerous types of high explosives, and in military use they serve as bursting charges in shells and bombs and as initiators. The function of the bursting charge, which must have great shattering power and which is carried in the cavity or body of shells and bombs, is to shatter the metal case into fragments. Although several different kinds of high explosives are used, the most commonly used bursting charge is TNT or a mix-

ture of TNT and ammonium nitrate, which is called amatol. Very sensitive high explosives, classified as initiators, are used in small amounts for setting off less-sensitive explosives and are usually loaded into the detonator, fuze, and booster. Since the bursting charge in shells and bombs is relatively insensitive to shock, these initiating explosives are loaded into a small detonator which is placed in the fuze, and into the booster which is generally assembled to the loaded fuze. Chief among the initiating explosives are mercury fulminate and lead azide, which are contained in the detonator, and tetryl, the typical booster explosive. The initial detonation, which is controlled by the fuze, explodes the tetryl charge in the booster, which in turn sets off the main or bursting charge of the shell or bomb.

Bombs are explosive missiles designed to be released over the target from aircraft. There are many different types and models of bombs, each serving a specific purpose. In general, however, they consist of a metal casing filled with the main high-explosive charge, a booster, one or more fuzes, a fin assembly for stabilizing the flight of the bomb through the air, and an arming-wire assembly to prevent the bomb from exploding prematurely.

Artillery projectiles are in many respects similar to bombs. The obvious differences are in size and in the method of projection from the point of release to the target. Bombs, which are released from aircraft, need no propellent charge to send them to their target. Projectiles fired from guns, on the other hand, require a propellent charge of slow-burning gunpowder to force them from the bore of the gun. A complete round of artillery ammunition, which includes all of the component parts necessary to fire the cannon once, includes, ordinarily, the main bursting charge (which is enclosed in the body of the projectile), a fuze and booster assembly, a propellent charge, and a primer loaded with black powder which performs the function of setting off or firing the propellent powder.

Depending upon the method of loading the propellent charge, artillery ammunition is classified as fixed, semifixed, or separate-loading ammunition. In fixed ammunition the propellent charge is carried as loose powder in the cartridge case, which is rigidly crimped to the projectile. In semifixed ammunition, the propellent powder is assembled in the cartridge case in bags or increments of varying sizes, and the projectile is easily separated from the cartridge case to allow removal of increments which may not be needed under certain firing conditions. In both fixed and semifixed ammunition the primer is rigidly pressed into the base of the cartridge case. Both types of ammunition are also loaded into the cannon with the primed cartridge case attached to the projectile. In separate-loading ammunition, which is used for large-caliber cannon, the projectile and the propellent charge are loaded into the gun separately rather than as a unit. The propellent charge for such ammunition is usually contained in one or more cylindrical bags. Similarly, the primer, or igniter charge (which consists of a small amount of black powder), is contained in cloth bags and loaded into the gun separately.

PROCESS OF MANUFACTURE

Both shell- and bag-loading plants require very extensive plant facilities. A typical loading plant built during the present war covers many acres of ground, and the various operations are carried

on in widely separated buildings in order to minimize the hazard. The processes involved in the loading of bombs and large-caliber artillery shells are very similar and require the same general type of plant equipment. Bombs are, therefore, generally loaded in plants which also perform shell-loading operations.

Shell and bomb loading.—The manufacturing process carried on in a shell- or bomb-loading plant consists largely of the final assembly of component materials into complete ammunition. The explosives, shell or bomb casings, cartridge cases, fuzes, primers, boosters, and detonators are received from outside manufacturers. They are then inspected and stored, until required, in the loading departments. The loading and assembling of these materials is carried on as an assembly-line process. Various departments or so-called "load lines" are maintained for the processing of each particular type of ammunition. Thus, a plant may have, in addition to one or more shell- or bomb-load lines, separate lines for loading such component parts as detonators, fuzes, primers, and boosters. In some cases, however, these smaller components are received from other plants, already loaded with the explosive charge and ready for final assembly into the completed projectile.

The main loading operation for shells and bombs is generally performed by either the melt-load or the press-load process. On the load line, the shell or bomb casings are cleaned, inspected, and painted. Large-caliber shells and bombs are usually filled by the melt-load process, the major operations of which consist in screening, melting, and pouring the main explosive or bursting charge into the shell or bomb cavity. The most commonly used bursting charge is TNT, which is readily melted either alone or with ammonium nitrate. After the TNT has hardened, the booster and fuze are inserted. Some large-caliber shells are shipped to combat zones unfuzed, and the fuze is assembled in the field prior to firing the shell. In the case of fixed and semifixed rounds of ammunition, the projectile is assembled to the cartridge case, which contains the propellent charge and artillery primer. The final operations involve labeling and packing or crating for storage or shipment. Inspection is carried on continuously at each stage of the operation.

The operations performed on the lines loading shells by the press-load process differ somewhat from those where the melt-loading process is used. The main explosive charge is loaded into the projectile in a dry, rather than molten state, and consolidated into the shell by means of a hydraulic press. Press loading is most generally applied to smaller-caliber shells, such as those used in 20-mm. and 40-mm. cannon.

The process of loading such component parts as fuzes, boosters, detonators, and primers is largely confined to very simple assembly work. Artillery primers, the bodies of which are metal tubes filled with a specified amount of black powder, are generally loaded on a volumetric loading machine. The heads, containing a small percussion element which ignites upon friction from the firing pin, are staked to the loaded bodies. Most of the operations on the primer-load lines are mechanized.

The method of loading detonators, fuzes, and boosters varies somewhat from plant to plant, but in general the operations involve a large amount of bench assembly work. On the booster-loading line,

for instance, each minute task is performed at long tables having numerous stations. Although most of the operations are performed by hand, small crimping and staking machines are used at the tables to assemble the various parts.

Bag loading.—The loading of propellent charges into ammunition bags for semifixed and separate-loading ammunition is a far more simple operation and requires equipment quite different from that found in bomb- and shell-loading plants. The major operations involved in the bag-loading plants are the cutting and sewing of cloth bags of various sizes and the loading of these bags with specific amounts of smokeless powder for propellent charges or black powder for igniter charges.

In the bag-making department the cloth is spread and cut into specified sizes and shapes, depending upon the type of charge which is to be loaded. After identification of the charge has been printed on these pieces of cloth, they are sent to the sewing room to be made into bags by seaming on power sewing machines. An opening is left in the bag for pouring in the powder charge.

The bag-loading lines are made up of the buildings for the actual loading of the gunpowder and a number of widely separated and barricaded storage magazines. The bag-loading buildings are divided into small rooms with thick concrete walls between them for safety of the operators. In these small rooms, each having only a limited number of operators, the explosive powder is carefully weighed and poured into the bags which have been transferred from the bag-making department. The bag is then closed on a sewing machine and is ready for final inspection and packing. For certain types of ammunition, several bags are tied together before packing, to form a charge made up of several increments.

Scope and Method of Survey

This report is based on a survey of the earnings of workers in plants loading bombs and artillery ammunition and includes virtually all of the establishments which were engaged in the loading of these products during the summer of 1944. Data were obtained for 38 plants; 35 of these were loading bombs and shells or their component parts and employed a total of approximately 133,000 workers, and the 3 others were loading propellent powder bags for semifixed and separate-loading ammunition and employed about 13,000 workers.

Because of the many different types of shells, bombs, and component parts processed in these ammunition-loading plants, wide variations existed from plant to plant in the scope of operations. Eight plants, for instance, were loading only such components as detonators, fuzes, boosters, or primers. A number of the plants were loading large shells and bombs by the melt-loading process, while others loaded smaller shells by pressing or consolidating the explosive charge into the shell cavity. Some component parts were also loaded in most of the shell- and bomb-loading plants. Operations in the three bag-loading plants, however, were in each instance confined to the making and filling of ammunition bags.

The wage data were collected from plant pay-roll records by trained field representatives of the Bureau, who used written job descriptions in classifying workers in each plant studied. The duties performed by

workers included within the individual occupational groups are, therefore, closely comparable despite any interplant differences in operations which may have existed at the time of the survey. Unusual difficulty was encountered in ascertaining the exact numbers of workers within each occupational group because of the frequent shifting of workers from one job to another as a result of changes in production schedules. The distribution of workers by occupation shown in this report, therefore, represents an averaging of different types of operations in these plants rather than an exact occupational distribution as of a particular time. The influence of this factor on the hourly earnings presented in the report is negligible, as the change from one job to another generally consists merely of a change of station within the same department or to some other job for which the same wage rate obtains.

Detailed wage data were obtained for 98,022 workers employed in the occupations selected for study. Somewhat more than two-thirds of all the workers employed by the 38 plants covered were classified in these selected occupations, which are believed to be representative of the various levels of skill and earnings in the industry. In each plant visited, the field representative also obtained such other items of information as scope of operations, number of shifts worked, extent of unionization, entrance rates paid to male common labor, methods of wage payment, and the plant policy with regard to premium payments for overtime and late-shift work. This general information was found helpful for interpreting the earnings data which constitute the chief objective of the study. The occupational wage data represent straight-time average hourly earnings, excluding premium payments for overtime work and for work on late shifts. In the main, the data relate to typical pay-roll periods in June 1944.

The Labor Force

The recruitment and training of workers was one of the most serious problems confronting the ammunition-loading industry in the early months of the war. As the industry has no real counterpart in peacetime, literally the entire labor force had to be trained by the few people already familiar with the operations. For a large percentage of the workers recruited by the loading plants, this employment involved moving from rural areas and represented their first experience in a manufacturing plant. Moreover, many of the workers, particularly the women, were entering the labor force for the first time.

The ammunition-loading industry is outstanding for the large percentage of women it employs. These workers accounted for nearly three-fifths of the entire labor force of the plants covered by the survey. The employment of women is somewhat greater in bag-loading plants than in bomb- and shell-loading plants. Nearly two-thirds of the employees in bag loading were women. In ammunition loading, unlike many other manufacturing industries, the employment opportunities for women are not limited to a few specialized jobs. Aside from some of the indirect jobs which involve either very heavy work or long experience, women were found in nearly every occupation selected for study.

Total plant employment varied widely in the plants studied. The actual range was from fewer than 200 workers in the smallest plant

to more than 10,000 in the largest. All but 13 of the plants employed over 2,000 workers.

Nearly all of the operations in the loading and assembling of ammunition involve unskilled or semiskilled work, and the training period is relatively short. In fact, most of the jobs require as little as one week of training. Undoubtedly, the most important feature in the training of new workers is that of impressing them with the importance of observing safety precautions and rules in the handling of explosives. Many other steps are also taken to reduce the accident hazard. The loading plants are so constructed as to provide every possible protection for the workers. The plants are spread over large tracts of land, and the individual buildings in which explosives are handled are widely separated so as to confine any accidents to only a small part of the plant and thus reduce to a minimum the possibility of endangering large numbers of workers. Safety regulations are of the strictest and apply to all persons entering the processing areas of the plants. Typical safety regulations are the prohibition against carrying matches or wearing shoes with exposed nails in the production areas. Only a specified number of persons and a limited quantity of explosives are allowed in any one building at a given time. Particularly hazardous operations are performed behind shields or barricades. The result of these and many other precautions is reflected in the low accident-frequency record of the industry during the present war.

For the most part, the operations involved in the loading and assembling of ammunition have been divided into many small and simple tasks, each of which is assigned to a different operator. In most plants there is considerable shifting of workers from one job to another, caused principally by (1) an attempt to offset the monotony of routine and repetitive work and (2) the continual changes made in production schedules and in the size and type of ammunition being processed.

Some steps in the loading process require that large numbers of workers be assigned to certain operations. Very considerable proportions of the workers on the lines loading bombs, shells, and component parts, for instance, are assigned to assembly work. Numerous operators are also required for the packing and crating departments on all load lines. On the melt-load line, the operators pouring the molten TNT into shell and bomb cavities comprise sizable groups. Relatively few workers, on the other hand, are employed as kettlemen and draw-off operators, whose duties are to tend the large units where the TNT is melted and to draw the molten TNT from these units into large tubs. Only a small crew of kettlemen and draw-off operators is needed to supply a large group of workers employed in the pouring room.

Fifteen of the 38 plants studied, employing 34 percent of the workers, had union agreements covering a large percentage of their employees. Nine additional plants, with 32 percent of the workers, had union contracts which covered only certain groups of employees, such as maintenance or other indirect workers, while the remaining 14 plants, which employed 34 percent of the wage earners, were not unionized. Nearly all union contracts were with the unions affiliated with the American Federation of Labor and with the United Mine Workers of America.

Wage-Payment Practices

Because of the hazardous nature of the industry, workers employed in ammunition-loading plants are typically paid straight hourly rates. Only 3 of the 38 plants studied employed any workers under incentive methods of wage payment, and most of these workers were in assembly occupations. Incentive workers constituted only about 3 percent of all the workers covered in the survey.

Multiple-shift operations were reported by 35 of the 38 plants. Twenty-two of the plants were on a 3-shift schedule, while 12 were operating two shifts. Of the total number of workers employed by the establishments surveyed, approximately 54 percent were employed on the first shift, 31 percent on the second, and 15 percent on the third. Twenty-three plants reported periodic shift rotation of production workers.

The payment of differentials for work of second and third shifts was reported by 12 plants. Four of these plants were operating only two shifts; and a differential of 5 cents an hour above the first-shift rate was paid to second-shift workers in all 4 plants. Of the 8 plants operating three shifts and paying shift differentials, 4 paid the same premium to both late shifts; in 2 of these 4 plants the differential amounted to 10 percent above the day-shift rate, in 1 plant to 5 percent, and in another to 5 cents an hour. Two plants paid shift differentials amounting to 5 percent more than the first-shift rate to second-shift workers, and 10 percent more to third-shift workers. One plant paid a premium of 5 cents an hour to second-shift workers and of 10 cents an hour to third-shift workers; the eighth plant paid no second-shift differential, but gave a premium of 5 percent for work on the third shift.

Nearly all the plants studied were operating on a scheduled 48-hour workweek. All paid time and a half for work in excess of 40 hours a week or 8 hours a day. Work on the 6 holidays recognized by Executive order was paid for at the rate of time and a half in all but 3 plants. Special provisions were reported for work on the seventh consecutive day by all but 1 of the 38 plants; 36 plants paid double time, and one paid time and a half.

Established entrance rates for male common labor were reported by 30 of the 38 plants. Starting rates for these workers ranged from 40 cents to 85 cents an hour, with 9 plants paying from 70 to 75 cents an hour and 12 plants paying less than 60 cents an hour.

Occupational Earnings

The basic wage data collected during the Bureau's survey are shown for shell- and bomb-loading plants in table 1 and for the bag-loading plants in table 2. Straight-time average hourly earnings are shown, by plant department, for a comprehensive group of occupations in each of these two branches of the ammunition-loading industry.

SHELL AND BOMB LOADING

The wage data obtained for the 35 plants loading bombs, artillery shells, and the related component parts cover 89,850 workers, classified into 106 selected occupational groups. About 58 percent of these

workers were women. In June 1944, straight-time average earnings amounted to about 77 cents an hour for all the workers for whom data on earnings by occupation were obtained. The general average for male workers employed in these plants was 88 cents an hour, and the corresponding average for women amounted to 70 cents an hour. This wide difference in average earnings for men and women workers is accounted for mainly by the fact that women were generally employed in large numbers in the lower-paid occupations. In the maintenance departments, where the wage rates are relatively high, women were found in only two occupations—journeymen's helpers and class B maintenance mechanics.

TABLE 1.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations, in Shell- and Bomb-Loading Plants, June 1944*

Occupation	United States		Northeast		Central		South	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Maintenance								
Blacksmiths	35	$1.20	6	$1.14	16	$1.23	13	$1.19
Carpenters, class A	686	1.19	49	1.20	384	1.22	253	1.15
Carpenters, class B	439	1.06	20	1.04	57	1.02	362	1.07
Electricians, class A	489	1.31	14	1.32	334	1.31	141	1.29
Electricians, class B	115	1.11	15	1.13	18	1.10	82	1.11
Helpers, journeymen	702	.83	37	.87	197	.93	468	.78
Helpers, journeymen, female	22	.78	1	(1)	3	.90	18	.76
Instrument repairmen	34	1.24	-----	-----	15	1.24	19	1.23
Machinists, class A	330	1.26	26	1.18	169	1.30	135	1.22
Machinists, class B	216	1.13	45	1.16	52	1.13	119	1.12
Mechanics, automotive	406	1.15	28	1.16	191	1.14	187	1.15
Mechanics, maintenance, class A	404	1.17	43	1.11	192	1.22	169	1.14
Mechanics, maintenance, class B	535	1.02	79	1.06	187	1.02	269	1.01
Mechanics, maintenance, class B, female	14	.83	2	(1)	-----	-----	12	(1)
Millwrights, class A	345	1.24	41	1.33	206	1.26	98	1.17
Millwrights, class B	76	1.14	7	1.05	24	1.06	45	1.19
Oilers	84	.89	9	.91	33	1.01	42	.79
Painters	216	1.15	15	1.04	111	1.16	90	1.15
Pipe fitters, class A	409	1.30	33	1.23	233	1.34	143	1.24
Pipe fitters, class B	88	1.15	10	1.16	29	1.11	49	1.17
Scale repairmen	79	1.10	1	(1)	31	1.17	47	1.06
Sheet-metal workers, class A	118	1.29	17	1.31	61	1.31	40	1.25
Sheet-metal workers, class B	18	1.15	-----	-----	8	1.10	10	1.18
Tool and die makers, class A	136	1.47	25	1.46	79	1.51	32	1.37
Tool and die makers, class B	11	1.26	2	(1)	9	(1)	-----	-----
Welders, hand	130	1.25	1	(1)	58	1.29	71	1.23
Supervision								
Working foremen	2,427	.96	31	1.04	1,453	1.00	943	.91
Working foreladies	1,490	.83	124	.84	458	.89	908	.80
Processing								
Shell and bomb load lines:								
Melt load:								
Assemblers	1,034	.78	-----	-----	482	.86	552	.71
Assemblers, female	4,042	.75	-----	-----	2,719	.78	1,323	.68
Booster-cavity drillers	245	.86	-----	-----	173	.89	72	.77
Booster-cavity drillers, female	78	.92	-----	-----	56	.98	22	.76
Cartridge-case fillers	20	.88	-----	-----	-----	-----	20	.88
Cartridge-case fillers, female	779	.71	-----	-----	576	.70	203	.71
Cleaners, funnel and splash pan	263	.88	-----	-----	154	.91	109	.83
Cleaners, funnel and splash pan, female	291	.77	-----	-----	251	.78	40	.69
Cleaners, loaded bombs	75	.82	-----	-----	18	(1)	57	.77
Cleaners, loaded bombs, female	156	.78	-----	-----	30	(1)	126	.77
Cooling-tub operators	203	.87	-----	-----	120	.89	83	.83
Cooling-tub operators, female	187	.77	-----	-----	77	.84	110	.72
Craters	1,094	.79	-----	-----	517	.86	577	.73
Craters, female	1,796	.70	-----	-----	826	.79	970	.62
Draw-off operators	252	.92	-----	-----	176	.96	76	.84
Draw-off operators, female	51	.90	-----	-----	32	.93	19	.84
Inspectors	801	.96	-----	-----	603	.98	198	.89

[1]Number of workers and/or plants too small to justify computation of an average.

TABLE 1.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations, in Shell- and Bomb-Loading Plants, June 1944*—Continued

Occupation	United States		Northeast		Central		South	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Processing—Continued								
Shell and bomb load lines—Continued.								
Melt load—Continued.								
Inspectors, female	1,089	$0.75	------	------	293	$0.79	796	$0.73
Kettlemen	435	.91	------	------	297	.94	138	.84
Kettlemen, female	130	.87	------	------	100	.89	30	.78
Packers	289	.78	------	------	114	.89	175	.71
Packers, female	987	.72	------	------	731	.76	256	.64
Pourers and puddlers	973	.88	------	------	556	.91	417	.83
Pourers and puddlers, female	2,066	.82	------	------	1,386	.87	680	.73
Primer-press operators	20	.80	------	------	11	.89	9	.70
Primer-press operators, female	125	.74	------	------	81	.76	44	.70
Salvagers	165	.81	------	------	88	.86	77	.75
Salvagers, female	93	.71	------	------	51	.70	42	.72
Screeners, powder	718	.86	------	------	462	.90	256	.79
Screeners, powder, female	336	.82	------	------	267	.81	69	.83
Set-up operators	249	.74	------	------	68	.91	181	.68
Set-up operators, female	193	.83	------	------	134	.89	59	.70
Split operators	73	.86	------	------	54	.86	19	.85
Split operators, female	10	.77	------	------	5	(1)	5	(1)
Spray painters	79	.76	------	------	34	.77	45	.76
Spray painters, female	100	.79	------	------	76	.80	24	.77
Unpackers and cleaners	435	.77	------	------	314	.78	121	.73
Unpackers and cleaners, female	1,269	.74	------	------	969	.76	300	.68
X-ray operators	14	.84	------	------	13	.86	1	(1)
X-ray operators, female	56	.77	------	------	33	.88	23	(1)
Press load:								
Assemblers	404	.84	69	$1.03	71	.83	264	.79
Assemblers, female	4,108	.71	1,594	.77	651	.69	1,863	.66
Cartridge-case fillers	45	.81	35	.82	------	------	10	.78
Cartridge-case fillers, female	947	.67	129	.75	185	.60	633	.67
Consolidating-press operators	107	.91	9	(1)	50	(1)	48	.89
Consolidating-press operators, female	376	.82	247	.85	106	.77	23	(1)
Craters	237	.77	8	(1)	101	.85	128	.68
Craters, female	219	.62	9	(1)	36	.72	174	.59
Crimping-machine operators	126	.87	64	(1)	57	(1)	5	(1)
Crimping-machine operators, female	93	.83	------	------	93	.83	------	------
Facers and buffers	111	.88	65	.90	------	------	46	.85
Facers and buffers, female	289	.65	36	.75	168	(1)	85	.62
Inspectors	260	.85	121	.88	2	(1)	137	.82
Inspectors, female	1,060	.68	305	.74	265	.65	490	.67
Loaders, projectile	349	.89	180	.90	------	------	169	.88
Loaders, projectile, female	741	.70	54	.81	180	(1)	507	.71
Packers	197	.79	84	.85	------	------	113	.74
Packers, female	643	.69	171	.79	175	.68	297	.65
Paint-machine operators	34	.86	17	.91	2	(1)	15	.81
Paint-machine tenders, female	248	.64	27	.78	64	.61	157	.63
Pellet-press operators	27	.84	14	(1)	------	------	13	.81
Pellet-press operators, female	213	.73	6	(1)	93	.76	114	.69
Primer-press operators	52	.76	16	.80	20	(1)	16	.79
Primer-press operators, female	732	.65	75	.78	236	.59	421	.66
Salvagers	214	.86	96	.97	29	.82	89	.76
Salvagers, female	426	.72	173	.74	6	(1)	247	.70
Screeners and blenders	185	.88	76	.92	46	.93	63	.81
Screeners and blenders, female	31	.71	------	------	------	------	31	.71
Unpackers and cleaners	159	.87	79	.93	36	.87	44	.75
Unpackers and cleaners, female	278	.67	8	.84	66	.66	204	.67
Component parts:								
Primer line:								
Craters	47	.70	2	(1)	2	(1)	43	.69
Dipping-room attendants	8	.87	------	------	7	(1)	1	(1)
Head-assembly machine operators	8	.85	------	------	5	.96	3	(1)
Head-assembly machine operators, female	57	.66	------	------	------	------	57	.66
Head-assembly machine tenders, female	221	.66	9	(1)	15	.74	197	.65
Inspectors, female	687	.68	111	.64	115	.75	461	.67
Lacquering-machine operators	8	.81	------	------	5	.92	3	(1)
Lacquering-machine operators, female	80	.66	14	(1)	------	------	66	.65
Lacquering-machine tenders	13	.61	------	------	------	------	13	.61
Lacquering-machine tenders, female	235	.68	38	(1)	19	.78	178	.67
Liner inserters, hand, female	170	.67	41	(1)	63	.71	66	.64
Liner inserters, machine, female	102	.70	------	------	29	.82	73	.66
Loaders, hand	7	.84	3	(1)	------	------	4	(1)

[1] Number of workers and/or plants too small to justify computation of an average.

TABLE 1.—*Straight-Time Average Hourly Earning of Workers in Selected Occupations, in Shell- and Bomb-Loading Plants, June 1944*—Continued

Occupation	United States		Northeast		Central		South	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Processing—Continued								
Component parts—Continued.								
Primer line—Continued.								
Oilers, female	5	$0.81	1	(1)	4	(1)		
Packers	45	.76			15	$0.76	30	$0.77
Packers, female	131	.70			25	.75	106	.69
Salvagers	41	.70	26	(1)	2	(1)	13	.77
Salvagers, female	105	.70	36	(1)	9	.89	60	.71
Screeners	18	.93	3	(1)	7	.99	8	.94
Screeners, female	27	.82			15	(1)	12	(1)
Tube-assembly machine operators, female	223	.69			23	.82	200	.67
Volumetric-loading machine operators, female	61	.73	18	(1)	29	.83	14	(1)
Fuze, booster, and detonator lines:								
Assemblers	1,529	.69	73	$0.80	280	.81	1,176	.66
Assemblers, female	15,918	.66	3,145	.70	2,843	.70	9,930	.64
Craters	253	.70	24	.81	44	.81	185	.66
Craters, female	52	.74			35	(1)	17	.62
Inspectors	199	.81	162	.81	4	(1)	33	.75
Inspectors, female	2,233	.69	769	.74	113	.77	1,351	.65
Inspectors, powder pellet	19	.82	15	.80	2	(1)	2	(1)
Inspectors, powder pellet, female	171	.74	36	.79	6	.81	129	.72
Packers	199	.66			29	.81	170	.64
Packers, female	483	.65	70	.63	80	.72	333	.63
Pellet-press operators	167	.91	18	.93	34	.95	115	.90
Pellet-press operators, female	410	.82	106	.89	114	.88	190	.74
Salvagers	159	.80	24	(1)	29	.87	106	.77
Salvagers, female	310	.69	147	(1)	15	.81	148	.61
Screeners and blenders	403	.86	27	.89	201	.82	175	.89
Screeners and blenders, female	101	.87			7	.84	94	.87
Powerhouse								
Ashmen	25	.63	5	(1)	3	(1)	17	.54
Coal handlers	39	.72	18	(1)	5	.77	16	.59
Engineer, stationary	178	1.24	5	1.17	113	1.29	60	1.14
Firemen, stationary boiler	409	.95	63	.96	194	.96	152	.92
Recording and control								
Magazine keepers	163	.90	16	(1)	34	.90	113	.92
Stock clerks	415	.90	8	.83	172	.84	235	.77
Stock clerks, female	23	.75	3	(1)	4	.76	16	.77
Stockmen	443	.82	110	.87	127	.89	206	.76
Timekeepers	333	.91	16	(1)	200	.95	117	.83
Timekeepers, female	328	.75	101	.78	116	.75	111	.74
Tool clerks	127	.89	4	.83	94	.89	29	.92
Tool clerks, female	43	.75			22	.78	21	.71
Material movement								
Brakemen	319	1.09	40	.94	165	1.14	114	1.05
Conductors, yard	159	1.20			99	1.22	60	1.15
Conveyor tenders	201	.80	40	.83	95	.89	66	.65
Conveyor tenders, female	100	.71			50	.85	50	.58
Engineers, locomotive	206	1.26	2	(1)	136	1.31	68	1.17
Firemen, locomotive	58	1.10			45	1.13	13	.99
Loaders and unloaders	4,538	.72	255	.80	2,650	.79	1,633	.59
Loaders and unloaders, female	413	.62			141	.77	272	.55
Truck drivers	2,013	.89	234	.94	939	.91	840	.85
Truck drivers, female	134	.75			41	.93	93	.66
Truckers, hand	1,743	.74	164	.93	416	.89	1,163	.65
Truckers, hand, female	772	.75	17	.79	271	.86	484	.69
Truckers, power	146	.83	2	(1)	121	.85	23	.72
Truckers, power, female	254	.79			215	.78	39	.82
Custodial								
Change-house attendants	165	.71	5	.80	126	.73	34	.62
Change-house attendants, female	244	.68	17	.65	119	.66	108	.70
Firemen, plant protection	669	.81	24	.86	376	.82	269	.79
Guards	2,986	.83	389	.84	1,601	.84	996	.81
Guards, female	181	.73	13	.78	168	.73		
Janitors	1,111	.69	166	.75	662	.73	283	.57
Janitresses	1,771	.51	55	.75	397	.72	1,319	.44

[1] Number of workers and/or plants too small to justify computation of an average.

For all occupations studied, the average earnings ranged from 51 cents an hour for janitresses to $1.47 an hour for class A tool and die makers. The average earnings of the majority of the workers, however, fell within a much more limited range. Occupations with average earnings ranging from 65 cents to $1.00 an hour accounted for 90 percent of the workers. Average earnings in the 10-cent interval between 65 and 75 cents an hour accounted for well over half of the workers, while slightly less than a third were in occupations averaging between 75 and 90 cents an hour. The greatest concentration of workers within any 5-cent interval occurred in the 21 occupational groups with earnings between 65 and 70 cents, where fully three-tenths of the workers were employed. Average earnings amounting to less than 65 cents an hour were paid to only six occupational groups and accounted for 3 percent of the workers studied. At the other extreme, about 7 percent of the workers were classified in the 27 occupational groups whose earnings amounted to an average of $1.00 or more an hour. These occupational groups were composed of male workers in indirect rather than processsing jobs.

Workers employed in maintenance occupations were, in general, receiving the highest average rates of pay. With only two exceptions (oilers, earning 89 cents an hour, and journeymen's helpers, earning 83 cents an hour), male workers in these occupations were paid well over $1.00 an hour. Women workers, employed in two maintenance occupations (journeymen's helpers and class B maintenance mechanics) earned respective average rates of 78 cents and 83 cents an hour. Other numerically important groups of workers not employed in processing occupations were male loaders and unloaders, truck drivers, and hand truckers. The respective averages for these occupations were 72 cents, 89 cents, and 74 cents an hour. The large group of male guards averaged 83 cents an hour.

Approximately two-thirds of the workers whose occupational earnings were studied were employed in processing jobs on the various load lines. Average earnings for these workers on all the load lines combined amounted to 73 cents an hour. The average for male load-line operatives was 82 cents an hour and for women 70 cents an hour. The highest average rate earned by male workers was paid to inspectors on the melt-load line, who earned 96 cents an hour; the lowest rate for male workers (61 cents an hour) was paid to the small group of lacquering-machine tenders on the primer-loading line. Average hourly earnings for women on the load lines ranged from 62 cents an hour for shell craters on the press-load lines to 92 cents an hour for booster-cavity drillers on the melt-load lines.

Somewhat more than nine-tenths of the women employed on the load lines were classified in the 42 occupational groups having average rates between 65 and 80 cents an hour. The largest concentration of male workers occurred in the 18 occupational groups whose average earnings ranged from 85 to 90 cents an hour. These occupations accounted for one-third of the male workers.

On each line except the primer-loading lines, where most of the operations are mechanized, assemblers constituted the largest occupational group for women workers. This concentration is particularly great on the lines loading fuzes, boosters, and detonators, most of the operations of which involve the relatively simple assembly of small parts, and on which women constitute about 85 percent of all workers em-

ployed. About 8 of every 10 women employed on these component-loading lines were classified as assemblers and received an average hourly rate of 66 cents an hour. The average earnings of women assemblers on the melt-load line amounted to 75 cents an hour and on the press-load line, to 71 cents an hour. Male assemblers on the melt-load, press-load, and component lines earned average rates of 78 cents, 84 cents, and 69 cents an hour, respectively. Two other numerically important groups of male workers were shell and bomb craters on the melt-load lines, who earned an average rate of 79 cents an hour, and pourers and puddlers, whose earnings averaged 88 cents an hour.

In most of the occupations in which both men and women were employed, the averages shown appear to indicate a wage difference in favor of the male workers. In many cases, however, this difference actually reflects minor variations in duties. The male workers are generally required to do any heavy lifting which may be connected with the performance of a particular operation. The packing and crating occupations on the shell- and bomb-loading lines furnish good examples of this difference in duties. Women are employed in these jobs, but the lifting of heavy shells and crates is usually assigned to male operators. Other differences in duties within the same general occupational groups may occur if male operators are responsible for the operation of equipment also used by women workers at the same station on the line. On the primer-loading line, for instance, the machine used for lacquering the primer bodies is usually started and maintained by a male operator who may also be responsible for keeping the machine in good working order and supplied with the lacquer solution.

In a few of the processing occupations the average hourly rate shown for female operators is higher than the average earned by male operators. This is generally a result of interplant differences in plants that did not employ both men and women in these particular jobs. Within individual plants, where both men and women were employed in these occupations, the rates paid to male workers were consistently as high as the rates earned by the women.

Regional comparisons.—The 38 plants included in this study are in widely separated wage areas. Consequently there was a considerable range between the highest and the lowest rate paid to workers in many of the occupations. In order to reduce somewhat the effect of extreme locality differences on average hourly earnings reflected in the general averages discussed above, separate figures are shown for three broad regional groups of plants. Because of the relatively small number of plants studied in the survey, however, even these three regions represent plants in widely separated wage areas. Thus, figures shown for the Northeastern region represent plants located in Massachusetts, Delaware, Maryland, Pennsylvania, and New Jersey; the Central region includes plants in Illinois, Ohio, Kentucky, Indiana, Iowa, Kansas, and Nebraska; the Southern region includes plants scattered from Virginia to Texas, including Tennessee, Mississippi, North Carolina, Georgia, Louisiana, and Arkansas.

Because of variations in products manufactured from plant to plant, not all occupational groups are represented in all three regions. For instance, in the Northeastern region none of the plants for which figures are shown were loading large shells and bombs by the melt-

load process. However, a comparison of the averages appearing in all 3 regions reveals that plants in the Northeastern region paid, in general, slightly higher average rates for most occupations than those in either of the other two regions, and that plants in the Central and Southern States ranked second and third respectively. For the occupations for which averages are shown in all three regions, the averages for the South are lowest in 33 occupational groups, and highest in only 5 occupational groups. The Northeastern region had the highest averages in 25 occupations, and the lowest in 11, while the Central region ranked first in 22 occupational groups and third in 9. On the melt-load lines, where only the Central and Southern regions are represented, the plant averages for the South are lowest in all but 3 of the occupational groups for which averages are shown.

A further attempt was made to measure and compare the *general level* of wages in the industry existing in each broad region at the time of the survey. The average hourly earnings of 73 occupations, all of which occurred in each region, were weighted for each region by the number of workers employed in the occupations for all regions combined, thus giving each occupation the same relative importance in all regions. A general average for these occupations was then computed for each region. The resulting average for the Northeast was 83 cents an hour; for the Central region, 81 cents; and for the South, 73 cents. The corresponding average for all regions combined (that is, for the same 73 occupations) amounted to 77 cents an hour, or the same as that for all the 106 occupations selected for study and mentioned earlier in the report.

Constant employment weights were also used to compute a general average for the 102 occupational groups found in both the Central and Southern regions. This average was computed in order to compare the two regions having plants loading large shells and bombs and also having representation in most of the occupations studied. The resulting average for the Central and Southern regions were 82 cents and 73 cents, respectively. Again, the corresponding average for all regions combined was 77 cents an hour.

BAG LOADING

The wage data collected for the 3 bag-loading plants cover 8,172 workers, classified into 40 occupational groups. Slightly more than two-thirds of all the workers studied were women. Straight-time average earnings for all workers amounted to 71 cents an hour. The average for all male workers studied was 81 cents an hour and that for women workers 66 cents an hour.

No women were employed in the maintenance occupations studied. With the exception of journeymen's helpers, who earned 66 cents an hour, the averages for male workers in these occupations ranged from 90 cents an hour for oilers and scale repairmen to $1.31 for class A pipe fitters.

Occupational earnings for women employees ranged from 48 cents an hour for janitresses to 78 cents for inspectors. Aside from maintenance occupations, the range in average rates for male workers was from 59 cents an hour for change-house attendants to $1.28 an hour for locomotive engineers. The highest average for processing workers was earned by the small number of male dyeing-machine tenders. Nearly 87 percent of all the workers were employed in occupations

whose average hourly earnings ranged from 60 to 80 cents. Roughly a third were concentrated in the four occupations with earnings from 60 to 65 cents an hour, and nearly a third were in five occupations whose average earnings fell within the range of 65 to 70 cents.

The women sewing-machine operators making powder bags accounted for the largest occupational group, and were paid 63 cents an hour. The women performing the operation of closing the loaded bags on sewing machines earned 68 cents an hour. Three other numerically important groups of women operators were the powder-bag loaders, the shadowgraph-scale operators, and the volumetric weighers. The respective averages for these occupations amounted to 65 cents, 69 cents, and 68 cents.

Among male workers, the two largest groups were hand truckers and loaders and unloaders, with average rates amounting to 79 cents and 77 cents, respectively. The guards, constituting another important group of male workers, earned 85 cents an hour. In the processing occupations, men were found in smaller numbers than women. The male powder-bag loaders earned 64 cents an hour, on the average, or 1 cent less than women in the same occupation. Within individual plants, however, these workers were paid rates amounting to as much as those paid women in the same occupation.

TABLE 2.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Ammunition Bag-Loading Plants, June 1944*

Occupation	Number of workers	Average hourly earnings
Maintenance		
Carpenters, class A	41	$1.16
Carpenters, class B	22	1.12
Electricians, class A	22	1.26
Electricians, class B	21	.98
Helpers, journeymen	166	.66
Machinists, class A	11	1.13
Machinists, class B	23	1.06
Mechanics, automotive	35	1.12
Mechanics, maintenance, class A	20	1.13
Mechanics, maintenance, class B	51	.98
Oilers	4	.90
Painters	14	1.06
Pipe fitters, class A	12	1.31
Scale repairmen	37	.90
Welders, hand	5	1.15
Processing		
Cloth spreaders	5	.77
Cutters, machine	31	.89
Dyeing-machine tenders	6	1.06
Inspectors	63	.85
Inspectors, female	321	.78
Loaders, powder bag	217	.64
Loaders, powder bag, female	791	.65
Packers	141	.82
Packers, female	283	.75
Printers	8	.92
Printing-press feeders, female	199	.63
Sewing-machine operators (bag closers)	75	.72
Sewing-machine operators (bag closers), female	574	.68
Sewing-machine operators (bag makers), female	2,170	.63
Processing—Continued		
Shadowgraph-scale operators	15	$0.79
Shadowgraph-scale operators, female	470	.69
Volumetric weighers	40	.70
Volumetric weighers, female	547	.68
Powerhouse		
Firemen, stationary boiler	16	1.00
Recording and control		
Stock clerks	32	.94
Stockmen	108	.79
Material movement		
Brakemen	8	.92
Conductors, yard	5	1.12
Engineers, locomotive	6	1.28
Loaders and unloaders	400	.77
Truck drivers	81	.76
Truck drivers, female	25	.73
Truckers, hand	546	.79
Custodial		
Change-house attendants	15	.59
Change-house attendants, female	9	.58
Firemen, plant protection	77	.81
Guards	254	.85
Janitors	67	.62
Janitresses	83	.48

Trend of Factory Earnings, 1939 to January 1945

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to January 1945.[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.).

Weekly earnings in all manufacturing averaged $47.52 in January 1945—104.9 percent above the average in January 1939, 78.4 percent above January 1941, and 22.2 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 plants, 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 104.7 cents in January 1945—65.7 percent above the average in January 1939, 53.3 percent above January 1941, and 17.2 percent above October 1942.

Earnings of Factory Workers in Selected Months, 1939 to January 1945

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 (1)	Durable goods (2)	Nondurable goods (3)	All manufacturing (4)	Durable goods (5)	Nondurable goods (6)	All manufacturing (7)	Durable goods (8)	Nondurable goods (9)	All manufacturing (10)	Durable goods (11)	Nondurable goods (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.	45.29	51.21	36.03	1.002	1.099	.838	.931	1.013	.793	.850	.945	.778
Apr.	45.55	51.67	36.16	1.013	1.110	.850	.942	1.023	.806	.862	.955	.792
July	45.43	51.07	37.05	1.018	1.116	.862	.950	1.035	.815	.874	.973	.799
Oct.	46.94	53.18	37.97	1.031	1.129	.878	.956	1.038	.829	.881	.969	.815
Nov.	46.85	53.04	37.87	1.035	1.136	.877	.961	1.046	.828	.882	.971	.815
Dec.[3]	47.45	53.68	38.41	1.040	1.139	.883	.963	1.047	.832	.886	.975	.818
1945: Jan.[3]	47.52	53.55	38.65	1.047	1.146	.890	.971	1.055	.840	.894	.985	.824

[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.

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 January 1945 was 97.1 cents per hour; this was 55.9

[1] Compare Trends in Factory Wages, 1939–43, in 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, January 1945, table 6 (p. 904), in this issue.

percent higher than in January 1939, 46.2 percent above January 1941, and 15.7 percent above October 1942.

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 89.4 cents in January 1945, or 43.5 percent above the corresponding average in January 1939, 38.0 percent above January 1941, and 14.3 percent above October 1942. Between December 1944 and January 1945 the increase in straight-time hourly earnings, after eliminating the influence of shifting employment, amounted to 0.9 percent. 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.

Increased Efficiency and Reduced Hours in a Canadian Enterprise [1]

INCREASED efficiency of labor has made possible the substitution of a 40-hour week for the 48-hour week in the factories and offices of Lever Brothers of Canada. In an experiment in a Toronto plant of the company, measures suggested by the joint labor-management committee resulted in an increased output per man-hour which reduced labor costs 20 percent during the 6-month trial period. This made it possible to reduce hours to 40 per week, with no loss in production. The National War Labor Board approved the "shorter hours" plan, authorizing incentive pay at the rate of 20 percent above the basic hourly rate. Weekly earnings, therefore, remained what they had been under the longer workweek. The decision of the Board is subject to review at the end of the first 6 months of 1945, during which time the increased worker productivity must be maintained. In this program, employers and employees recognized as of mutual interest the need for reducing hours of labor without raising production costs.

Employment, Earnings, and Hours in Ireland, October 1943 [2]

ACCORDING to preliminary figures of the 1943 census of industrial production in Ireland, average weekly earnings for males in October of that year ranged from 49s. 2d. in the butter, cheese, etc., industry to 100s. 5d. in the tobacco industry. Hourly earnings of males averaged from 1s. 0.1d. to 2s. 2.8d. in the same two industries. Earnings

[1] Data are from the Trades and Labor Congress Journal (Montreal), January 1945.
[2] Data are from Irish Trade Journal and Statistical Bulletin (Department of Industry and Commerce, Dublin), June, September, and December 1944.

TABLE 1.—*Employment (Salaried Workers and Wage Earners) in Ireland, by Industry and Sex, Mid-October 1943*

Industry	Employment [1]				
	Total	Salaried workers		Wage earners	
		Male	Female	Male	Female
Aerated and mineral waters	1,017	213	68	664	72
Bacon curing	1,747	351	95	913	388
Boots and shoes [2]	5,152	173	163	2,727	2,089
Brewing	3,822	535	201	2,942	144
Brushes and brooms	426	37	24	179	[3] 186
Chemicals, drugs, etc	858	133	100	257	368
Fellmongery and leather	1,660	165	43	[3] 1,227	225
Gas works establishments	2,054	369	66	1,590	29
Malting [3]	954	115	15	818	6
Oils, paints, and polishes	813	165	63	396	189
Railways and tramways	7,133	218	41	6,856	18
Clothing:					
Men's and boys' readymades [3]	3,694	177	131	714	2,672
Women's and girls' readymades [3]	3,980	234	238	534	2,974
Miscellaneous	1,369	98	67	196	[4] 1,008
Distilling	602	120	16	435	31
Engineering and implements	3,046	278	144	2,047	577
Hosiery	5,687	202	215	778	[5] 4,492
Laundry, dyeing, and cleaning	3,466	104	350	[3] 729	2,283
Linen, cotton, jute, and canvas	2,308	137	83	870	[3] 1,218
Metals (excluding engineering)	3,187	378	125	[3] 2,272	412
Papermaking and stationery	2,203	139	95	876	1,093
Shirtmaking [2]	1,252	83	31	80	[6] 1,058
Soap and candles	606	99	38	210	259
Sugar, sugar confectionery, preserved fruit and vegetables, pickles, and sauces	4,834	595	327	1,501	2,411
Timber	4,355	452	93	[3] 3,776	34
Tobacco	2,161	367	106	501	1,187
Assembly, construction, and repair of vehicles	1,808	227	67	1,570	[3] 34
Wood furniture and upholstery	1,976	219	69	[3] 1,341	[3] 347
Woolen and worsted	3,593	181	111	[7] 1,580	[3] 1,721
Bread, flour confectionery, and biscuits	8,075	825	496	5,105	1,649
Bricks, pottery, glass, cement, and monumental masonry	2,306	296	82	[3] 1,720	208
Building and construction	10,268	987	197	9,071	13
Grain milling	3,421	657	169	2,498	[3] 97
Butter, cheese, condensed milk, and margarine	3,517	826	94	[3] 2,213	384
Canals, docks, and harbors	737	51	2	682	2
Electricity	3,196	836	167	2,123	70
Local authorities and Government departments	19,201	736	111	18,314	40
Mines and quarries	3,204	207	26	2,962	9
Printing, publishing, and bookbinding	6,019	1,167	380	[3] 3,100	1,372
Waterworks	945	140	10	794	1
Miscellaneous industries	6,113	696	276	3,506	[8] 1,635

[1] Including both workers under 18 years of age and those 18 and over.
[2] Wholesale factories.
[3] Including fewer than 15 outside piece workers.
[4] Including 126 outside piece workers.
[5] Including 1,537 outside piece workers.
[6] Including 52 outside piece workers.
[7] Including 35 outside piece workers.
[8] Including 30 outside piece workers.

of females were from 21s. 0d. weekly in building and construction to 51s. 6d. weekly in the tobacco industry, and from 0s. 7.8d. hourly in the bricks, pottery, etc., group to 1s. 2.7d. per hour in the tobacco industry. Such earnings included overtime, bonuses, and other forms of payment in excess of normal weekly wage rates; National Health and Unemployment Insurance contributions, deducted by the employer; and income and other public taxes, also deducted by the employer. The range of total hours worked during the week (including overtime) was, for males, 36.2 to 50.6 for boot and shoe workers and employees of gas works, respectively; for females the range was from 22.4 hours in gas works to 46.6 in the bacon-curing and butter, cream, etc., industries. The 1943 census covered a selected group of

41 industries employing a total of 142,855 persons. Of these groups, local authorities and Government departments employed the largest number of workers—19,201—and the brushes and brooms industry accounted for the fewest—426. All the figures given were for a single week in October. Details of the census concerning employment are presented in table 1, and earnings and hours in table 2.

TABLE 2.—*Earnings and Hours of Wage Earners in Ireland, by Industry and Sex, October 1943*

Industry	Average earnings of wage earners [1]				Average hours of wage earners [1]	
	Hourly		Weekly		Weekly	
	Male	Female	Male	Female	Male	Female
	s. d.	s. d.	s. d.	s. d.		
Aerated and mineral waters	1 3.7	0 9.5	59 7	34 1	45.7	43.3
Bacon curing	1 5.7	0 9.5	69 8	37 0	47.3	46.6
Boots and shoes [2]	1 9.4	1 0.4	64 5	35 9	36.2	34.7
Brewing	1 11.5	1 1.3	84 9	27 11	43.2	25.2
Brushes and brooms	2 0.4	1 0.3	91 7	44 7	45.0	43.4
Chemicals, drugs, etc	1 5.7	0 9.0	63 3	30 0	43.0	40.1
Fellmongery and leather	1 4.4	0 8.5	63 5	31 0	46.5	43.9
Gas works establishments	1 7.5	0 11.9	82 3	22 2	50.6	22.4
Malting [3]	1 2.8	(4)	59 10	(4)	48.5	(4)
Oils, paints, and polishes	1 6.0	0 8.8	65 11	31 6	44.0	42.7
Railways and tramways	1 5.1	0 9.7	68 8	30 7	48.2	37.8
Clothing:						
Men's and boys' readymades [2]	1 10.5	0 11.6	72 5	35 9	38.7	37.1
Women's and girls' readymades [2]	1 9.5	0 10.5	75 10	33 8	42.4	38.4
Miscellaneous	1 6.7	[5] 0 9.0	63 8	[5] 30 2	40.8	[5] 40.4
Distilling	1 5.7	0 9.0	68 3	32 3	46.1	42.9
Engineering and implements	1 5.4	0 9.1	67 5	29 5	46.5	38.9
Hosiery	1 6.6	[5] 0 9.8	66 8	[5] 33 9	43.0	[5] 41.1
Laundry, dyeing, and cleaning	[5] 1 6.4	0 9.1	[5] 72 0	33 7	[5] 46.9	44.4
Linen, cotton, jute, and canvas	1 3.0	[5] 0 8.3	56 10	[5] 29 11	45.4	[5] 43.3
Metals (excluding engineering)	[5] 1 5.5	0 9.1	[5] 67 2	32 4	[5] 45.9	42.4
Papermaking and stationery	1 8.1	0 10.2	77 2	36 3	46.1	42.7
Shirtmaking [2]	1 7.7	[5] 0 10.3	62 6	[5] 32 0	38.1	[5] 37.4
Soap and candles	1 8.5	0 11.0	68 7	37 1	40.1	40.5
Sugar, sugar confectionery, preserved fruit and vegetables, pickles, and sauces	1 6.1	0 9.7	69 5	34 1	46.1	42.2
Timber	[5] 1 3.5	0 9.7	[5] 59 6	31 8	[5] 45.9	39.3
Tobacco	2 2.8	1 2.7	100 5	51 6	45.0	42.1
Assembly, construction, and repair of vehicles	1 8.5	[5] 0 10.8	76 4	[5] 34 2	44.7	[5] 38.0
Wood furniture and upholstery	[5] 1 6.7	[5] 0 11.3	[5] 69 3	[5] 40 10	[5] 44.4	[5] 43.4
Woolen and worsted	1 3.3	0 10.5	61 1	37 11	48.0	44.5
Bread, flour confectionery, and biscuits	1 7.6	0 10.7	77 2	39 4	47.4	44.2
Bricks, pottery, glass, cement, and monumental masonry	[5] 1 5.5	0 7.8	[5] 65 11	27 7	[5] 45.1	42.2
Building and construction	1 7.5	0 10.3	71 3	21 0	43.9	24.5
Grain milling	1 4.2	0 9.0	64 6	30 11	47.9	41.3
Butter, cheese, condensed milk, and margarine	1 0.1	0 9.8	49 2	38 0	48.8	46.6
Canals, docks, and harbors	1 7.3	(4)	70 3	(4)	43.6	(4)
Electricity	1 8.6	1 1.4	78 10	30 1	45.8	26.9
Mines and quarries	1 3.8	----------	55 1	----------	41.9	----------
Printing, publishing, and bookbinding	[5] 1 10.9	0 9.7	[5] 84 9	36 4	[5] 44.5	44.8

[1] Aged 18 years and over.
[2] Wholesale factories.
[3] Figures are for October 1942.
[4] Less than 10 persons engaged.
[5] Excluding outside piece workers.

Wage and Hour Regulation

New Minimum Rate for Cotton-Textile Industry[1]

THE National War Labor Board has ordered a minimum rate of 55 cents an hour for 54 cotton-textile and rayon companies located in New England, in New York and Pennsylvania, and in the Southern States. This rate is to replace the former minimum of 50 cents per hour. According to its chairman, "the Board in these three textile orders is not only raising these substandard-of-living wage rates for the sake of the workers involved but is striving to increase production in a critical war industry." To aid the parties (the companies and the workers) in negotiation of the wage agreements, the Board has set forth "guidepost" rates for certain key occupations, in order to insure a proper alignment of the wage schedules. These key-rate guides are not identical in all three cases, because they are based on the area rates. Thus, the lowest guide rate for the Southern and New York-Pennsylvania areas is 55 cents an hour for common labor, while the lowest in the New England area is 57 cents for scrubbers and sweepers (a few employees in the New England mills receive a rate below the scrubber-sweeper category and thus are affected by the minimum rate). The top "guidepost" (for loom fixers) is $1.02 in the New England and New York-Pennsylvania areas, while it is 90 cents in the Southern area.

Having raised the minimum rate to 55 cents, the Board found it necessary to increase all rates above the previous 50-cent rate by 5 cents an hour, in order "to keep the minimum differentials between immediately interrelated job classifications necessary for the maintenance of productive efficiency." The Board stated that it had found the wage-rate structure compressed close to the 50-cent minimum, because of gradual increases in minimum rates over a period of years and failure in the past to keep the proper differentials between jobs above the minimum.

Three other provisions of the order should be noted. The Board ordered a retroactive payment equal to 5 cents per hour dating from October 1, 1944, unless otherwise agreed by the parties. A second provision (applicable only in the Southern area) orders payment of a premium of 5 cents an hour for work on the third shift, and effective as of the date of the Board's order. The third item pertains to 11 southern companies in which the matter of vacations was an issue. The Board ordered 1 week's vacation with pay for employees with 1 year of service unless a more liberal plan was contained in an expired contract in the company involved. The vacation allowance is to be computed as 2 percent of the individual employee's total earnings during the previous year, and the employees are to receive vacation

[1] National War Labor Board, Press release (B–1963) February 21, 1945.

pay in lieu of vacation time, if the company "requires their services in the interest of war production."

Wage Order for Sugar Industry in Puerto Rico

BY WAGE order effective on January 15, 1945, a wage rate of 35 cents an hour became effective in the Puerto Rican sugar industry under the terms of the Fair Labor Standards Act. The order applies to employees engaged in commerce or in the production of goods for commerce in the production of raw sugar, cane juice, molasses and refined sugar, and incidental by-products, provided that the industry shall not include transportation by common carriers or any activity which is exempt under section 13 (a) of the Fair Labor Standards Act of 1938.

Minimum Wage Rates in Costa Rica, August 1944 to June, 1945 [1]

MINIMUM wage rates for a large number of industries in Costa Rica were established by decree of August 7, 1944, to be effective from August 11, 1944, until June 30, 1945. Such rates were to supersede any lower rates fixed by collective agreement, but were not to affect any higher rate so fixed nor any provisions relating to housing, land for cultivation by workers, the furnishing of implements for work, and medical and other benefits. In cases in which rates were not fixed by the decree, the rates being paid on the date of publication of the decree were to be considered the minima until replaced by officially established rates.

Monthly wages set for various occupations ranged from 15 colones [2] (with living) for cooks to 300 colones for certain supervisory nurses; weekly wages ranged from 6 colones for printers' apprentices to 125 colones for newspaper editors; daily wages ranged from 2.50 colones (with food) for agricultural workers to 12 colones for sea captains; and hourly rates ranged from 25 centimos for weavers' helpers to 2.25 colones for master builders in the construction industry. Piecework rates were set in the shoe and tailoring industries.

The table below shows the rates established for workers in agriculture, bakeries, commerce, construction, and other industries common to different Provinces of Costa Rica.

[1] La Gaceta—Diario Oficial (San José), August 11, 1944, and October 6, 1944; and report of S. Walter Washington, chargé d'affaires, United States Embassy at San José, October 11, 1944.

[2] Average exchange rate of colon (100 centimos), August 1944=17.6 cents.

Minimum Wage Rates Established in Costa Rica, by Province and Occupation, August 11, 1944–June 30, 1945

Industry and occupation	Unit	San José	Alajuela	Cartago	Heredia	Puntarenas	Limón
Agriculture:							
Skilled workers (coffee, banana, etc.)	Hour	*Colones* 0.46½–0.62½	*Colones* 0.53¼	*Colones* 0.53¼–0.62½	*Colones* 0.53¼–0.66½	*Colones* 0.75	*Colones* 0.62½–0.70
Unskilled workers	do	.35–.47	.40	.40–.47	.40–.50	.50	.50
Bakeries:							
Foremen	8-hour day[1]		.95		.95		
Bakers	do	.90	.80	.90	.80	.75	.75
Weighers	do	.75	.70	.75	.70	[2] 1.00	[2] 1.00
Commerce:							
Salaried employees	Month	75.00–150.00					
Cashiers	do		96.00	96.00	96.00	100.00	100.00
Clerks	do		96.00	96.00	96.00	100.00	100.00
Messengers	do	50.00	50.00	50.00	50.00	50.00	50.00
Construction:							
Master workmen (foremen)	Hour	2.25					
Cabinetmakers	do		1.25	1.25	1.25	[3] 1.25	[3] 1.25
Carpenters	do	1.35	1.00	1.00	1.00		
Masons	do	1.35	1.00	1.00	1.00		
Pipe layers	do	1.25	1.00	1.00	1.00		
Painters	do	1.00	1.00	1.00	1.00		
Helpers	do	.80	.60	.60	.60	.75	.75
Laborers	do	.70	.50	.50	.50	.50	.50
Domestic service:							
Cooks, laundresses, servants	Month	[4] 20.00	[4] 15.00	[4] 15.00	[4] 15.00	[4] 20.00	[4] 20.00
Nursemaids	do	[4] 15.00	[4] 10.00	[4] 10.00	[4] 10.00	[4] 15.00	[4] 15.00
Metallurgy:							
Skilled metal workers	Hour	1.00–1.50				1.00–1.50	1.00–1.50
Helpers	do	.80				.75	.75
Laborers	do	.60				.50	.50
Sawmills:							
Filers	do	1.25–1.75				1.50	1.50
Sawyers	do	1.20–1.50				1.25	1.25
Saw carriage men	do	.70–.85					
Planers	do	.90–1.30				1.10	1.10
Wood salesmen	do	1.00				1.00	1.00
Sawyers' or carters' helpers	do					.80	.80
Laborers	do					.65	.65
Balsa workers	do					.65–.75	.65–.75
Soap factories:							
Soap makers	do	1.20–1.45					
Slabbers	do	.75–1.05				1.00	1.00
Kettle workers	do					.85	.85
Frame workers, slatters	do					.75	.75
Helpers	do	.65–.75				.60	.60
Sugar mills:							
Mechanics	do		1.10	1.10	1.10		
Tractor men	do		.70	.70	.70		
Sugar boilers	do		.60	.60	.60		
Centrifugal tenders	do		.50	.50	.50		
Crusher operators	do		.50	.50	.50		
Tanneries:							
Foremen	do		[5] 7.50	.90	.90	1.25	1.25
Scrapers	do		[5] 6.60	.80	.80	.90	.90
Laborers	do		[5] 5.60	.70	.70	.75	.75
Transportation:							
Taxi drivers [6]	do		1.00	1.00	1.00	1.00	1.00
Truck drivers	do		.80	.80	.80	.80	.80
Bus drivers	do		.90	.90	.90	.90	.90
Bus conductors	do		.45	.45	.45	.45	.45

[1] Rates for 6-hour night shift range from 0.90 centimo to 1.75 colones per hour.
[2] For cake and biscuit makers
[3] For skilled workmen.
[4] With room and board.
[5] Per day.
[6] With commission.

Province of San José.—By far the greatest number of rates in any one Province were listed for the Province of San José, which includes about one-third of the population of Costa Rica. Among the industries covered were the following: For the textile industry, 45 different rates ranging from 25 centimos per hour for weavers' helpers to 1.50 colones for mechanics and 1.80 colones for dyers; for carpentry and woodwork, 27 rates ranging from 50 centimos per hour for varnishers to 1.50 colones for cabinetmakers, turners, and wood carvers; for aviation workers, 23 rates with a low of 60 centimos per hour and a high of 1.75 colones; for brewery workers, 8 rates ranging from 35 to 75 centimos per hour; and for nurses, 13 rates ranging from 50 colones per month for practical and student nurses to 300 colones for head nurses. The highest minima set in the Nation were also in this Province—7 colones per hour for occasional work by orchestra directors and pianists.

Province of Guanacaste.—The smallest number of rates for any one Province were set for the northwestern Province of Guanacaste, an area in which the main occupation is grazing. Hourly rates for construction and wood workers were 50 centimos to 1.00 colon and for sugar-mill workers from 45 to 75 centimos. Agricultural laborers were to receive from 2.50 to 3.20 colones per day with food. Rates for cattle ranch workers were established by the month, with a low of 20.00 colones (food provided) and a high of 80.00 colones.

Piece-work rates.—Throughout all the Provinces except Guanacaste, piece-work rates were established for most processes in tailoring and shoemaking and for some occupations in other industries. For the sugar industry, some rates (not given in the table) were fixed (per 100 bundles) for processes involving bundles of sugarcane.

Minimum Wage Rates in New Zealand, 1944

THE annual report of the New Zealand Department of Labor for 1944 included minimum wage rates in a number of principal industries. Such rates were established by awards issued by the Court of Arbitration, and were in effect on March 31, 1944. With stated exceptions, all the wage rates are subject to an increase of 5 percent as from August 12, 1940, and an additional 5-percent increase from April 7, 1942. In addition, as shown in the table, further rises in specified rates have been authorized under the emergency regulations of December 15, 1942, which permitted the Court of Arbitration to increase rates in cases involving anomalies or in those already pending at the date of the regulations, and to grant increases up to £5 5s. a week for male workers or to £3 for females.

Minimum-Wage Rates in New Zealand, as of March 31, 1944

[With exceptions noted, all rates shown are subject to 5-percent increase from Aug. 12, 1940, and an additional 5-percent increase from Apr. 7, 1942]

Occupational group	Minimum rate		Increase from Dec. 15, 1942
	Per hour	Per 40-hour week	
	s. d.	£ *s. d.*	*s. d.*
Bacon workers		[1] 5 5 0 to [1] 6 10 0	5 0
Bakers		[1] 5 15 0	
Biscuit and confectionery workers:			
Male		4 15 0 to 5 15 0	2 6
Female		2 15 0	5 0
Boot and shoe operatives:			
Male	2 6¾		
Female	1 5¼		
Bricklayers	2 10½		
Brick, tile, and pottery workers:			
Male	2 5 to 2 9		
Female		[2] 2 10 0 [3] 3 3 0	[4] 10 0
Butchers (retail)		1 5 5 0 to [1] 6 5 0	
Canister workers:			
Male	2 7		
Female		2 15 0	
Carpenters and joiners	2 9¾		
Cleaners and caretakers:			
Male		[5] 4 8 4 to [5] 5 0 0	
Female		[5] 2 11 6 to [5] 2 15 0	
Clerical workers:			
Male		[6] 5 10 0	
Female		[6] 3 5 0	
Clothing-trade employees:			
Male		5 2 6	
Female		2 15 0	
Coach workers	2 9		
Cheese- and butter-factory employees		[7] 4 16 6 to [7] 6 0 6	6 6
Drivers:			
Motor		4 16 0 to 5 8 0	([8])
Horse		[9] 4 13 0	([8])
Passenger transport		[10] 5 10 0	
Electrical workers:			
Tradesmen	2 9		
Linesmen	2 8½ to 2 9		½
Engine drivers, firemen, and greasers:			
Drivers, first-class certificate		5 6 6	
Drivers, second-class certificate		5 1 6	
Firemen and greasers		4 16 6	
Engineering-trade employees	2 4½ to 2 11		
Flour-mill employees	2 4 to 2 8		[11] ½

[1] 44-hour week.
[2] Dunedin.
[3] New Zealand Insulators, Timaru.
[4] Allowed.
[5] 40- to 44-hour week.
[6] Establishment hours.
[7] Butter, 40-, 44-, or 48-hour week, according to season; cheese, 38-, 44-, or 52-hour week, according to season.
[8] 5-percent increase for 42-hour week, 7½-percent increase for 43-hour week, and 10-percent increase for 44-hour week.
[9] 3s. increase per week for 2 horses, and 6d. per day extra for each additional horse.
[10] 88 hours per fortnight; 80 for omnibus drivers.
[11] For storemen.

Minimum-Wage Rates in New Zealand, as of March 31, 1944—Continued

With exceptions noted, all rates shown are subject to 5-percent increase from Aug. 12, 1940, and an additional 5-percent increase from Apr. 7, 1942]

Occupational group	Minimum rate		Increase from Dec. 15, 1942
	Per hour	Per 40-hour week	
	s. d.	*£ s. d.*	*s. d.*
Fur workers:			
Male		5 10 0	
Female		2 15 0	2 6
Furniture-trade employees, male	2 4½ to 2 9		
Gas-works employees	2 4½ to 2 9		½
Glove workers:			
Male		4 17 6 to 5 10 0	
Female		2 15 0	2 6
Grocers' assistants		[1] 5 5 0	
Hairdressers:			
Male		[12] 5 13 0	
Female		[1] 3 17 6	
Laborers	2 4 to 2 7		
Laundry workers:			
Male		[5] 4 15 0 to [5] 6 5 0	
Female		[5] 2 12 6	2 6
Motor-engineering-trade employees	2 5 to 2 11		
Painters and decorators	2 9		
Plasterers	2 10½		
Plumbers	2 9½		
Printers' machinists, etc		4 10 0 to 5 7 6	
Rubber workers:			
Male		4 10 0 to 6 0 0	
Female		2 15 0	
Shop assistants:			
Male		[1] 5 10 0	
Female		[1] 3 7 6	
Storemen and packers:			
Wholesale		4 17 6	
Oil stores		4 19 2	2 6
Wool, grain, etc., stores		4 15 0	
Fruit and produce		4 17 6	2 6
Timber-yard and sawmill employees	2 4½ to 3 0		
Tobacco workers:			
Male		5 5 0	1 0
Female		2 12 6	
Tramway employees:			
Motormen (after first year)	[13] 2 9.575		
Conductors (after first year)	[13] 2 6.950		
Conductors (after fifth year)	[13] 2 7.475		
Motor-bus drivers	[13] 2 9.575		
Typographers		4 5 0 to 5 15 0	
Warehouse employees:			
Male		[14] 5 5 0	
Female		[14] 3 2 6	
Woolen-mill employees:			
Male	2 4 to 2 9		
Female	1 3¾		

[1] 44-hour week.
[5] 40- to 44-hour week.
[12] 44-hour week. Not subject to the 5-percent increase from Aug. 12, 1940.
[13] Not subject to the 5-percent increase from Aug. 12, 1940.
[14] 42-hour week.

Cost of Living and Retail Prices

Living Costs in Large Cities, February 1945

ONLY minor changes occurred in retail prices of most staples purchased by moderate-income city families during the month ending February 15, 1945. The continued seasonal decline in egg prices was the chief cause of a decrease of 0.6 percent in average food prices and 0.2 percent in prices of living essentials. The Bureau of Labor Statistics cost-of-living index for February 1945 was 126.8 percent of the 1935–39 average and 2.4 percent above the level of February 1944.

Prices of the family food budget, with the exception of eggs, were comparatively stable. Prices were higher for onions, spinach, potatoes, and sweetpotatoes, while those of oranges, green beans, and cabbage were lower, as new crop shipments reached retail markets and "disaster" ceilings were removed from some crops. On the average, fresh fruit and vegetable prices declined slightly. Eggs, which represent about 6½ percent of the average family's food costs, dropped seasonally by 9.7 percent during the month.

Clothing prices rose 0.2 percent between mid-January and mid-February, with scattered advances for many clothing articles, resulting from continued short supplies of medium- and low-priced merchandise. Women's percale housedresses and rayon underwear and men's cotton socks and woolen suits showed the largest cost increases during the month.

Housefurnishings prices rose slightly (0.1 percent) as a result of some increases in prices of bedroom furniture, gas stoves, wool rugs, and sheets. February furniture sales were not so widespread as usual. The housefurnishings index for February reflects in some cities, in addition to the price movement of the month, a downward adjustment of costs of some goods of pre-war quality, especially spring-filled living-room furniture. These adjustments were based on additional price information which has become available as these goods have moved into retail stores in greater volume than at any other time since their reappearance early in 1944.

Higher coal prices caused a 0.3-percent rise in average prices for the fuel, electricity, and ice group. Retail coal and coke dealers, restricted to 1-ton deliveries by order of the Solid Fuels Administrator for War, in February were permitted by OPA to raise their delivery prices 25 cents a ton if this price increase had not already been imposed.

Miscellaneous goods and services rose only 0.1 percent. Charges for haircuts were raised in two cities, and cigarettes cost more in two cities as customers could no longer buy more than one package at a time. Rents were not surveyed in February.

In connection with the data shown in the following tables, it should be borne in mind that the Bureau of Labor Statistics index indicates average changes in retail prices of selected goods, rents, and services, bought by families of wage earners and lower-salaried workers in large cities. The items covered represented 70 percent of the expenditures of families which had incomes ranging from $1,250 to $2,000 in 1934–36. The index does not show the full wartime effect on the cost of living of such factors as lowered quality, disappearance of low-priced goods, and forced changes in housing and eating away from home. It does not measure changes in *total* "living costs"—that is, *in the total amount families spend for living.* Income taxes and bond subscriptions are not included.[1]

TABLE 1.—*Indexes of Cost of Living in Large Cities, Feb. 15, 1945, and Earlier Dates*

Date	Indexes[1] (1935–39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1939: Aug. 15	98.6	93.5	100.3	104.3	97.5	100.6	100.4
1941: Jan. 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
1943: May 15	125.1	143.0	127.9	108.0	107.6	125.1	115.3
1944: Feb. 15	123.8	134.5	135.2	108.1	110.3	128.7	118.7
1945: Jan. 15	127.1	137.3	143.0	[2]	109.7	143.6	123.1
Feb. 15	126.8	136.5	143.3	[2]	110.0	143.8	123.2

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in this month.

TABLE 2.—*Percent of Change*[1] *in Cost of Living in Large Cities in Specified Periods*

Date	All items	Food	Clothing	Rent[2]	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Jan. 15, 1945, to Feb. 15, 1945	−0.2	−0.6	+0.2	[3]	+0.3	+0.1	+0.1
Feb. 15, 1944, to Feb. 15, 1945	+2.4	+1.5	+6.0	+0.2	−.3	+11.7	+3.8
May 15, 1943, to Feb. 15, 1945	+1.4	−4.5	+12.0	+.3	+2.2	+14.9	+6.9
May 15, 1942, to Feb. 15, 1945	+9.3	+12.3	+13.5	−1.5	+4.9	+17.7	+11.1
Jan. 15, 1941, to Feb. 15, 1945	+25.8	+39.6	+42.3	+3.1	+9.1	+43.7	+20.9
Aug. 15, 1939, to Feb. 15, 1945	+28.6	+46.0	+42.9	+3.8	+12.8	+42.9	+22.7

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Changes through December 15, 1944.
[3] Rents not surveyed in January and February.

[1] For a description of the methods used in computing the index, see Description of the Cost of Living Index of the Bureau of Labor Statistics. For an appraisal of the factors enumerated above, see the report of the President's Committee on the Cost of Living, November 17, 1944.

TABLE 3.—*Percent of Change*[1] *in Cost of Living in Specified Periods, by Cities*

City	Feb. 15, 1944, to Feb. 15, 1945	Aug. 15, 1939, to Feb. 15, 1945	Jan. 1, 1941, to Feb. 15, 1945	May 15, 1942, to Feb. 15, 1945	May 15, 1943, to Feb. 15, 1945
Average: Large cities	+2.4	+28.6	+25.8	+9.3	+1.4
New England: Boston	+2.4	+27.0	+24.4	+8.7	+.8
Middle Atlantic:					
Buffalo	+2.1	+29.5	+25.2	+5.9	−.9
New York	+2.6	+28.7	+26.1	+12.4	+2.6
Philadelphia	+2.8	+29.2	+27.4	+10.2	+1.3
Pittsburgh	+3.2	+30.1	+26.5	+10.5	+2.5
East North Central:					
Chicago	+2.7	+27.3	+24.1	+7.8	+.9
Cincinnati	+2.6	+30.1	+27.1	+9.2	+2.3
Cleveland	+1.4	+29.6	+27.1	+9.1	+1.2
Detroit	+2.5	+29.4	+26.2	+7.3	+.2
West North Central:					
Kansas City	+2.5	+26.8	+27.0	+9.6	+2.0
Minneapolis	+1.7	+23.6	+21.0	+6.3	+1.1
St. Louis	+2.3	+27.5	+23.9	+8.2	+.9
South Atlantic:					
Baltimore	+3.5	+31.6	+29.0	+9.9	+1.3
Savannah	+2.2	+36.1	+33.2	+11.7	+2.4
Washington, D. C	+2.5	+27.8	+26.1	+9.9	+1.9
East South Central: Birmingham	+2.7	+32.5	+28.4	+9.9	+3.7
West South Central: Houston	+1.5	+23.9	+22.4	+7.4	+.3
Mountain: Denver	+2.7	+27.7	+25.9	+8.9	+1.2
Pacific:					
Los Angeles	+2.2	+28.0	+25.5	+8.9	+2.2
San Francisco	+3.3	+32.1	+28.9	+11.6	+2.4
Seattle	+2.3	+30.2	+27.9	+7.8	+.8

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.

TABLE 4.—*Percent of Change*[1] *in Cost of Living, Jan. 15, to Feb. 15, 1945, by Cities*

City	All items	Food	Clothing	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Average: Large cities	[2]−0.2	[3]−0.6	[4]+0.2	[5]+0.3	[4]+0.1	[4]+0.1
New England: Boston	−.2	−.5	+.2	+.3	−.2	0
Middle Atlantic:						
Buffalo	+.2	+.6	+.4	+.2	[6]−3.2	0
New York	−.4	−1.0	+.1	+.3	+.1	0
Philadelphia	+.4	+.6	+.4	+1.1	+.9	0
Pittsburgh	−.1	−.6	+.5	0	+2.4	0
East North Central:						
Chicago	−.2	−.6	+.1	0	[6]−2.3	0
Cincinnati	−.3	−.7	+.8	0	[6]−3.3	0
Cleveland	−.2	−.5	+.2	+.2	+1.1	0
Detroit	+.1	−.5	+.1	+.4	+5.4	0
West North Central:						
Kansas City	−.1	−.8	+.6	0	0	+.4
Minneapolis	0	−.8	+1.4	0	+1.9	0
St. Louis	[7]−.3	[7]−.6	0	+.1	[6]−1.3	0
South Atlantic:						
Baltimore	+.2	0	+.1	+.4	0	+.4
Savannah	[8]+.2	[8]+.1	+.2	0	+.6	+.5
Washington, D. C	−.1	−.4	0	+.6	+.3	+.1
East South Central: Birmingham	−.6	−1.5	+.2	+.1	[6]−.6	−.1
West South Central: Houston	−.2	−.8	0	0	[6]−.1	0
Mountain: Denver	−.2	−.7	+.4	0	+.4	0
Pacific:						
Los Angeles	−.4	−1.1	+.1	0	+2.6	0
San Francisco	−.6	−1.1	0	0	[6]−6.5	0
Seattle	−.3	−.8	+.4	+.1	[6]−.5	0

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in February.
[3] Based on prices for 56 cities collected on the Tuesday nearest the 15th of the month.
[4] Based on data for 21 cities.
[5] Based on data for 34 cities.
[6] Revised, owing to downward adjustment for some housefurnishings of pre-war quality, based on additional information obtained after reappearance of these goods in retail markets in 1944.
[7] Indexes for Jan. 15, 1945, revised: All items 125.5; Food 140.0.
[8] Indexes for Jan. 15, 1945, revised: All items 134.8; Food 150.7.

TABLE 5.—*Indexes of Cost of Living in Large Cities, 1935 to February 1945*

Year and month	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	115.8
1944	125.5	136.1	138.8	108.2	109.8	136.4	121.3
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
Apr. 15	124.6	134.6	137.1	108.1	109.9	132.9	120.9
May 15	125.1	135.5	137.4	108.1	109.8	135.0	121.3
June 15	125.4	135.7	138.0	108.1	109.6	138.4	121.7
July 15	126.1	137.4	138.3	108.2	109.7	138.7	122.0
Aug. 15	126.4	137.7	139.4	108.2	109.8	139.3	122.3
Sept. 15	126.5	137.0	141.4	108.2	109.8	140.7	122.4
Oct. 15	126.5	136.4	141.9	[2]	109.8	141.4	122.8
Nov. 15	126.6	136.5	142.1	[2]	109.9	141.7	122.9
Dec. 15	127.0	137.4	142.8	108.3	109.4	143.0	123.1
1945:							
Jan. 15	127.1	137.3	143.0	[2]	109.7	143.6	123.1
Feb. 15	126.8	136.5	143.3	[2]	110.0	143.8	123.2

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in this month.

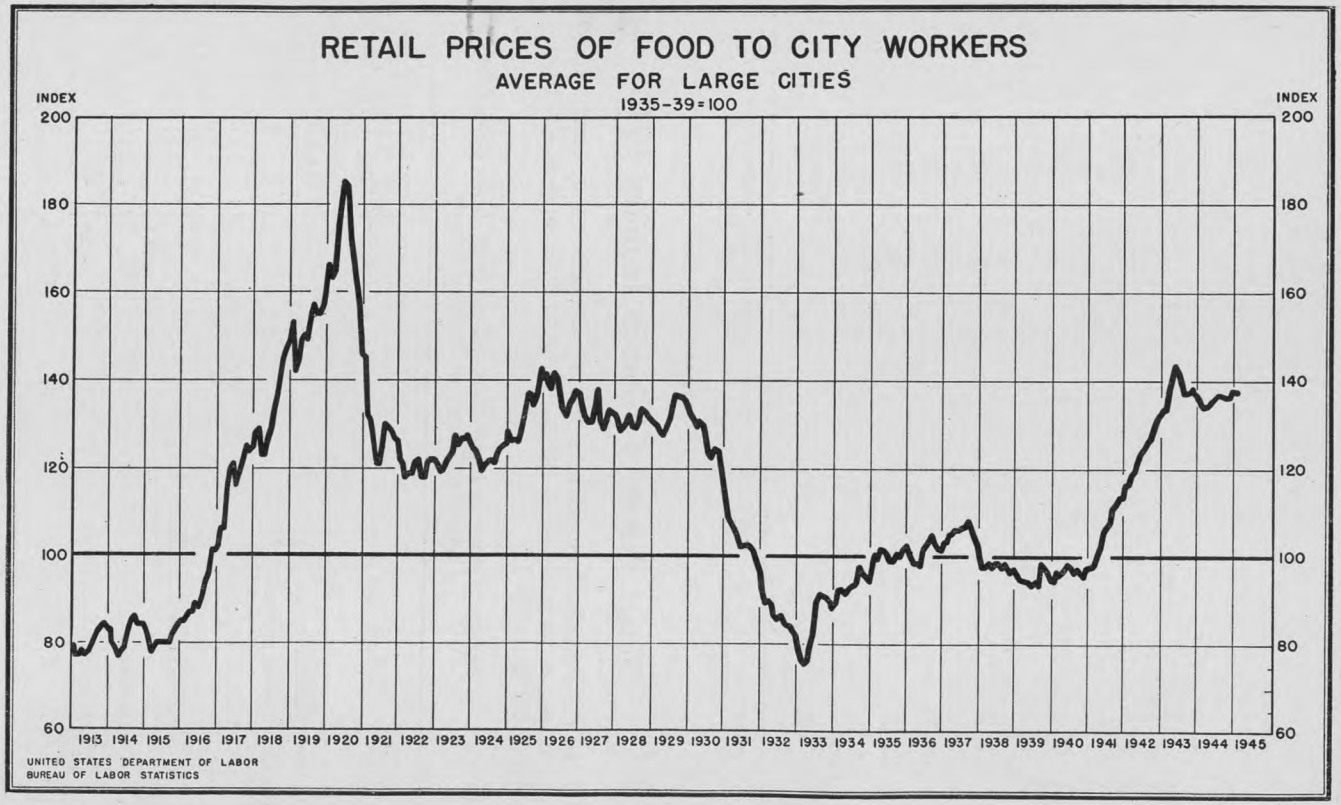
Retail Prices of Food in January 1945

PERCENTAGE changes in retail food costs on January 16, 1945, as compared with costs in the previous month and in January 1944, are shown in table 1.

TABLE 1.—*Percent of Change in Retail Costs of Food in 56 Large Cities Combined,[1] by Commodity Groups, in Specified Periods*

Commodity group	Dec. 12, 1944, to Jan. 16, 1945	Jan. 18, 1944, to Jan. 16, 1945	Sept. 15, 1942, to Jan. 16, 1945	Jan. 14, 1941, to Jan. 16, 1945	Aug. 15, 1939, to Jan. 16, 1945
All foods	−0.1	+0.9	+8.5	+40.4	+46.8
Cereals and bakery products	+.1	+.2	+3.1	+14.5	+16.4
Meats	+.2	−.6	−.3	+28.8	+36.1
Beef and veal	+.1	−.8	−6.0	+8.2	+18.9
Pork	+.2	−.3	−9.3	+30.7	+27.8
Lamb	−.1	+1.3	+1.3	+37.3	+37.1
Chickens	+1.1	+1.5	+13.8	+56.6	+60.9
Fish, fresh and canned	−.4	−6.0	+24.9	+77.0	+110.9
Dairy products	0	0	+4.5	+27.0	+43.4
Eggs	−10.0	+10.1	+9.3	+74.1	+87.0
Fruits and vegetables	+2.9	+1.3	+30.2	+81.0	+82.8
Fresh	+3.5	+1.5	+36.5	+90.5	+91.7
Canned	−.2	0	+4.8	+41.9	+41.6
Dried	+.3	+2.5	+16.4	+67.6	+84.8
Beverages	+.1	0	+.5	+36.9	+31.1
Fats and oils	+.1	−.5	+2.2	+53.7	+46.0
Sugar and sweets	−.1	−.2	−.6	+32.5	+32.1

[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.



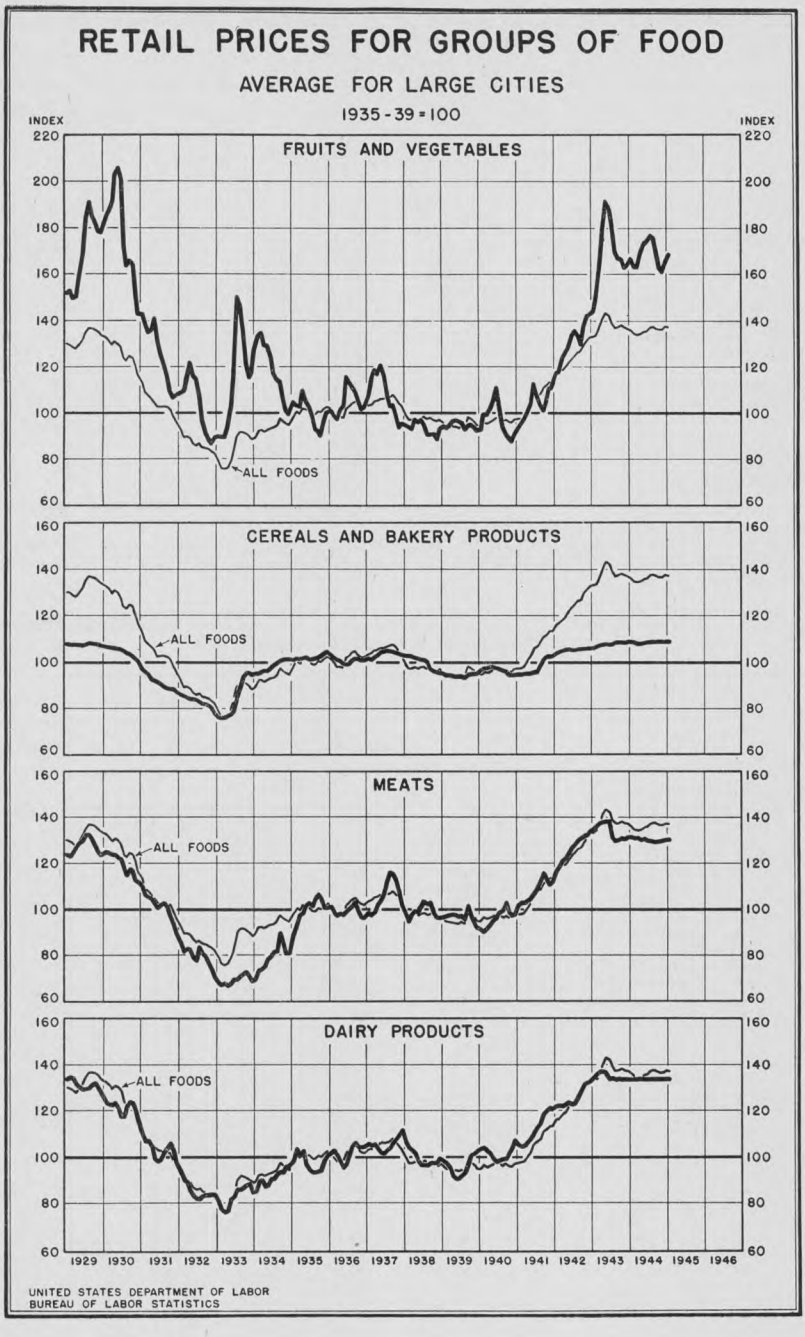


TABLE 2.—*Indexes of Retail Costs of Food in 56 [1] Large Cities Combined,[2] by Commodity Groups, on Specified Dates*

[1935-39=100]

Commodity group	1945	1944		1942	1941	1939
	Jan. 16	Dec. 12	Jan. 18	Sept. 15	Jan. 14	Aug. 15
All foods	137.3	137.4	136.1	126.6	97.8	93.5
Cereals and bakery products	108.7	108.6	108.5	105.4	94.9	93.4
Meats	130.2	129.9	131.0	130.6	101.1	95.7
Beef and veal	118.4	118.3	119.3	126.0	109.4	99.6
Pork	112.5	112.3	112.8	124.0	86.1	88.0
Lamb	135.5	135.6	133.8	133.7	98.7	98.8
Chickens	152.2	150.6	149.9	133.7	97.2	94.6
Fish, fresh and canned	210.1	211.0	223.5	168.2	118.7	99.6
Dairy products	133.5	133.5	133.5	127.7	105.1	93.1
Eggs	169.6	188.5	154.0	155.2	97.4	90.7
Fruits and vegetables	168.9	164.2	166.7	129.7	93.3	92.4
Fresh	177.9	171.9	175.3	130.3	93.4	92.8
Canned	129.7	129.9	129.7	123.8	91.4	91.6
Dried	166.9	166.4	162.8	143.4	99.6	90.3
Beverages	124.4	124.3	124.4	123.8	90.9	94.9
Fats and oils	123.4	123.3	124.0	120.7	80.3	84.5
Sugar and sweets	126.3	126.4	126.6	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.

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,[1] January 1945 Compared With Earlier Months*

Article	1945	1944		1941	1939
	Jan. 16	Dec. 12	Jan. 18	Jan. 14	Aug. 15
Cereals and bakery products:					
Cereals:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Flour, wheat—10 pounds	64.2	64.1	64.6	41.4	35.8
Macaroni—pound	15.7	15.7	15.5	13.8	14.0
Wheat cereal [2]—28 ounces	23.2	23.1	23.3	23.5	24.2
Corn flakes—8 ounces	6.5	6.5	6.5	7.1	7.0
Corn meal—pound	6.4	6.4	5.9	4.2	4.0
Rice [2]—do	12.8	12.8	12.8	7.9	7.5
Rolled oats—do	10.2	10.2	8.7	7.1	7.1
Flour, pancake [2]—20 ounces	12.3	12.3	11.9	(3)	(3)
Bakery products:					
Bread, white—pound	8.8	8.8	8.9	7.8	7.8
Bread, whole-wheat—do	9.6	9.6	9.8	8.7	8.8
Bread, rye—do	9.9	9.9	10.0	9.0	9.2
Vanilla cookies—do	28.8	28.9	28.8	25.1	(4)
Soda crackers—do	18.9	18.9	18.7	15.0	14.8
Meats:					
Beef:					
Round steak—do	40.5	40.6	42.0	38.6	36.4
Rib roast—do	32.8	32.9	34.0	31.5	28.9
Chuck roast—do	28.1	28.2	29.2	25.2	22.5
Stew meat [2]—do	30.1	30.4	31.7	(3)	(3)
Liver—do	37.3	37.3	37.2	(4)	(4)
Hamburger—do	27.4	27.5	28.7	(3)	(3)
Veal:					
Cutlets—do	44.5	44.8	46.0	45.2	42.5
Roast, boned and rolled [2]—do	35.5	35.9	35.4	(3)	(3)
Pork:					
Chops—do	37.3	37.3	37.6	29.1	30.9
Bacon, sliced—do	40.9	40.9	41.4	30.1	30.4
Ham, sliced—do	50.0	50.0	51.6	45.1	46.4
Ham, whole—do	35.3	35.2	35.6	26.2	27.4
Salt pork—do	22.2	21.9	22.6	16.7	15.4
Liver [2]—do	22.1	22.0	22.2	(3)	(3)
Sausage [2]—do	38.2	38.5	38.4	(3)	(3)
Bologna, big [2]—do	33.6	33.9	34.4	(3)	(3)
Lamb:					
Leg—do	39.9	40.1	40.1	27.8	27.6
Rib chops—do	45.4	45.7	45.3	35.0	36.7

See footnotes at end of table.

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,*[1] *January 1945 Compared With Earlier Months*—Continued

Article	1945	1944		1941	1939
	Jan. 16	Dec. 12	Jan. 18	Jan. 14	Aug. 15
Meats—Continued.	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Poultry: Roasting chickens, pound	45.5	45.0	44.9	31.1	30.9
Fish:					
Fish (fresh, frozen), do	(5)	(5)	(5)	(5)	(5)
Salmon, pink, 16-ounce can	23.0	22.5	23.2	15.7	12.8
Salmon, red [2], do	40.3	40.4	41.8	26.4	23.1
Dairy products:					
Butter, pound	49.8	50.0	50.2	38.0	30.7
Cheese, do	35.7	36.0	36.1	27.0	24.7
Milk, fresh (delivered), quart	15.6	15.6	15.6	13.0	12.0
Milk, fresh (store), do	14.5	14.5	14.4	11.9	11.0
Milk, evaporated, 14½-ounce can	10.0	10.0	10.0	7.1	6.7
Eggs: Eggs, fresh, dozen	60.2	66.9	54.3	34.9	32.0
Fruits and vegetables:					
Fresh fruits:					
Apples, pound	11.1	10.7	10.8	5.2	4.4
Bananas, do	10.4	11.1	11.7	6.6	6.1
Oranges, dozen	44.5	43.7	40.5	27.3	31.5
Grapefruit [2], each	8.8	8.8	7.4	(6)	(6)
Fresh vegetables:					
Beans, green, pound	23.2	20.5	25.9	14.0	7.2
Cabbage, do	7.4	5.8	6.0	3.4	3.9
Carrots, bunch	8.7	9.2	10.4	6.0	4.6
Lettuce, head	11.8	12.5	12.2	8.4	8.4
Onions, pound	5.3	5.0	7.7	3.6	3.6
Potatoes, 15 pounds	72.0	67.6	64.1	29.2	34.4
Spinach, pound	11.6	11.9	11.6	7.3	7.8
Sweetpotatoes, do	8.8	8.0	10.6	5.0	5.5
Beets [2], bunch	9.7	9.7	9.6	(3)	(3)
Canned fruits:					
Peaches, No. 2½ can	27.6	27.8	27.0	16.5	17.1
Pineapple, do	26.6	26.7	27.7	20.9	21.0
Grapefruit juice, No. 2 can	14.3	14.4	14.4	(6)	(6)
Canned vegetables:					
Beans, green, do	13.1	13.1	14.0	10.0	10.0
Corn, do	14.7	14.7	14.5	10.7	10.4
Peas, do	13.3	13.2	14.2	13.2	13.6
Tomatoes, do	12.0	12.1	12.2	8.4	8.6
Soup, vegetable [2], 11-ounce can	13.4	13.3	13.2	(3)	(3)
Dried fruits: Prunes, pound	17.2	17.0	17.0	9.6	8.8
Dried vegetables:					
Navy beans, pound	11.2	11.1	10.5	6.5	5.8
Soup, dehydrated, chicken noodle [2], ounce	3.7	3.7	3.7	(3)	(3)
Beverages:					
Coffee, pound	30.3	30.3	29.8	20.7	22.3
Tea, ¼ pound	24.1	24.0	23.5	17.6	17.2
Cocoa [2], ½ pound	10.3	10.4	9.7	9.1	8.6
Fats and oils:					
Lard, pound	18.8	18.8	18.8	9.3	9.9
Shortening other than lard—					
In cartons, do	20.1	20.2	20.0	11.3	11.7
In other containers, do	24.7	24.8	24.8	18.3	20.2
Salad dressing, pint	25.7	25.8	25.5	20.1	(4)
Oleomargarine, pound	24.1	24.2	24.0	15.6	16.5
Peanut butter, do	28.4	28.3	28.9	17.9	17.9
Oil, cooking or salad [2], pint	30.7	30.7	30.7	(4)	(4)
Sugar and sweets:					
Sugar, pound	6.7	6.7	6.8	5.1	5.2
Corn sirup, 24 ounces	15.8	15.8	15.9	13.6	13.7
Molasses [2], 18 ounces	15.8	15.9	15.9	13.4	13.6
Apple butter [2], 16 ounces	13.5	13.5	13.2	(3)	(3)

[1] Data are based on 51 cities combined prior to January 1943.
[2] Not included in index.
[3] First priced, February 1943.
[4] Not priced.
[5] Composite price not computed.
[6] First priced, October 1941.

TABLE 4.—*Indexes of Average Retail Costs of All Foods, by Cities,*[1] *on Specified Dates*

[1935–39=100]

City	1945	1944		1941	1939
	Jan. 16	Dec. 12	Jan. 18	Jan. 14	Aug. 15
United States	137.3	137.4	136.1	97.8	93.5
New England:					
Boston	132.8	132.7	130.9	95.2	93.5
Bridgeport	134.2	134.6	135.1	96.5	93.2
Fall River	132.5	132.2	131.2	97.5	95.4
Manchester	134.0	133.6	132.5	96.6	94.9
New Haven	135.1	135.3	136.3	95.7	93.7
Portland, Maine	132.4	133.1	132.3	95.3	95.9
Providence	135.6	135.7	132.0	96.3	93.7
Middle Atlantic:					
Buffalo	135.5	134.1	135.0	100.2	94.5
Newark	140.0	140.2	140.7	98.8	95.6
New York	138.7	138.7	138.0	99.5	95.8
Philadelphia	135.1	135.0	135.0	95.0	93.0
Pittsburgh	136.4	136.1	134.6	98.0	92.5
Rochester	134.3	134.0	131.5	99.9	92.3
Scranton	137.2	137.2	134.7	97.5	92.1
East North Central:					
Chicago	135.3	136.5	132.5	98.2	92.3
Cincinnati	135.5	134.7	135.1	96.5	90.4
Cleveland	140.8	140.6	140.8	99.2	93.6
Columbus, Ohio	129.5	129.4	128.1	93.4	88.1
Detroit	132.4	132.7	132.8	97.0	90.6
Indianapolis	134.0	133.8	133.3	98.2	90.7
Milwaukee	135.2	135.2	130.5	95.9	91.1
Peoria	140.0	140.5	138.4	99.0	93.4
Springfield, Ill	142.7	142.0	138.7	96.2	94.1
West North Central:					
Cedar Rapids [2]	140.7	139.9	137.6	95.9	----------
Kansas City	131.6	131.0	130.3	92.4	91.5
Minneapolis	130.7	130.4	128.3	99.0	95.0
Omaha	130.6	130.0	131.1	97.9	92.3
St. Louis	140.0	139.5	137.9	99.2	93.8
St. Paul	129.6	129.1	127.1	98.6	94.3
Wichita [2]	148.0	147.3	146.1	97.2	----------
South Atlantic:					
Atlanta	139.7	138.8	138.0	94.3	92.5
Baltimore	145.2	143.9	142.5	97.9	94.7
Charleston, S. C	134.3	135.0	134.2	95.9	95.1
Jacksonville	146.3	146.8	145.8	98.8	95.8
Norfolk [3]	145.0	143.2	145.1	95.8	93.6
Richmond	136.5	137.1	134.7	93.7	92.2
Savannah	150.7	150.5	151.1	100.5	96.7
Washington, D. C	138.0	137.1	136.4	97.7	94.1
Winston-Salem [2]	139.7	138.7	136.9	93.7	----------
East South Central:					
Birmingham	142.8	142.3	140.6	96.0	90.7
Jackson [2]	152.9	151.3	142.9	105.3	----------
Knoxville [2]	160.2	158.3	154.3	97.1	----------
Louisville	131.9	132.0	132.6	95.5	92.1
Memphis	147.1	145.6	146.0	94.2	89.7
Mobile	143.8	144.6	145.5	97.9	95.5
West South Central:					
Dallas	133.7	133.4	134.5	92.6	91.7
Houston	136.5	135.9	137.5	102.6	97.8
Little Rock	137.3	137.0	134.7	95.6	94.0
New Orleans	150.6	150.3	149.9	101.9	97.6
Mountain:					
Butte	134.8	134.3	135.3	98.7	94.1
Denver	137.8	137.9	136.0	94.8	92.7
Salt Lake City	140.4	141.9	138.6	97.5	94.6
Pacific:					
Los Angeles	143.4	143.9	142.0	101.8	94.6
Portland, Oreg	147.0	148.1	142.5	101.7	96.1
San Francisco	146.9	149.1	143.6	99.6	93.8
Seattle	143.4	143.9	142.5	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] June 1940=100.

[3] Includes Portsmouth and Newport News.

TABLE 5.—*Indexes of Retail Food Costs in 56 Large Cities Combined,*[1] *1913 to January 1945*

[1935–39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index
1913	79.9	1929	132.5	*1944*	
1914	81.8	1930	126.0	January	136.1
1915	80.9	1931	103.9	February	134.5
1916	90.8	1932	86.5	March	134.1
1917	116.9	1933	84.1	April	134.6
1918	134.4	1934	93.7	May	135.5
1919	149.8	1935	100.4	June	135.7
1920	168.8	1936	101.3	July	137.4
1921	128.3	1937	105.3	August	137.7
1922	119.9	1938	97.8	September	137.0
1923	124.0	1939	95.2	October	136.4
1924	122.8	1940	96.6	November	136.5
1925	132.9	1941	105.5	December	137.4
1926	137.4	1942	123.9		
1927	132.3	1943	138.0	*1945*	
1928	130.8	1944	136.1	January	137.3

[1] Indexes based on 51 cities combined prior to March 1943.

Retail Prices of Coal in 1944

RETAIL prices for coal to domestic consumers averaged between 3 and 5 percent higher in 1944 than in 1943. The extension by the Office of Price Administration of "area" retail ceilings to more cities, replacing individual retailer price ceilings, caused some small local adjustments in prices. Another type of local price adjustment was a uniform price increase of 10 cents per ton for all types of coal in Milwaukee, allowed by OPA in December to cover increased distribution costs.

Near the end of the 1943–44 heating season, the Solid Fuels Administration attempted to spread available supplies of coal by directing mines and mine representatives to supply retailers in an emergency. Local committees adapted this procedure to local needs. The development in the industry which was most important to domestic consumers during 1944 was the extension of formal controls directly to them, stringently limiting the anthracite, Eastern byproduct coke, and bituminous coal available to consumers for the winter of 1944–45. Consumer problems were further complicated when, by mid-December 1944, production figures were considerably below those for corresponding weeks in 1943, and an extensive period of inclement weather began.

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Prices of Anthracite

Anthracite prices, which had increased in November and December 1943, were at approximately the same levels in January 1944. For the month of February only, the OPA allowed special price increases at all levels of sale to cover the additional costs of the 7-day week production which the Solid Fuels Administration for War requested for that month. The general increase was 45 cents per ton. Prices in March reverted to about the January levels.

Composite average prices in April and May were not affected by price increases by retailers in the Upper Lakes area, who for the first time received, by water, anthracite purchased at the higher f. o. b. mine prices initiated at the end of 1943.

The higher anthracite prices allowed by OPA late in 1943, were sufficient to permit mine owners to recover, by the end of May 1944, back wage adjustments allowed the miners by the National War Labor Board. Ceiling prices were lowered in June. Following this decrease, which amounted to about 15 cents per net ton in all markets, prices remained practically unchanged to the end of the year.

During the year higher price ceilings were allowed for the anthracite mines having exceptionally high production costs, and retailers handling these coals were allowed to pass this increase on to consumers.

The decline in anthracite prices from December 1943 to December 1944 averaged 7 cents a ton for stove and 3 cents a ton for chestnut. In the accompanying table average retail prices and indexes for these two sizes are shown by years from 1929 through 1944 and by month for 1943 and 1944.

Bituminous-Coal Prices

Between December 1943 and December 1944, the unweighted average retail price for bituminous coal in 35 cities rose 16 cents per net ton or about 1.5 percent. In the table following, average retail prices and indexes for all sizes of bituminous coal combined are shown by years from 1929 through 1944, and by month for 1943 and 1944.

The advance was gradual and was caused principally by actions of OPA. Small increases were allowed in April in prices both at the mine and at retail for coal from certain high-volatile mines. In Minnesota and Wisconsin retail prices were advanced in the spring to cover the higher mine prices of late 1943. Local price adjustments also were made as area ceilings replaced individual dealer ceilings, or as local retailers were allowed to match increased costs with increased prices.

The Petroleum Administration for War again allocated supplies of oil to the industry for dust treatment, in the second quarter of the year, and the majority of the dealers exercised their right to raise prices 10 cents per net ton for coal so treated.

Average Retail Prices and Indexes for Coal in Large Cities, 1929–44

Year and month	Average price per ton of 2,000 lbs.			Indexes (October 1922–September 1925=100) of—		
	Bituminous (unweighted average, 35 cities) [1]	Pennsylvania anthracite (weighted average, 24 cities)[2]		Bituminous (unweighted average, 35 cities)[1]	Pennsylvania anthracite (weighted average, 24 cities)[2]	
		Stove	Chestnut		Stove	Chestnut
1929	$8.85	$14.14	$13.70	91.5	100.5	97.7
1930	8.83	14.03	13.66	91.3	99.7	97.3
1931	8.33	13.68	13.65	86.2	97.1	97.3
1932	7.71	12.55	12.45	79.7	89.2	88.7
1933	7.65	12.12	11.93	79.1	86.2	85.0
1934	8.26	12.18	11.92	85.4	86.6	85.0
1935	8.29	11.38	11.14	85.7	80.9	79.4
1936	8.42	11.74	11.61	87.1	83.5	82.7
1937	8.58	11.05	11.19	88.4	78.5	79.6
1938	8.61	10.96	11.11	88.7	77.9	79.1
1939	8.52	10.79	10.84	87.7	76.7	77.2
1940	8.60	11.33	11.35	87.9	80.5	80.8
1941	9.10	11.92	11.97	92.6	84.7	85.2
1942	9.51	12.41	12.47	96.7	88.1	88.7
1943	9.94	13.15	13.20	100.9	93.4	93.9
1944	10.27	13.89	13.94	104.3	98.7	99.2
1943: January	9.63	13.10	13.13	97.9	93.0	93.4
February	9.68	13.10	13.14	98.4	93.0	93.5
March	9.82	13.08	13.13	99.8	92.9	93.4
April	9.86	13.08	13.14	100.1	92.9	93.5
May	9.99	13.09	13.15	101.4	93.0	93.6
June	9.98	13.08	13.14	101.4	92.9	93.5
July	10.01	13.05	13.11	101.5	92.7	93.3
August	10.02	13.05	13.11	101.6	92.7	93.3
September	10.02	13.05	13.11	101.6	92.7	93.3
October	10.03	13.06	13.12	101.7	92.8	93.4
November	10.03	13.20	13.22	101.8	93.8	94.1
December	10.17	13.88	13.89	103.2	98.6	98.9
1944: January	10.19	13.90	13.92	103.5	98.7	99.1
February	10.22	14.36	14.37	103.8	102.0	102.3
March	10.22	13.97	14.04	103.8	99.2	99.9
April	10.24	13.97	14.04	104.0	99.2	99.9
May	10.27	13.93	13.96	104.3	99.0	99.3
June	10.28	13.80	13.85	104.4	98.0	98.6
July	10.29	13.80	13.84	104.5	98.0	98.5
August	10.31	13.80	13.84	104.6	98.0	98.5
September	10.31	13.80	13.84	104.6	98.0	98.5
October	10.31	13.80	13.85	104.7	98.1	98.6
November	10.32	13.80	13.86	104.7	98.1	98.6
December	10.33	13.81	13.86	104.8	98.1	98.7

[1] 38 cities prior to December 1940.
[2] 25 cities prior to July 1944.

Wholesale Prices

Wholesale Prices in February 1945

LED by higher prices for agricultural products—particularly livestock and poultry and fresh fruits and vegetables—the Bureau of Labor Statistics index of commodity prices at the primary market[1] level rose to a 24-year peak in February. The increase brought the all-commodity index up 0.3 percent during the month to the highest point reached since the inflationary period which followed World War I. At 105.2 percent of the 1926 average the combined level of prices for the nearly 900 series included in the index was 1.5 percent higher than in February of last year and more than 40 percent over the average for August 1939.

Although prices have been edging gradually upward during the past 6 months the increases in all instances have been very moderate. In addition to a rise of 0.6 percent in farm product prices during February, average prices for miscellaneous commodities rose 0.4 percent; metals and metal products and building materials, 0.2 percent; and hides and leather products and textile products, 0.1 percent. The indexes for the foods, fuel and lighting materials, chemicals and allied products, and housefurnishing goods groups remained unchanged at the January level.

Largely because of the increase in prices for agricultural commodities, raw materials rose 0.4 percent during the month, manufactured products advanced 0.2 percent, and semimanufactured products 0.1 percent.

The rise of 0.6 percent in average prices for farm products in February was similar to that in 1944. The increase was the result of an upward seasonal movement in the fruits and vegetables and livestock and poultry markets. Among the more important fruits and vegetables for which higher prices were reported were apples, oranges, onions, and sweetpotatoes. Lemons and white potatoes declined. Prices for all livestock items were higher, ranging from less than a half of 1 percent for hogs and steers to about 8 percent for cows and sheep. Live poultry in both the Chicago and New York markets rose approximately 2 percent. Led by slightly higher prices for wheat and No. 3 yellow corn at Chicago, average prices for grains advanced 0.4 percent in February. Quotations for most types of hay were higher than in January. Rye on the contrary declined 1.3 percent and No. 2 yellow corn quotations were 0.8 percent below the January level. Cotton also declined fractionally. A seasonal decrease of nearly 10 percent occurred in prices for eggs.

[1] The Bureau of Labor Statistics wholesale price data for the most part represent prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.

Food prices in primary markets were unchanged during the month. Higher prices for fresh fruits, vegetables, flour, and dressed poultry were offset by lower prices for eggs.

An increase of 2.5 percent in quotations for sheepskins brought the index for the hides and leather products group up 0.1 percent. No changes were reported in prices for leather and leather products, such as shoes, belting, and luggage.

OPA action in granting an interim increase of 1 cent per pound to manufacturers of cotton rope together with higher producers' ceilings on cotton flannel, in order to conform to the Stabilization Extension Act of 1944, accounted for the advance of 0.1 percent in the textile products group index.

During February prices for coal, coke, and petroleum products remained steady, although a temporary increase in ceiling was granted for coal mined by Southern Appalachian producers on two Sundays in February. Sales realizations on gas were 1.5 percent higher while on electricity they were 0.3 percent lower.

The index for metals and metal products rose 0.2 percent to the highest level in nearly 20 years. The increase at the mill level in five basic steel products allowed by OPA in January and subsequently passed on to warehousemen and jobbers, together with a $1 per gross ton increase in basing point ceilings on pig iron, effective February 14, accounted for the rise. The mercury market continued strong with an increase of 4.7 percent recorded in February. Prices of mercury have risen about 69 percent or to about $170 a flask from the low point reached last July when the market dropped below $100.

Increased ceilings early in the year on brick and cement in certain areas continued to be reflected in prices reported to the Bureau on these building materials. Slight increases were also reported in prices for western pine boards and shop lumber. In addition, prices were higher for turpentine and for lime. Quotations for butyl acetate, an important varnish material, were reduced nearly 2 percent in February.

Average prices for chemicals and allied products remained steady in February. The index for this group at 94.9 is about 5 percent below the 1926 level.

No changes were reported in prices for furniture and furnishings during the month. Average prices for housefurnishing goods have fluctuated between 4 and 5 percent over the 1926 average since early last year when higher ceilings were allowed by OPA on furniture.

The increase of 0.4 percent in the miscellaneous commodity group index resulted from higher prices for paper and pulp products, which advanced 0.4 percent during the month, and for soap and certain tobacco products. Manufacturers ceilings on bleached and unbleached soda woodpulp were increased $4 per ton at the end of January. The result of this action by OPA and higher ceilings, effective January 20, on paperboard made from waste paper or straw and sold East of the Rocky Mountains were reflected in the February index.

Prices for most commodities fluctuated within a very narrow range between February 1944 and February 1945. The largest increases were 8.5 percent for livestock and poultry, 5.8 percent for cement, 5.7 percent for cotton goods, 4 percent for hides and skins, 3.7 percent for lumber, 2.4 percent for paint and paint materials, 1.4 percent for hosiery and underwear, and 1.3 percent for paper and pulp. A few

commodities declined during the 12-month period ending in February. The most important decrease was 2.6 percent for anthracite. In February 1944 temporary price increases were granted to producers in order to cover the additional cost of Sunday production necessary to meet widespread fuel shortages. Fruits and vegetables declined 2.2 percent and cereal products, shoes, rayon, and chemicals declined less than 1 percent.

In the past 5½ years of hostilities, prices for most commodities have risen substantially over their levels in the late summer of 1939. The most outstanding increases have been for agricultural commodities and their products. Since August 1939 farm product prices have advanced 108 percent, led by increases of 152 percent for grains and nearly 103 percent for livestock and poultry. In February 1945 prices for fruits and vegetables were about 102 percent higher than before the war. Prices for dairy products rose 63 percent; for meats, more than 44 percent; and for cereal products, 32 percent. Of the commodity groups, fats and oils show the greatest increase, 151 percent. Cattle feed prices have advanced 133 percent; cotton goods, 83 percent; lumber, about 71 percent; hides and skins and woolen and worsted goods, over 49 percent; drugs and pharmaceuticals, about 39 percent; paper and pulp, 35 percent; and clothing and anthracite, approximately 32 percent. Increases of from 20 to 30 percent have been recorded for shoes, leather, bituminous coal, coke, petroleum products, motor vehicles, brick and tile, paint and paint materials, fertilizer materials, furniture, and automobile tires and tubes. Prices for the following groups of commodities have advanced from 10 to 20 percent since the summer of 1939—hosiery and underwear, other leather products (including gloves, belting, harness, and luggage), nonferrous metals, plumbing and heating equipment, "other building materials" (including millwork items, wallboard, glass, and prepared roofing), chemicals, mixed fertilizers, and furnishings. During the war, prices for raw materials have advanced almost 3 times more rapidly than fully and partially processed commodities, or 74 percent as compared to about 28 percent for semimanufactured articles and finished products.

Percentage comparisons of the February 1945 level of wholesale prices with January 1945, February 1944, and August 1939, with corresponding index numbers, are given in table 1.

TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, February 1945, Compared with January 1945, February 1944, and August 1939*

[1926=100]

Group and subgroup	February 1945	January 1945	Percent of change	February 1944	Percent of change	August 1939	Percent of change
All commodities	105.2	104.9	+0.3	103.6	+1.5	75.0	+40.3
Farm products	127.0	126.2	+.6	122.5	+3.7	61.0	+108.2
Grains	129.8	129.3	+.4	129.3	+.4	51.5	+152.0
Livestock and poultry	133.8	131.1	+2.1	123.3	+8.5	66.0	+102.7
Other farm products	121.4	121.5	−.1	119.3	+1.8	60.1	+102.0
Foods	104.7	104.7	0	104.5	+.2	67.2	+55.8
Dairy products	110.8	110.8	0	110.7	+.1	67.9	+63.2
Cereal products	94.9	94.7	+.2	95.1	−.2	71.9	+32.0
Fruits and vegetables	118.1	114.4	+3.2	120.7	−2.2	58.5	+101.9
Meats	106.5	106.4	+.1	106.0	+.5	73.7	+44.5
Other foods	95.1	97.3	−2.3	93.5	+1.7	60.3	+57.7
Hides and leather products	117.6	117.5	+.1	116.9	+.6	92.7	+26.9
Shoes	126.3	126.3	0	126.4	−.1	100.8	+25.3
Hides and skins	115.4	114.8	+.5	111.0	+4.0	77.2	+49.5
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	99.7	99.6	+.1	97.7	+2.0	67.8	+47.1
Clothing	107.4	107.4	0	107.0	+.4	81.5	+31.8
Cotton goods	119.9	119.7	+.2	113.4	+5.7	65.5	+83.1
Hosiery and underwear	71.5	71.5	0	70.5	+1.4	61.5	+16.3
Rayon	30.2	30.2	0	30.3	−.3	28.5	+6.0
Silk	(1)	(1)	----	(1)	----	44.3	----
Woolen and worsted goods	112.7	112.7	0	112.5	+.2	75.5	+49.3
Other textile products	100.9	100.9	0	100.5	+.4	63.7	+58.4
Fuel and lighting materials	83.3	83.3	0	83.1	+.2	72.6	+14.7
Anthracite	95.3	95.3	0	97.8	−2.6	72.1	+32.2
Bituminous coal	120.5	120.5	0	119.9	+.5	96.0	+25.5
Coke	130.7	130.7	0	130.7	0	104.2	+25.4
Electricity	(1)	(1)	----	60.1	----	75.8	----
Gas	(1)	75.7	----	77.2	----	86.7	----
Petroleum and products	64.3	64.3	0	64.0	+.5	51.7	+24.4
Metals and metal products	104.2	104.0	+.2	103.7	+.5	93.2	+11.8
Agricultural implements	97.5	97.5	0	97.0	+.5	93.5	+4.3
Farm machinery	98.7	98.7	0	98.1	+.6	94.7	+4.2
Iron and steel	98.0	97.7	+.3	97.1	+.9	95.1	+3.0
Motor vehicles	112.8	112.8	0	112.8	0	92.5	+21.9
Nonferrous metals	85.9	85.9	0	85.8	+.1	74.6	+15.1
Plumbing and heating	92.4	92.4	0	91.8	+.7	79.3	+16.5
Building materials	117.0	116.8	+.2	113.6	+3.0	89.6	+30.6
Brick and tile	110.5	110.4	+.1	100.1	+.4	90.5	+22.1
Cement	99.0	97.4	+1.6	93.6	+5.8	91.3	+8.4
Lumber	153.9	153.8	+.1	148.4	+3.7	90.1	+70.8
Paint and paint materials	106.4	106.3	+.1	103.9	+2.4	82.1	+29.6
Plumbing and heating	92.4	92.4	0	91.8	+.7	79.3	+16.5
Structural steel	107.3	107.3	0	107.3	0	107.3	0
Other building materials	103.6	103.5	+.1	102.8	+.8	89.5	+15.8
Chemicals and allied products	94.9	94.9	0	95.0	−.1	74.2	+27.9
Chemicals	95.8	95.8	0	96.3	−.5	83.8	+14.3
Drugs and pharmaceuticals	106.9	106.9	0	106.4	+.5	77.1	+38.7
Fertilizer materials	81.9	81.9	0	81.4	+.6	65.5	+25.0
Mixed fertilizers	86.6	86.6	0	86.3	+.3	73.1	+18.5
Oils and fats	102.0	102.0	0	102.0	0	40.6	+151.2
Housefurnishing goods	104.5	104.5	0	104.2	+.3	85.6	+22.1
Furnishings	107.5	107.5	0	107.1	+.4	90.0	+19.4
Furniture	101.5	101.5	0	101.4	+.1	81.1	+25.2
Miscellaneous	94.6	94.2	+.4	93.4	+1.3	73.3	+29.1
Automobile tires and tubes	73.0	73.0	0	73.0	0	60.5	+20.7
Cattle feed	159.6	159.6	0	159.6	0	68.4	+133.3
Paper and pulp	108.0	107.6	+.4	106.6	+1.3	80.0	+35.0
Rubber, crude	46.2	46.2	0	46.2	0	34.9	+32.4
Other miscellaneous	98.9	98.2	+.7	96.7	+2.3	81.3	+21.6
Raw materials	115.6	115.1	+.4	112.8	+2.5	66.5	+73.8
Semimanufactured articles	95.0	94.9	+.1	93.4	+1.7	74.5	+27.5
Manufactured products	101.5	101.3	+.2	100.4	+1.1	79.1	+28.3
All commodities other than farm products	100.2	100.1	+.1	99.3	+.9	77.9	+28.6
All commodities other than farm products and foods	99.2	99.1	+.1	98.0	+1.2	80.1	+23.8

[1] Data not available.

Index Numbers by Commodity Groups, 1926 to February 1945

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1944, and by months from February 1944 to February 1945, 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	84.4	94.3	82.0	87.3
1942	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	98.8
1943	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	103.1
1944	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	104.0
1944											
February	122.5	104.5	116.9	97.7	83.1	103.7	113.6	95.0	104.2	93.4	103.6
March	123.6	104.6	116.9	97.8	83.0	103.7	114.2	95.0	104.3	93.5	103.8
April	123.2	104.9	116.9	97.8	83.0	103.7	115.2	95.5	104.3	93.5	103.9
May	122.9	105.0	117.0	97.8	83.2	103.7	115.7	95.5	104.3	93.5	104.0
June	125.0	106.5	116.4	97.8	83.3	103.7	115.9	95.3	104.3	93.5	104.3
July	124.1	105.8	116.2	98.0	83.2	103.7	115.9	95.5	104.3	93.6	104.1
August	122.6	104.8	116.0	98.4	83.2	103.8	116.0	95.5	104.4	93.6	103.9
September	122.7	104.2	116.0	99.2	83.0	103.8	116.0	94.9	104.4	93.6	104.0
October	123.4	104.2	116.2	99.4	82.9	103.7	116.3	95.0	104.4	93.6	104.1
November	124.4	105.1	116.2	99.4	83.1	103.7	116.4	94.8	104.4	94.0	104.4
December	125.5	105.5	117.4	99.5	83.1	103.8	116.4	94.8	104.4	94.2	104.7
1945											
January	126.2	104.7	117.5	99.6	83.3	104.0	116.8	94.9	104.5	94.2	104.9
February	127.0	104.7	117.6	99.7	83.3	104.2	117.0	94.9	104.5	94.6	105.2

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 10 and 11 of Wholesale Prices, July to December and Year 1943 (Bulletin No. 785).

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	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	*1944*					
1929	97.5	93.9	94.5	93.3	91.6	February	112.8	93.4	100.4	99.3	98.0
1932	55.1	59.3	70.3	68.3	70.2	March	113.4	93.7	100.5	99.3	98.1
1933	56.5	65.4	70.5	69.0	71.2	April	113.2	93.6	100.8	99.6	98.4
1936	79.9	75.9	82.0	80.7	79.6	May	113.0	93.7	100.9	99.7	98.5
						June	114.2	93.8	100.9	99.6	98.5
1937	84.8	85.3	87.2	86.2	85.3	July	113.6	93.9	100.9	99.6	98.5
1938	72.0	75.4	82.2	80.6	81.7	August	112.7	94.1	100.9	99.7	98.6
1939	70.2	77.0	80.4	79.5	81.3	September	112.8	94.7	100.9	99.7	98.6
1940	71.9	79.1	81.6	80.8	83.0	October	113.2	94.8	101.0	99.8	98.7
						November	113.8	94.8	101.1	99.9	98.8
1941	83.5	86.9	89.1	88.3	89.0	December	114.6	94.8	101.1	100.0	98.9
1942	100.6	92.6	98.6	97.0	95.5						
1943	112.1	92.9	100.1	98.7	96.9	*1945*					
1944	113.2	94.1	100.8	99.6	98.5	January	115.1	94.9	101.3	100.1	99.1
						February	115.6	95.0	101.5	100.2	99.2

Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during January and February 1945 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, January and February 1945*

[1926=100]

Commodity group	Feb. 24	Feb. 17	Feb. 10	Feb. 3	Jan. 27	Jan. 20	Jan. 13	Jan. 6
All commodities	104.8	105.0	104..9	104.7	104.7	104.8	104.7	104.6
Farm products	126.4	127.2	126.8	125.7	125.8	126.6	126.3	125.9
Foods	104.1	104.8	104.9	104.3	104.4	105.0	104.7	104.6
Hides and leather products	118.0	118.0	118.0	117.9	117.9	117.9	117.9	117.9
Textile products	99.1	99.1	99.1	99.1	99.0	99.0	99.0	99.0
Fuel and lighting materials	83.8	83.8	84.0	84.0	83.9	83.9	83.9	83.6
Metals and metal products	104.3	104.3	104.2	104.2	104.3	104.2	104.0	103.9
Building materials	116.9	116.9	116.7	116.7	116.7	116.7	116.4	116.4
Chemicals and allied products	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9
Housefurnishing goods	106.2	106.2	106.2	106.2	106.1	106.1	106.1	106.1
Miscellaneous	94.1	94.1	94.1	94.1	94.0	94.0	94.0	93.9
Raw materials	115.7	116.2	116.0	115.3	115.3	115.8	115.6	115.4
Semimanufactured articles	94.8	94.8	94.8	94.8	94.8	94.8	94.7	94.7
Manufactured products	101.6	101.6	101.6	101.6	101.6	101.6	101.4	101.3
All commodities other than farm products	100.1	100.1	100.1	100.1	100.0	100.0	99.9	99.9
All commodities other than farm products and foods	99.3	99.3	99.3	99.3	99.3	99.3	99.2	99.1

Labor Turnover

Labor Turnover in Manufacturing, Mining, and Public Utilities, January 1945

FOR every 1,000 workers on factory pay rolls in January, 61 either changed jobs or left manufacturing work. The rate of accession, 69 per 1,000, was considerably above the December low of 51 and slightly higher than in January 1944.

The increased accession rate between December and January may be explained, in part, by the use of furloughed soldiers in the critical war industries. However, interindustry shifting of workers accounted for many of the additions. The machinery group profited most from these shifts, receiving workers from plants in the transportation-equipment, nonferrous-metals, ordnance, electrical-machinery, iron and steel, and automobile groups. Of these, only the ordnance and automobile groups received enough workers from other major groups to more than make up their losses. The greatest amount of shifting took place in the ordnance group.

The lay-off rate for all manufacturing rose slightly, from 5 to 6 per 1,000, between December and January. The rate of lay-offs in the munitions group was almost double that in the nonmunitions, reflecting revised schedules in the production of war equipment. The highest group lay-off rate, 13 per 1,000 workers, was reported by the transportation-equipment group. An equipment shortage in shipbuilding accounted, in part, for the doubling of the lay-off rate in that industry. The ordnance and nonferrous-metals groups each laid off 7 per 1,000 workers. The tanks industry of the ordnance group reported a lay-off rate of 26 per 1,000, occasioned by cut-backs in heavy tank production in some plants. Continued curtailment of production in aluminum and magnesium plants accounted for the high lay-off rate in the nonferrous-metals group.

Of the 20 major manufacturing groups, 14 reported a higher discharge rate in January than in December, which is reflected in the slight rise to 7 per 1,000 for all manufacturing. Discharges were higher in the munitions group. Reporting firms indicated that absenteeism was the main reason for discharges, while incompetence and infraction of rules were secondary causes.

In manufacturing as a whole, 45 out of every 1,000 workers voluntarily left their jobs in January. The quit rate in three-fourths of the major groups was above the December level. A shifting of workers from food establishments to essential war industries to avoid being drafted accounted for the highest quit rate, 82 per 1,000. Dissatisfaction with wages in the tobacco industry is reflected in the second

highest quit rate, 72 per 1,000 workers. At the same time, the greenleaf season, which opened in December, necessitated the hiring of a considerable number of workers in the tobacco group, raising the accession rate from 4.9 to 8.0 over the month.

Accessions in all mining were above the December level. However, both total accession and separation rates for metal mining as a whole and for each of the coal-mining industries were lower than those for all manufacturing, in January.

The total separation rate for women in manufacturing work was 73 per 1,000 as against 55 for men. The accession rate for both men and women more than offset their separation rates.

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:												
1945	[2] 6.1											
1944	6.7	6.6	7.4	6.8	7.1	7.1	6.6	7.8	7.6	6.4	6.0	5.7
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
Quit:												
1945	[2] 4.5											
1944	4.6	4.6	5.0	4.9	5.3	5.4	5.0	6.2	6.1	5.0	4.6	4.3
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
Discharge:												
1945	[2] .7											
1944	.7	.6	.7	.6	.6	.7	.7	.7	.6	.6	.6	.6
1943	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
Lay-off: [3]												
1945	[2] .6											
1944	.8	.8	.9	.6	.5	.5	.5	.5	.6	.5	.5	.5
1943	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
Military and miscellaneous: [4]												
1945	[2] .3											
1944	.6	.6	.8	.7	.7	.5	.4	.4	.3	.3	.3	.3
1943	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
Accession:												
1945	[2] 6.9											
1944	6.5	5.5	5.8	5.5	6.4	7.6	6.3	6.3	6.1	6.0	6.1	4.9
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

[1] Month-to-month employment changes as indicated by labor-turnover 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 so 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] Miscellaneous separations comprise not more than 0.1 in these figures. In 1939 these data were included with quits.

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries,*[1] *January 1945*[2]

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944
Manufacturing												
Munitions [3]	5.6	5.2	3.7	3.6	0.9	0.7	0.7	0.6	0.3	0.3	6.5	4.6
Nonmunitions [3]	6.8	6.4	5.7	5.3	.4	.4	.4	.5	.3	.2	7.6	5.7
Ordnance	7.6	6.4	5.4	4.8	1.2	.9	.7	.5	.3	.2	10.2	7.4
Guns, howitzers, mortars and related equipment	5.7	5.1	3.6	3.1	.8	.6	1.0	1.2	.3	.2	7.1	5.0
Ammunition, except for small arms	8.4	7.6	6.3	5.9	1.4	1.1	.4	.4	.3	.2	11.8	8.9
Tanks	8.6	5.6	4.6	3.7	1.1	.9	2.6	.7	.3	.3	8.1	5.6
Sighting and fire-control equipment	3.7	2.3	2.2	1.6	.5	.4	.8	.1	.2	.2	4.4	2.4
Iron and steel and their products	4.1	4.0	3.0	2.9	.4	.4	.3	.4	.4	.3	5.1	3.6
Blast furnaces, steel works, and rolling mills	2.8	2.7	2.1	2.2	.2	.1	.2	.1	.3	.3	3.6	2.7
Gray-iron castings	7.0	7.4	5.4	5.9	1.1	.9	.1	.3	.4	.3	9.8	7.7
Malleable-iron castings	5.3	5.3	4.1	4.5	.7	.5	.2	.1	.3	.2	7.4	6.2
Steel castings	5.7	5.4	4.2	4.0	.8	.8	.2	.3	.5	.3	7.2	4.7
Cast-iron pipe and fittings	4.6	2.5	3.7	1.9	.5	.3	(4)	.1	.4	.2	4.2	2.9
Tin cans and other tinware	8.9	8.5	6.8	6.2	1.5	1.3	.3	.7	.3	.3	12.6	6.2
Wire products	2.7	2.7	2.1	2.0	.3	.3	(4)	.2	.3	.2	4.6	3.5
Cutlery and edge tools	4.1	4.5	2.9	3.9	1.0	.4	(4)	(4)	.2	.2	7.1	6.1
Tools (except edge tools, machine tools, files, and saws)	4.7	4.1	3.4	3.2	.7	.5	.1	.1	.5	.3	7.6	4.3
Hardware	3.9	3.5	3.2	2.4	.3	.4	.1	.5	.3	.2	4.1	2.9
Stoves, oil burners, and heating equipment	7.3	8.5	3.8	6.4	1.4	1.2	1.6	.6	.5	.3	9.0	8.2
Steam and hot-water heating apparatus and steam fittings	4.6	4.6	3.7	3.2	.3	.3	.1	.8	.5	.3	4.7	2.9
Stamped and enameled ware and galvanizing	7.1	5.6	5.3	4.4	.7	.6	.6	.3	.5	.3	8.1	5.1
Fabricated structural-metal products	9.3	8.0	4.8	4.7	.8	.7	3.2	2.2	.5	.4	7.9	5.2
Bolts, nuts, washers, and rivets	5.2	3.6	3.4	2.1	.7	.4	.8	.8	.3	.3	4.0	2.4
Forgings, iron and steel	3.8	3.8	2.8	2.8	.4	.4	.3	.3	.3	.3	4.6	3.6
Firearms (60 caliber and under)	4.2	6.0	2.9	3.0	.5	.8	.6	2.0	.2	.2	5.7	3.9
Electrical machinery	4.4	4.3	3.2	3.0	.6	.5	.3	.5	.3	.3	4.9	3.1
Electrical equipment for industrial use	3.4	3.3	2.7	2.5	.3	.3	.1	.3	.3	.2	3.8	2.6
Radios, radio equipment, and phonographs	5.5	4.8	4.0	3.2	.8	.7	.4	.6	.3	.3	7.1	3.6
Communication equipment, except radios	2.8	3.8	2.2	2.7	.3	.3	.1	.5	.2	.3	2.5	2.4
Machinery, except electrical	3.9	3.6	2.7	2.5	.6	.5	.3	.3	.3	.3	4.9	3.4
Engines and turbines	4.6	3.7	3.0	2.5	.7	.5	.5	.4	.4	.3	5.3	4.0
Agricultural machinery and tractors	4.4	4.0	3.4	3.2	.5	.4	.1	.1	.4	.3	5.2	4.4
Machine tools	2.7	2.6	1.8	1.7	.5	.5	.2	.2	.2	.2	4.5	2.6
Machine-tool accessories	4.1	3.0	2.4	2.0	.7	.6	.7	.1	.3	.3	4.1	2.8
Metalworking machinery and equipment, not elsewhere classified	3.2	3.0	2.1	2.1	.6	.5	.1	.1	.4	.3	4.8	3.1
General industrial machinery, except pumps	3.9	3.5	2.8	2.4	.6	.5	.2	.3	.3	.3	5.1	3.0
Pumps and pumping equipment	3.7	3.6	2.7	2.8	.6	.6	(4)	(4)	.4	.2	4.7	3.2
Transportation equipment, except automobiles	7.3	6.6	4.3	4.3	1.4	1.1	1.3	.9	.3	.3	7.0	5.1
Aircraft	4.9	4.5	3.7	3.5	.6	.5	.3	.3	.3	.2	6.7	4.5
Aircraft parts	4.7	4.7	2.6	2.5	.7	.5	1.2	1.5	.2	.2	5.4	3.7
Shipbuilding and repairs	10.4	9.0	5.7	5.9	2.3	1.8	2.0	1.0	.4	.3	8.2	6.4
Automobiles	5.7	5.2	3.9	3.8	1.3	.8	.3	.3	.2	.3	7.3	5.3
Motor vehicles, bodies, and trailers	5.1	4.9	2.9	3.2	1.4	.7	.5	.7	.3	.3	6.5	5.0
Motor-vehicle parts and accessories	6.2	5.5	4.4	4.2	1.3	.9	.3	.1	.2	.3	7.7	5.5

See footnotes at end of table.

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries,*[1] *January 1945* [2]—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944
Manufacturing—Continued												
Nonferrous metals and their products	5.5	4.9	3.8	3.3	0.6	0.6	0.7	0.7	0.4	0.3	7.6	5.0
Primary smelting and refining, except aluminum and magnesium	3.4	3.5	2.7	2.7	.2	.2	.1	.1	.4	.5	3.7	3.0
Aluminum and magnesium smelting and refining	7.8	11.7	5.8	5.8	.4	.5	1.0	4.9	.6	.5	7.8	6.7
Rolling and drawing of copper and copper alloys	4.3	3.7	3.5	3.0	.4	.4	.2	.1	.2	.2	7.7	4.0
Aluminum and magnesium products	6.0	4.9	3.8	3.3	.7	.6	1.0	.7	.5	.3	9.3	5.6
Lighting equipment	6.6	3.8	4.7	2.7	1.0	.7	.3	.2	.6	.2	8.1	7.3
Nonferrous-metal foundries, except aluminum and magnesium	5.1	5.0	4.0	3.7	.6	.6	.1	.3	.4	.4	6.1	5.1
Lumber and timber basic products	8.6	10.3	6.8	7.6	.4	.4	1.0	2.0	.4	.3	9.6	8.0
Sawmills	8.5	10.0	6.9	7.2	.3	.3	.9	2.2	.4	.3	9.1	7.6
Planing and plywood mills	6.6	9.3	4.6	6.9	.5	.5	1.2	1.5	.3	.4	7.5	7.5
Furniture and finished lumber products	7.9	8.3	6.5	6.8	.6	.5	.4	.8	.4	.2	9.6	7.0
Furniture, including mattresses and bedsprings	8.0	8.4	6.8	7.1	.6	.6	.2	.5	.4	.2	9.7	7.0
Stone, clay, and glass products	5.2	4.9	3.9	3.6	.4	.3	.5	.7	.4	.3	5.3	4.1
Glass and glass products	5.5	4.7	3.9	3.4	.5	.5	.5	.5	.6	.3	5.9	4.3
Cement	5.1	7.3	3.5	2.9	.2	.3	1.1	3.8	.3	.3	3.7	2.5
Brick, tile, and terra cotta	6.2	6.0	4.8	4.8	.7	.4	.3	.5	.4	.3	6.7	5.6
Pottery and related products	5.9	4.6	4.6	4.0	.4	.2	.5	.1	.4	.3	5.2	4.5
Textile-mill products	6.0	5.4	5.0	4.5	.4	.4	.3	.3	.3	.2	7.0	4.5
Cotton	7.2	6.4	6.1	5.5	.5	.4	.3	.2	.3	.3	8.4	5.7
Silk and rayon goods	6.1	5.2	5.0	4.3	.6	.5	.1	.1	.4	.3	7.0	4.1
Woolen and worsted, except dyeing and finishing	3.5	3.3	2.6	2.2	.3	.2	.4	.7	.2	.2	4.1	2.4
Hosiery, full-fashioned	4.7	4.1	4.1	3.4	.2	.1	.2	.5	.2	.1	5.0	1.7
Hosiery, seamless	5.0	4.6	4.4	4.0	.2	.3	.2	.2	.2	.1	6.4	3.2
Knitted underwear	5.1	4.6	4.7	4.3	.2	.2	.1	(4)	.1	.1	6.5	3.8
Dyeing and finishing textiles, including woolen and worsted	3.6	3.7	2.8	2.7	.3	.5	.1	.2	.4	.3	4.4	2.7
Apparel and other finished textile products	5.5	5.1	5.0	4.2	.2	.2	.2	.6	.1	.1	6.0	3.2
Men's and boys' suits, coats, and overcoats	4.2	4.3	3.8	3.4	.1	.1	.2	.8	.1	(4)	4.8	2.3
Men's and boys' furnishings, work clothing, and allied garments	5.6	4.7	5.1	4.2	.2	.2	.2	.2	.1	.1	5.7	2.7
Leather and leather products	5.4	4.6	4.7	4.0	.3	.2	.1	.2	.3	.2	5.8	4.3
Leather	3.6	3.3	2.9	2.6	.2	.2	.2	.2	.3	.3	4.4	3.2
Boots and shoes	5.7	4.9	5.0	4.3	.3	.2	.1	.2	.3	.2	6.0	4.4
Food and kindred products	9.7	8.5	8.2	7.5	.6	.5	.5	.2	.4	.3	9.7	8.9
Meat products	10.6	8.6	8.8	7.5	.6	.6	.7	.2	.5	.3	10.1	11.2
Grain-mill products	8.4	7.7	6.9	6.7	.7	.5	.4	.3	.4	.2	9.9	7.1
Tobacco manufactures	7.9	6.1	7.2	5.7	.3	.2	.3	.1	.1	.1	8.0	4.9
Paper and allied products	5.7	6.2	4.6	5.3	.5	.4	.2	.2	.4	.3	6.7	6.0
Paper and pulp	4.9	6.4	3.8	5.3	.4	.4	.2	.3	.5	.4	5.8	6.1
Paper boxes	8.1	7.0	6.9	5.8	.7	.7	.1	.2	.4	.3	9.0	5.7
Chemicals and allied products	4.6	4.1	3.5	3.1	.7	.5	.1	.2	.3	.3	7.8	5.9
Paints, varnishes, and colors	3.2	3.1	2.3	2.4	.5	.5	.1	.1	.3	.1	3.3	2.7
Rayon and allied products	4.2	3.7	3.5	3.1	.3	.2	.1	.2	.3	.2	5.5	3.2
Industrial chemicals, except explosives	3.8	3.7	2.7	2.6	.6	.5	.2	.3	.3	.3	4.3	3.2
Explosives	6.2	5.7	4.7	4.5	1.1	.7	(4)	.1	.4	.4	10.0	7.8
Small-arms ammunition	5.0	3.7	3.8	3.0	.9	.5	.1	.1	.2	.1	12.7	11.3
Products of petroleum and coal	2.7	2.8	1.9	2.0	.2	.3	.3	.2	.3	.3	3.8	2.5
Petroleum refining	2.7	2.9	1.9	2.1	.2	.3	.3	.2	.3	.3	3.8	2.5

See footnotes at end of table.

TABLE 2.—*Monthly Labor-Turnover Rates (Per 100 Employees) in Selected Groups and Industries,*[1] *January 1945* [2]—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944	January 1945	December 1944
Manufacturing—Continued												
Rubber products	5.5	4.9	4.4	4.1	0.6	0.4	0.2	0.1	0.3	0.3	7.3	5.3
Rubber tires and inner tubes	5.2	4.8	4.0	3.9	.7	.5	.2	.1	.3	.3	7.6	5.7
Rubber footwear and related products	6.4	5.6	5.9	5.0	.3	.2	(4)	.1	.2	.3	8.1	5.2
Miscellaneous rubber industries	5.8	4.9	4.8	4.2	.4	.3	.3	.1	.3	.3	6.7	4.8
Miscellaneous industries	4.3	3.3	3.0	2.4	.6	.3	.4	.4	.3	.2	5.9	3.0
Nonmanufacturing												
Metal mining	4.5	4.4	3.1	3.1	.4	.4	.5	.5	.5	.4	4.5	3.5
Iron ore	2.8	3.4	1.9	2.0	.2	.1	.4	.9	.3	.4	2.1	1.4
Copper ore	5.2	4.7	3.9	3.7	.5	.3	.2	.3	.6	.4	5.7	4.7
Lead and zinc ore	4.5	5.0	3.3	3.8	.5	.5	.2	.4	.5	.3	6.6	5.1
Metal mining, not elsewhere classified, including aluminum ore	6.7	5.5	3.6	3.8	.8	1.2	1.7	.2	.6	.3	4.9	4.2
Coal mining:												
Anthracite mining	1.6	1.6	1.2	1.1	(4)	(4)	.2	.3	.2	.2	1.3	1.1
Bituminous-coal mining	3.3	3.6	2.7	3.0	.2	.1	.1	.3	.3	.2	3.5	2.8
Public utilities:												
Telephone	3.0	2.7	2.6	2.4	.2	.1	.1	.1	.1	.1	3.2	1.9
Telegraph	3.3	3.1	3.0	2.8	.1	.1	.1	.1	.1	.1	2.9	2.5

[1] Since January 1943 manufacturing firms reporting labor turnover have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample, comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

[2] Preliminary figures.

[3] The munitions division which replaces the Selected War Industries group, includes the following major industry groups: Ordnance; iron and steel; electrical machinery; machinery, except electrical; automobiles; transportation equipment, except automobiles; nonferrous metals; chemicals; products of petroleum and coal; rubber. The nonmunitions division includes lumber; furniture and finished lumber products; stone; clay, and glass; textile-mill products; apparel and finished textile products; leather; food and kindred products; tobacco; paper and pulp; miscellaneous industries. Comparable data for 1943 and 1944 will appear in a forthcoming issue of the Monthly Labor Review.

[4] Less than 0.05.

TABLE 3.—*Monthly Labor-Turnover Rates (Per 100 Employees)* [1] *for Men and Women in Selected Industries Engaged in War Production, January 1945* [2]

Industry group and industry	Total separation		Quit		Total accession	
	Men	Women	Men	Women	Men	Women
All manufacturing	5.5	7.3	3.8	6.0	6.5	7.9
Ordnance	6.4	9.5	4.0	7.7	9.7	11.1
Guns, howitzers, mortars, and related equipment	4.7	9.0	2.7	6.6	6.3	9.9
Ammunition, except for small arms	7.3	9.9	4.8	8.3	11.8	11.8
Tanks	7.6	9.1	3.5	6.9	7.9	9.9
Sighting and fire-control equipment	2.3	6.2	1.4	3.7	3.3	6.3
Iron and steel and their products	3.8	7.1	2.6	5.4	4.9	8.2
Blast furnaces, steel works, and rolling mills	2.6	5.4	1.9	4.6	3.4	7.5
Gray-iron castings	6.8	8.1	5.1	6.0	9.5	9.1
Malleable-iron castings	5.2	6.2	3.9	5.7	7.6	5.8
Steel castings	5.6	6.7	4.2	4.7	7.2	6.7
Cast-iron pipe and fittings	4.4	6.0	3.6	4.8	3.5	10.7
Firearms (60 caliber and under)	3.5	7.1	2.2	5.0	4.8	8.2
Electrical machinery	3.1	5.8	2.0	4.6	3.8	6.1
Electrical equipment for industrial use	2.4	5.2	1.7	4.5	2.6	5.3
Radios, radio equipment, and phonographs	3.8	6.8	2.6	5.0	5.5	8.3
Communication equipment, except radios	2.0	3.5	1.2	3.0	2.4	2.5
Machinery, except electrical	3.3	6.0	2.2	4.6	4.5	6.6
Engines and turbines	3.9	6.7	2.3	5.0	4.5	7.5
Machine tools	2.5	4.9	1.6	3.8	4.1	7.1
Machine-tool accessories	3.4	6.1	1.8	4.1	3.8	5.0
Metal-working machinery and equipment, not elsewhere classified	2.7	5.4	1.8	3.6	4.3	7.0
General industrial machinery, except pumps	3.4	5.5	2.3	4.4	4.5	6.9
Pumps and pumping equipment	2.9	6.9	1.9	5.6	4.4	6.0
Transportation equipment, except automobiles	6.8	8.7	3.7	6.0	6.9	7.6
Aircraft	3.7	6.7	2.5	5.6	6.2	7.5
Aircraft parts	3.8	6.6	2.0	4.0	4.8	6.7
Shipbuilding and repairs	10.3	15.3	5.3	9.3	8.5	8.8
Nonferrous metals and their products	4.6	6.6	3.4	5.4	7.3	9.0
Primary smelting and refining, except aluminum and magnesium	3.3	5.3	2.6	3.9	3.6	4.5
Aluminum and magnesium smelting and refining	7.5	10.3	5.6	7.7	7.8	7.5
Rolling and drawing of copper and copper alloys	3.6	7.0	2.8	6.3	7.2	9.8
Aluminum and magnesium products	5.8	6.7	3.5	5.2	8.9	11.2
Nonferrous-metal foundries, except aluminum and magnesium	4.8	5.6	3.5	5.0	5.7	7.0
Chemicals and allied products	4.1	5.8	2.8	5.0	7.0	9.4
Industrial chemicals, except explosives	3.6	4.6	2.4	3.7	4.3	4.7
Explosives	5.7	7.9	4.0	6.7	9.2	12.0
Small-arms ammunition	4.6	5.7	2.9	4.9	12.6	12.8

[1] These figures are presented to show comparative turnover rates and should not be used to estimate employment.
[2] Data are preliminary.

Building Operations

Building Construction in Urban Areas, February 1945

BUILDING construction started in urban areas of the United States rose nearly 15 percent from January. The total value of all urban building construction started during February was approximately 77 million dollars, over three-fifths of which was for non-Federally financed work.

New nonresidential building, two-thirds of it Federally financed, made up over half the building construction started this month. Practically all of the new residential building was non-Federal, which rose in value 18 percent from the previous month as compared with a 37-percent increase in new nonresidential building. Total valuations for additions, alterations, and repairs in the month declined 13 percent from January.

To meet a demand for additional industrial capacity, new nonresidential construction increased by one-half over February 1944, in both Federal and non-Federal work. On the other hand, new residential work declined almost two-fifths over the year because of the virtual completion of Federal war housing programs and because of wartime ceilings on nonessential building. Federal new residential building declined by 2.7 million dollars from a year ago, as compared with a drop of 8.3 million dollars in non-Federal residential construction. While new residential building decreased, additions, alterations, and repair work increased 7 percent over February 1944, with Federally financed work accounting for the largest proportion of the gain.

TABLE 1.—*Summary of Building Construction in all Urban Areas, February 1944 and January and February 1945*

Class of construction	Number of buildings			Value		
	February 1945	Percent of change from—		February 1945 (thousands of dollars)	Percent of change from—	
		January 1945	February 1944		January 1945	February 1944
All building construction	34,342	−0.1	−4.8	76,932	+14.8	+5.0
New residential	4,623	+7.1	−40.5	17,232	+17.6	−38.9
New nonresidential	4,676	−3.6	+28.0	38,547	+36.9	+52.1
Additions, alterations, and repairs	25,043	−.6	+1.6	21,153	−12.7	+7.2

There was a 6-percent rise over January in the number of new dwelling units begun during the month. The total of 5,324 units started in February 1945 and the 5,046 started in January were all privately financed. In February 1944, however, Federal contracts were let for nearly 1,200 units out of a total of about 9,000.

TABLE 2.—*Number and Value of New Dwelling Units in all Urban Areas, by Source of Funds and Type of Dwelling, February 1945*

Source of funds and type of dwelling	Number of dwelling units			Value		
	February 1945	Percent of change from—		February 1945 (thousands of dollars)	Percent of change from—	
		January 1945	February 1944		January 1945	February 1944
All dwellings	5,324	+5.5	−41.2	16,861	+18.9	−39.9
Privately financed	5,324	+5.5	−32.3	16,861	+18.9	−32.9
1-family	4,326	+5.6	−29.8	13,593	+17.6	−30.4
2-family [1]	366	+71.8	−10.5	996	+71.7	−22.4
Multifamily [2]	632	−14.4	−51.0	2,272	+11.2	−47.2
Federally financed	0	[3]	[3]	0	[3]	[3]

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.
[3] Percent of change not computed since no contract award notifications were received during January and February 1945.

Comparison of First 2 Months of 1944 and 1945

At the close of the first 2 months of 1945, the cumulative value of building construction started in all urban areas was approximately 144 million dollars, 10 percent below the aggregate for the same period in 1944. Non-Federal work was 9 percent and Federal work about 12 percent below the point where it was at the end of February a year ago. On the other hand, the new nonresidential building started was 11 percent higher in value by the end of February 1945 than in 1944, entirely because of greater non-Federal activity. Furthermore, the values of additions, alterations, and repairs were 14 percent higher.

TABLE 3.—*Value of Building Construction in all Urban Areas, by Class of Construction, First 2 Months of 1944 and 1945*

Class of construction	Value (in thousands of dollars)					
	Total construction			Federal construction		
	First 2 months of—		Percent of change	First 2 months of—		Percent of change
	1945	1944		1945	1944	
All construction	143,968	160,401	−10.2	47,131	53,500	−11.9
New residential	31,889	60,480	−47.3	305	9,172	−96.7
New nonresidential	66,696	60,125	+10.9	40,570	41,092	−1.3
Additions, alterations, and repairs	45,383	39,796	+14.0	6,256	3,236	+93.3

TABLE 4.—*Number and Value of New Dwelling Units in all Urban Areas, by Source of Funds and Type of Dwelling, First 2 Months of 1944 and 1945*

Source of funds and type of dwelling	Number of dwelling units			Value (in thousands of dollars)		
	First 2 months of—		Percent of change	First 2 months of—		Percent of change
	1945	1944		1945	1944	
All dwellings	10,370	20,066	−48.3	31,046	60,151	−48.4
Privately financed	10,370	16,082	−35.5	31,046	51,150	−39.3
1-family	8,421	12,418	−32.3	25,155	39,606	−36.5
2-family [1]	579	1,386	−58.2	1,576	4,358	−63.8
Multifamily [2]	1,370	2,278	−39.9	4,315	7,186	−40.0
Federal	0	3,984	[3]	0	9,001	[3]

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.
[3] Percent of change not computed since no contract award notifications were received during January and February 1945.

Construction From Public Funds, February 1945

The value of contracts awarded and force-account work started during January and February 1945 and February 1944 on all construction projects, excluding shipbuilding, financed wholly or partially from Federal funds and reported to the Bureau of Labor Statistics, is shown in table 5. This table includes construction both inside and outside the corporate limits of cities.

TABLE 5.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects [1] Financed From Federal Funds, February 1945*

Source of funds	Value (in thousands of dollars) of contracts awarded and force-account work started		
	February 1945 [2]	January 1945 [3]	February 1944 [3]
All Federal sources	44,953	51,743	94,114
War public works [4]	2,113	6,343	4,664
Regular Federal appropriations [1]	42,535	45,048	84,645
Federal Public Housing Authority	305	352	4,805

[1] Excludes the following amounts (in thousands of dollars) for ship construction: February 1945, 893,191; January 1945, 333,661; February 1944, 109,764.
[2] Preliminary; subject to revision.
[3] Revised.
[4] Public works financed under the Lanham Act, to provide facilities in crowded war districts.

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 value, are derived from estimates of construction cost 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 which were received in February 1945 for cities containing between 80 and 85 percent of the urban population of the country, 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 and force-account work started on Federally financed building construction inside the corporate limits of cities in urban areas were valued at $27,518,000 in February 1945, $19,613,000 in January 1945, and $21,531,000 in February 1944.

Trend of Employment, Earnings, and Hours

Summary of Reports for February 1945

EMPLOYMENT in nonagricultural establishments declined 840,000 between February 1944 and February 1945, during which period there was a net increase of 1¼ million in the armed forces. Nonagricultural employment stood at 38 million in February, about 3,000 more than in January.

Industrial and Business Employment

Wage-earner employment in all manufacturing industries combined declined 17,000 between January and February. There was no change in munitions employment. The falling off in munitions employment which started in December 1943 came to a halt in November 1944, since which time there has been a gain of about 40,000.

The largest increase over the month, 12,000, was reported by the iron and steel group and was concentrated in the bag and shell loading, heavy ammunition, and blast furnace industries. The chemicals group reported an increase of 10,000. Most of this gain may be attributed to plants manufacturing small-arms ammunition and explosives.

Despite increases in employment in the aircraft and aircraft-engine industries, the transportation equipment group reported a decline of 32,000. The shipbuilding industry, in which the decline was localized, reported completion of some contracts, and cut-backs in production schedules as a result of cancellation of other contracts.

The decline in nonmunitions employment reflected drops in the food and textile-mill products groups. The major share of the drop of 12,000 in the food group was brought about by a decrease in receipts of livestock, necessitating the laying off of employees in the slaughtering and meat-packing industry. To a lesser degree, the decline in employment in the food industries may be attributed to seasonal layoffs in canning. The decline of 8,000 in the textile-mill products group was shared by almost all of the industries in that group. However, the only significant decrease was in cotton goods.

The number of bituminous-coal miners remained at 338,000. With but three exceptions, employment in this industry has been declining each month since the last quarter of 1941 and is at present over 100,000 below the peak.

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 (in thousands)				Wage earner indexes (1939=100)	
	February 1945 [2]	January 1945	December 1944	February 1944	February 1945 [2]	January 1945
All manufacturing	13,095	13,112	13,190	14,254	159.9	160.1
Durable goods	7,785	7,796	7,804	8,698	215.6	215.9
Nondurable goods	5,310	5,316	5,386	5,556	115.9	116.0
Iron and steel and their products	1,669	1,657	1,651	1,730	168.3	167.1
Electrical machinery	697	698	702	769	268.8	269.2
Machinery, except electrical	1,167	1,163	1,159	1,272	220.8	220.0
Transportation equipment, except automobiles	2,050	2,082	2,096	2,533	1291.7	1311.7
Automobiles	683	682	677	753	169.7	169.4
Nonferrous metals and their products	404	398	397	453	176.3	173.6
Lumber and timber basic products	451	450	452	484	107.3	107.1
Furniture and finished lumber products	339	338	340	358	103.2	103.0
Stone, clay, and glass products	325	328	330	346	110.7	111.6
Textile-mill products and other fiber manufactures	1,075	1,083	1,092	1,163	94.0	94.7
Apparel and other finished textile products	835	837	851	909	105.8	106.0
Leather and leather products	310	311	312	317	89.3	89.5
Food	1,001	1,013	1,054	1,013	117.1	118.6
Tobacco manufactures	82	82	85	87	88.0	88.1
Paper and allied products	310	309	312	320	116.7	116.5
Printing, publishing, and allied industries	329	328	335	338	100.2	100.1
Chemicals and allied products	638	628	621	655	221.4	217.8
Products of petroleum and coal	133	133	133	127	126.1	126.0
Rubber products	196	196	194	204	161.9	161.8
Miscellaneous industries	401	396	397	423	163.8	161.8

[1] The estimates and indexes presented in this table have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. These data are not comparable with data published in mimeographed releases dated prior to February 1945 or in issues of the Monthly Labor Review prior to March 1945. Comparable data from January 1939 are available upon request.

[2] Preliminary.

Public Employment

A 27,000 increase in employment in war agencies within continental United States in February 1945 represented the first sizable expansion since the summer of 1944. The Navy Department accounted for 19,000 of the rise, the War Department for 7,000, and the War Shipping Administration for 1,000. Other agencies showed a rise of 2,000 in February, which was mostly in the Treasury Department and Veterans Administration. The Tennessee Valley Authority showed a decrease of 1,300 employees.

War-agency employment outside continental United States is now over the half-million mark (552,000) and since April 1944 has been increasing at an average rate of almost 20,000 a month.

In February 1945, Federal employment (including employment in the executive, legislative, and judicial branches, and in Government corporations) totaled 3½ million, with war agencies constituting 75 percent. This represented an increase during the preceding year of 238,000, with a slight increase in the proportion of employees in war agencies.

Source of data.—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Force-account employment is also in-

cluded in construction employment (table 5), and navy yard employment is also included in employment on shipbuilding and repair projects (table 4). Data for pay rolls are now being revised and the revised series will be available shortly.

TABLE 2.—*Employment in Regular Federal Services and in Government Corporations, in Selected Months*

Year and month	Total	Executive [1]	Legislative	Judicial	Government corporations [2]
February 1939	917,213	885,021	5,234	2,228	24,730
February 1940	992,856	958,319	5,889	2,360	26,288
February 1941	1,232,956	1,196,876	5,985	2,507	27,588
February 1942	1,813,014	1,773,533	6,354	2,584	30,543
February 1943	3,031,830	2,988,636	6,284	2,597	34,313
February 1944	3,263,016	3,217,941	6,115	2,668	36,292
November 1944	3,400,220	3,356,254	6,253	2,646	35,067
December 1944	3,702,940	3,659,220	6,203	2,646	34,871
January 1945	3,449,802	3,406,672	6,160	2,638	34,332
February 1945 [3]	3,500,573	3,457,249	6,561	2,643	34,120

[1] Includes employees in United States Navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5). Includes employees stationed outside continental United States.
[2] Data are for employees of the Panama Railroad Co., the Federal Reserve Banks, and banks of the Farm Credit Administration, who are paid out of operating revenues and not out of Federal appropriations. Data for other Government corporations are included under the executive service.
[3] Preliminary.

TABLE 3.—*Employment in the Executive Branch of the Federal Government by War and Other Agencies, in Selected Months* [1]

Year and month	Total	War agencies [2]			Other agencies		
		Total, war agencies	Continental United States	Outside continental United States [3]	Total, other agencies	Continental United States	Outside continental United States [3]
February 1939	885,021	187,430	161,092	26,338	697,591	689,406	8,185
February 1940	958,319	241,249	204,848	36,401	717,070	706,042	11,028
February 1941	1,196,876	433,197	368,860	64,337	763,679	751,031	12,648
February 1942	1,773,533	930,853	793,172	137,681	842,680	828,813	13,867
February 1943	2,988,636	2,173,311	1,929,862	243,449	815,325	800,510	14,815
February 1944	3,217,941	2,401,552	2,019,816	381,736	816,389	800,157	16,232
November 1944 [4]	3,356,254	2,507,804	2,045,720	462,084	848,450	832,492	15,958
December 1944 [4]	3,659,220	2,541,176	2,046,206	494,970	118,044	1,101,161	16,883
January 1945 [4]	3,406,672	2,561,118	2,030,351	530,767	845,554	829,327	16,227
February 1945 [5]	3,457,249	2,609,505	2,057,409	552,096	847,744	831,432	16,312

[1] Includes employees in United States navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5).
[2] Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the emergency war agencies.
[3] Includes Alaska and the Panama Canal Zone.
[4] Data incorporate revisions in War Department employment outside continental United States.
[5] Preliminary.

Employment on Shipbuilding and Repair

Employment on the Government's shipbuilding program (including repair) decreased 46,000 in February 1945. All regions were affected, but the Pacific region was affected to the greatest extent (15,600) and the Great Lakes region to the smallest (600). In relative terms, the Inland region was affected most (13.2 percent) and the North Atlantic region least (0.7 percent).

Employment in private shipyards declined 270,600 in the year, February 1944 to February 1945, and 325,000 since the peak in November 1943. The steady decline in employment in private shipyards since the peak has been due to the gradual completion of contracts and to the fact that few new contracts have been let.

The increase in repair work at the navy yards has tended to offset declines on new construction and has been responsible for the relative stability in navy yard employment since mid-1943.

Data on employment and pay rolls on shipbuilding and repair projects are received monthly by the Bureau of Labor Statistics directly from all shipyards within continental United States. Employees in the navy yards are also included in data for the Federal executive service (tables 2 and 3).

TABLE 4.—*Total Employment and Pay Rolls in United States Navy Yards and Private Shipyards Within Continental United States, by Shipbuilding Region, February 1945*

Shipbuilding region	Employment (in thousands)			Pay rolls (in thousands of dollars)		
	February 1945 [1]	January 1945	February 1944	February 1945 [1]	January 1945	February 1944
All regions	1,400.0	1,446.0	1,673.4	398,932	425,809	454,069
United States navy yards [2]	327.3	326.6	330.1	94,237	94,065	87,348
Private shipyards	1,072.7	1,119.4	1,343.3	304,695	331,744	366,721
North Atlantic	512.6	516.1	608.5	155,183	156,157	[3]
South Atlantic	123.8	128.8	151.7	32,907	33,769	[3]
Gulf	177.5	191.9	228.7	50,593	55,893	[3]
Pacific	490.7	506.3	562.0	134,604	151,808	[3]
Great Lakes	50.1	50.7	64.0	13,860	14,023	[3]
Inland	45.3	52.2	58.5	11,785	14,159	[3]

[1] Preliminary.
[2] Includes all navy yards constructing or repairing ships, including the Curtis Bay (Md.) Coast Guard yard.
[3] Break-down not available.

Construction Employment

Although site employment on construction projects financed wholly or partially from Federal funds showed no change in level between January and February 1945, increases occurred on the construction of additional facilities to existing plants for rocket and other ordnance manufacture and on electrification projects servicing these facilities. These increases were offset by decreases on other types of projects, resulting from seasonal factors and completion of war facilities.

For non-Federal projects site employment showed a 20,000 increase on nonresidential building construction and a 2,200 increase on public utility construction. All other types of projects, except the miscellaneous group, showed declines during February 1945.

Source of data.—For construction projects financed wholly or partially from Federal funds, the Bureau of Labor Statistics receives monthly reports on employment and pay rolls at the construction site, directly from the contractors or from the Federal agency sponsoring the project. Force-account employees hired directly by the Federal Government are also included in tables 2 and 3 under Federal executive service.

Estimates of employment on non-Federal construction projects (except State roads) are obtained by converting the value of work started (compiled from reports on building permits issued, priorities granted, and from certain special reports) into monthly expenditures and employment by means of factors which have been developed from special studies and adjusted to current conditions. For State roads projects, data represent estimates of the Public Roads Administration.

TABLE 5.—*Estimated Employment and Pay Rolls on Construction Within Continental United States, February 1945*

Type of project	Employment (in thousands)			Pay rolls (in thousands of dollars)		
	February 1945 [1]	January 1945	February 1944	February 1945 [1]	January 1945	February 1944
New construction, total [2]	662.3	651.8	779.1	(3)	(3)	(3)
At the construction site	550.9	537.6	618.4	(3)	(3)	(3)
Federal projects [4]	165.9	165.9	295.6	37,385	35,828	58,250
Airports	7.0	7.9	23.1	1,215	1,471	3,688
Buildings	111.5	107.4	201.8	26,541	24,231	41,548
Residential	10.8	11.2	35.8	2,524	2,581	7,163
Nonresidential [5]	100.7	96.2	166.0	24,017	21,650	34,385
Electrification	.4	.3	.3	84	36	44
Reclamation	6.8	7.3	15.3	1,580	1,760	3,148
River, harbor, and flood control	15.1	16.3	21.6	2,997	3,184	4,176
Streets and highways	7.4	7.9	11.0	1,337	1,379	1,718
Water and sewer systems	3.8	3.7	7.5	577	574	1,127
Miscellaneous	13.9	15.1	15.0	3,054	3,193	2,801
Non-Federal projects	385.0	371.7	322.8	(3)	(3)	(3)
Buildings	228.4	210.2	182.5	48,878	48,346	35,953
Residential	71.9	73.7	116.4	(3)	(3)	(3)
Nonresidential	156.5	136.5	66.1	(3)	(3)	(3)
Farm	43.2	47.0	38.8	(3)	(3)	(3)
Public utilities	87.8	85.6	74.6	(3)	(3)	(3)
Streets and highways	11.9	15.2	15.6	(3)	(3)	(3)
State	4.2	5.5	6.6	(3)	(3)	(3)
County and municipal	7.7	9.7	9.0	(3)	(3)	(3)
Miscellaneous	13.7	13.7	11.3	(3)	(3)	(3)
Other [6]	111.4	114.2	160.7	(3)	(3)	(3)
Maintenance of State roads [7]	85.0	85.0	79.7	(3)	(3)	(3)

[1] Preliminary.

[2] Data are for all construction workers (contract and force-account) engaged on new construction, additions, and alterations, and on repair work of the type usually covered by building permits. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the type usually chargeable to capital account.) The construction figure included in the Bureau's nonagricultural employment series covers only employees of construction contractors and on Federal force-account, and excludes force-account workers of State and local governments, public utilities, and private firms.

[3] Data not available.

[4] Includes the following force-account employees, hired directly by the Federal Government, and their pay rolls: February 1944, 32,727, $6,308,242; January 1945, 19,817, $3,964,793; February 1945, 19,355, $3,729,396. These employees are also included under the Federal executive service (tables 2 and 3); all other workers were employed by contractors and subcontractors.

[5] Includes the following employees and pay rolls for Defense Plant Corporation (RFC) projects: February 1944, 72,974, $17,234,891; January 1945, 12,368, $2,787,114; February 1945, 10,064, $2,668,598.

[6] Includes central office force of construction contractors, shop employees of special trades contractors, such as bench sheet-metal workers, etc., and site employees engaged on projects which, for security reasons, cannot be shown above.

[7] Data for other types of maintenance not available.

Detailed Reports for Industrial and Business Employment, January 1945

Nonagricultural Employment

ESTIMATES of employment in nonagricultural establishments are shown in table 1. The estimates are based on reports of employers to the Bureau of Labor Statistics, on unemployment-compensation data made available by the Bureau of Employment Security of the Federal Security Agency, and on information supplied by other Government agencies, such as the Interstate Commerce Commission, Civil Service Commission, Bureau of the Census, and the Bureau of Old-Age and Survivors Insurance. The estimates include all wage and salaried workers in nonagricultural establishments but exclude military personnel, proprietors, self-employed persons, and domestic servants.

Estimates of employees in nonagricultural establishments, by States, are published each month in a detailed report 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)			
	January 1945	December 1944	November 1944	January 1944
Total estimated employment [1]	38,104	38,888	38,347	38,965
Manufacturing	15,557	15,630	15,607	16,825
Mining	804	806	812	858
Contract construction and Federal force-account construction	563	594	629	764
Transportation and public utilities	3,735	3,771	3,771	3,664
Trade	7,088	7,611	7,299	6,919
Finance, service, and miscellaneous	4,463	4,304	4,315	4,128
Federal, State and local government, excluding Federal force-account construction	5,894	6,172	5,914	5,807

[1] Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who are employed during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

Industrial and Business Employment

Monthly reports on employment and pay rolls are available for 154 manufacturing industries and for 27 nonmanufacturing industries, including water transportation and class I steam railroads. The reports for the first 2 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 esti-

mates 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 cleaning and dyeing, 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 about 25 percent for wholesale and retail trade, cleaning and dyeing, and insurance, to about 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 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 November and December 1944 and January 1945 and for January 1944, 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 levels indicated by final data for 1942 and preliminary data for 1943 made available 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. 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 do not in general add to the total for that group.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	January 1945	December 1944	November 1944	January 1944
All manufacturing [1]	13,112	13,190	13,161	14,338
Durable goods [1]	7,796	7,804	7,789	8,765
Nondurable goods [1]	5,316	5,386	5,372	5,573
Durable goods				
Iron and steel and their products [1]	1,657	1,651	1,637	1,736
Blast furnaces, steel works, and rolling mills	474.8	474.7	473.8	497.8
Gray-iron and semisteel castings	75.6	74.6	73.2	77.2
Malleable-iron castings	25.9	25.6	25.1	25.8
Steel castings	72.1	71.6	71.7	80.3
Cast-iron pipe and fittings	15.7	15.7	15.4	15.6
Tin cans and other tinware	39.8	39.4	38.9	33.6
Wire drawn from purchased rods	32.8	32.4	32.1	35.2
Wirework	34.6	34.6	34.7	34.0
Cutlery and edge tools	24.3	24.3	23.7	22.7
Tools (except edge tools, machine tools, files, and saws)	28.0	27.5	26.9	28.7
Hardware	46.2	46.4	45.9	47.5
Plumbers' supplies	22.5	22.1	21.8	23.5
Stoves, oil burners, and heating equipment, not elsewhere classified	63.1	63.9	62.5	62.8
Steam and hot-water heating apparatus and steam fittings	55.2	55.3	54.8	59.7
Stamped and enameled ware and galvanizing	87.3	87.0	86.2	91.3
Fabricated structural and ornamental metalwork	73.2	72.8	72.5	75.5
Metal doors, sash, frames, molding, and trim	10.7	10.8	10.8	13.7
Bolts, nuts, washers, and rivets	24.1	24.1	24.6	29.4
Forgings, iron and steel	35.6	35.3	35.0	40.7
Wrought pipe, welded and heavy riveted	23.8	24.4	24.4	26.7
Screw-machine products and wood screws	42.7	42.9	42.4	48.4
Steel barrels, kegs, and drums	8.2	8.0	7.7	8.2
Firearms	34.5	36.8	38.0	62.2
Electrical machinery [1]	698	702	707	765
Electrical equipment	429.3	431.8	433.0	465.2
Radios and phonographs	118.1	119.2	121.4	131.2
Communication equipment	104.9	105.8	107.2	118.8
Machinery, except electrical [1]	1,163	1,159	1,149	1,284
Machinery and machine-shop products	451.8	449.6	445.5	498.6
Engines and turbines	68.1	67.8	67.5	70.7
Tractors	57.5	57.3	56.6	59.1
Agricultural machinery, excluding tractors	44.6	44.6	44.0	44.1
Machine tools	74.3	74.3	74.0	88.9
Machine-tool accessories	65.0	65.0	64.5	78.3
Textile machinery	26.7	27.3	27.3	28.5
Pumps and pumping equipment	73.8	73.9	73.6	83.6
Typewriters	12.8	12.6	12.3	12.4
Cash registers, adding and calculating machines	30.6	30.8	31.1	35.6
Washington machines, wringers and driers, domestic	12.0	11.7	11.4	14.8
Sewing machines, domestic and industrial	11.0	10.7	10.5	10.0
Refrigerators and refrigeration equipment	52.6	52.6	51.8	59.0
Transportation equipment, except automobiles [1]	2,082	2,096	2,108	2,560
Locomotives	34.0	35.5	35.5	36.4
Cars, electric- and steam-railroad	58.0	57.6	56.5	60.5
Shipbuilding and boatbuilding	1,020.6	1,034.5	1,045.7	1,249.6
Motorcycles, bicycles, and parts	9.4	9.4	9.2	10.3
Automobiles [1]	682	677	669	766
Nonferrous metals and their products [1]	398	397	395	458
Smelting and refining, primary, of nonferrous metals	39.5	39.8	40.4	58.8
Alloying and rolling and drawing of nonferrous metals, except aluminum	70.6	69.6	69.0	74.6
Clocks and watches	25.6	26.0	25.9	25.5
Jewelry (precious metals) and jewelers' findings	13.3	13.5	13.4	14.7
Silverware and plated ware	11.0	11.1	11.1	11.5
Lighting equipment	26.0	26.5	26.3	26.2
Aluminum manufactures	66.8	64.5	64.2	86.0
Sheet-metal work, not elsewhere classified	31.8	32.4	32.7	30.4
Lumber and timber basic products [1]	450	452	459	487
Sawmills and logging camps	219.1	220.5	226.1	235.6
Planing and plywood mills	70.4	70.5	69.4	77.8

See footnote at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Con.

Industry	Estimated number of wage earners (in thousands)			
	January 1945	December 1944	November 1944	January 1944
Durable goods—Continued				
Furniture and finished lumber products [1]	338	340	338	361
Mattresses and bedsprings	17.7	17.9	18.0	17.7
Furniture	152.2	153.3	152.7	167.0
Wooden boxes, other than cigar	27.5	27.5	27.2	28.0
Caskets and other morticians' goods	11.9	11.8	12.0	12.2
Wood preserving	9.9	9.9	9.7	9.9
Wood, turned and shaped	21.6	21.6	21.4	22.1
Stone, clay, and glass products [1]	328	330	327	348
Glass and glassware	88.0	87.8	87.2	91.9
Glass products made from purchased glass	10.7	10.7	10.6	10.8
Cement	16.5	17.2	17.1	18.9
Brick, tile, and terra cotta	41.4	41.8	41.4	45.8
Pottery and related products	39.5	40.0	39.9	40.9
Gypsum	4.0	3.9	4.0	4.6
Wallboard, plaster (except gypsum), and mineral wool	9.6	9.7	9.6	10.7
Lime	7.7	7.6	7.7	8.8
Marble, granite, slate, and other products	13.8	14.0	13.9	11.7
Abrasives	21.3	21.2	21.1	23.3
Asbestos products	20.3	20.4	19.9	22.0
Nondurable goods				
Textile-mill products and other fiber manufactures [1]	1,083	1,092	1,081	1,162
Cotton manufactures except smallwares	432.7	433.7	428.8	459.3
Cotton smallwares	13.5	13.6	13.5	14.7
Silk and rayon goods	88.8	89.8	89.2	93.4
Woolen and worsted manufactures, except dyeing and finishing	146.6	148.3	146.8	158.2
Hosiery	100.7	102.4	102.0	110.9
Knitted cloth	10.3	10.4	10.2	11.4
Knitted outerwear and knitted gloves	28.5	29.4	29.2	30.7
Knitted underwear	34.4	34.6	34.4	38.7
Dyeing and finishing textiles, including woolen and worsted	59.9	60.3	59.3	65.3
Carpets and rugs, wool	20.3	20.4	20.3	20.8
Hats, fur-felt	9.4	9.5	9.4	9.8
Jute goods, except felts	3.2	3.3	3.3	3.5
Cordage and twine	15.1	15.4	15.1	16.6
Apparel and other finished textile products [1]	837	851	854	906
Men's clothing, not elsewhere classified	201.2	204.5	205.7	216.5
Shirts, collars, and nightwear	49.6	51.0	51.1	54.8
Underwear and neckwear, men's	11.9	12.1	12.2	12.3
Work shirts	14.1	14.3	14.5	16.9
Women's clothing, not elsewhere classified	214.6	216.7	217.5	228.7
Corsets and allied garments	14.6	15.1	15.0	16.1
Millinery	19.4	19.0	18.4	19.3
Handkerchiefs	2.6	2.8	2.8	3.4
Curtains, draperies, and bedspreads	10.9	12.8	13.0	15.0
Housefurnishings, other than curtains, etc	11.5	11.9	11.8	12.7
Textile bags	14.0	14.0	13.9	15.4
Leather and leather products [1]	311	312	310	315
Leather	39.5	39.6	39.2	40.8
Boot and shoe cut stock and findings	16.0	16.2	16.2	16.4
Boots and shoes	173.1	173.4	172.3	175.0
Leather gloves and mittens	12.3	12.6	12.8	13.4
Trunks and suitcases	12.9	12.9	13.0	11.8
Food [1]	1,013	1,054	1,074	1,021
Slaughtering and meat packing	154.7	155.4	149.1	172.3
Butter	20.7	20.8	21.1	19.6
Condensed and evaporated milk	13.0	12.8	13.0	12.1
Ice cream	13.3	13.7	13.9	13.0
Flour	29.5	29.3	28.9	30.0
Feeds, prepared	21.3	20.6	20.4	21.8
Cereal preparations	8.9	8.6	8.4	9.6
Baking	257.0	264.8	264.8	258.6
Sugar refining, cane	15.3	15.2	15.0	14.2
Sugar, beet	5.2	15.6	21.8	5.4
Confectionery	59.1	62.4	60.7	59.0
Beverages, nonalcoholic	25.8	26.1	26.5	25.9
Malt liquors	49.6	51.1	51.3	47.1
Canning and preserving	105.3	113.8	134.3	94.8

See footnote at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Con.

Industry	Estimated number of wage earners (in thousands)			
	January 1945	December 1944	November 1944	January 1944
Nondurable goods—Continued				
Tobacco manufactures [1]	82	85	84	88
Cigarettes	35.2	36.4	35.8	35.7
Cigars	33.3	34.4	34.6	37.9
Tobacco (chewing and smoking) and snuff	8.6	8.6	8.4	8.7
Paper and allied products [1]	309	312	308	321
Paper and pulp	147.4	147.2	145.0	149.4
Paper goods, other	44.7	45.6	44.8	47.4
Envelopes	9.5	9.7	9.7	10.2
Paper bags	13.2	13.3	13.2	13.2
Paper boxes	77.7	79.1	78.8	84.0
Printing, publishing, and allied industries [1]	328	335	333	338
Newspapers and periodicals	109.6	111.3	110.7	110.5
Printing, book and job	131.6	135.5	134.5	137.0
Lithographing	24.3	24.7	24.4	24.9
Bookbinding	27.9	28.3	27.8	30.1
Chemicals and allied products [1]	628	621	607	665
Paints, varnishes, and colors	29.7	30.1	29.8	29.6
Drugs, medicines, and insecticides	49.2	49.8	49.6	50.2
Perfumes and cosmetics	12.3	12.7	12.8	11.7
Soap	13.6	13.6	13.5	13.5
Rayon and allied products	54.1	54.2	53.7	52.1
Chemicals, not elsewhere classified	115.2	115.5	115.2	122.3
Explosives and safety fuses	95.1	93.5	90.3	79.8
Compressed and liquefied gases	5.9	5.9	5.6	6.1
Ammunition, small-arms	61.0	55.1	50.4	96.3
Fireworks	25.9	26.9	26.6	28.6
Cottonseed oil	19.7	20.4	21.1	20.4
Fertilizers	23.1	21.5	20.0	23.5
Products of petroleum and coal [1]	133	133	132	125
Petroleum refining	91.5	90.8	90.3	82.8
Coke and byproducts	22.2	22.0	22.2	23.3
Paving materials	1.6	1.6	1.7	1.4
Roofing materials	9.5	9.6	9.6	9.8
Rubber products [1]	196	194	192	204
Rubber tires and inner tubes	95.3	93.0	92.8	94.2
Rubber boots and shoes	17.8	18.3	18.3	21.3
Rubber goods, other	71.3	71.4	70.3	76.7
Miscellaneous industries [1]	396	397	397	428
Instruments (professional and scientific), and fire-control equipment	58.8	59.0	59.2	68.1
Photographic apparatus	28.0	28.0	27.9	30.0
Optical instruments and ophthalmic goods	23.6	23.5	23.4	26.6
Pianos, organs, and parts	7.3	7.1	7.1	10.0
Games, toys, and dolls	16.5	16.8	16.9	15.9
Buttons	9.2	8.8	9.4	10.3
Fire extinguishers	4.9	5.0	5.1	7.4

[1] Estimates for the major industry groups have been adjusted to levels indicated by final 1942 and preliminary 1943 data made available by the Bureau of Employment Security of the Federal Security Agency. These data are not comparable with data published in mimeographed releases dated prior to February 1945 or the March 1945 issue of the Monthly Labor Review. Comparable data from January 1939 are available upon request. 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, the sum of the individual industry estimates will not agree with totals shown for the major industry groups.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*

[1939 average=100]

Industry	Wage-earner employment				Wage-earner pay roll			
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944
All manufacturing [1]	160.1	161.0	160.7	175.0	330.3	331.8	327.3	345.1
Durable goods [1]	215.9	216.1	215.7	242.7	454.2	455.8	450.3	489.4
Nondurable goods [1]	116.0	117.6	117.3	121.7	209.2	210.5	207.0	204.0
Durable goods								
Iron and steel and their products [1]	167.1	166.5	165.2	175.1	316.3	316.7	308.8	320.9
Blast furnaces, steel works, and rolling mills	122.2	122.2	122.0	128.2	224.4	225.5	221.9	223.6
Gray-iron and semisteel castings	129.3	127.6	125.3	132.1	265.1	261.7	251.7	257.8
Malleable-iron castings	143.6	142.1	138.9	142.8	305.1	305.6	291.9	291.2
Steel castings	239.7	238.1	238.1	266.7	457.3	454.9	448.6	488.1
Cast-iron pipe and fittings	95.3	95.3	93.2	94.3	193.5	192.1	187.9	173.4
Tin cans and other tinware	125.2	123.9	122.4	105.8	219.3	215.6	205.4	179.5
Wire drawn from purchased rods	149.4	147.6	145.9	160.4	260.8	257.1	251.2	267.2
Wirework	113.9	113.7	114.3	111.9	236.4	235.8	229.7	226.6
Cutlery and edge tools	157.4	157.3	153.8	147.3	336.6	333.0	320.4	301.9
Tools (except edge tools, machine tools, files, and saws)	180.5	177.2	175.4	187.2	353.7	347.1	332.0	351.1
Hardware	129.5	130.3	128.9	133.2	273.6	275.9	266.4	270.3
Plumbers' supplies	91.4	89.8	88.4	95.4	173.4	168.0	161.7	164.8
Stoves, oil burners, and heating equipment, not elsewhere classified	136.8	138.6	135.5	136.1	267.2	269.4	260.9	252.8
Steam and hot-water heating apparatus and steam fittings	182.3	182.6	180.8	197.0	356.1	353.6	351.0	350.3
Stamped and enameled ware and galvanizing	157.2	156.6	155.2	164.3	336.7	332.3	313.4	322.0
Fabricated structural and ornamental metal-work	206.1	205.0	204.2	212.6	395.1	401.7	397.4	411.1
Metal doors, sash, frames, molding, and trim	138.2	139.2	140.0	176.5	266.0	274.5	266.7	325.8
Bolts, nuts, washers, and rivets	168.7	168.5	171.6	205.6	329.2	333.4	335.1	395.0
Forgings, iron and steel	231.5	229.5	227.7	264.6	477.0	467.3	459.2	531.6
Wrought pipe, welded and heavy riveted	284.5	292.1	291.4	318.8	571.7	583.4	568.4	607.4
Screw-machine products and wood screws	252.2	253.5	250.8	286.3	509.2	498.7	488.9	563.9
Steel barrels, kegs, and drums	135.5	132.5	126.4	135.3	261.6	270.4	247.8	264.8
Firearms	689.1	736.2	760.2	1244.2	1509.2	1659.2	1758.4	2896.5
Electrical machinery [1]	269.2	271.1	272.9	295.2	504.8	504.3	498.7	521.1
Electrical equipment	237.5	238.9	239.5	257.3	454.4	452.0	443.8	464.8
Radios and phonographs	271.3	274.1	278.9	301.5	534.4	537.3	541.7	569.7
Communication equipment	326.5	329.5	333.7	370.0	541.3	548.1	549.5	562.9
Machinery, except electrical [1]	220.0	219.2	217.5	243.1	421.9	422.0	409.0	456.5
Machinery and machine-shop products	223.3	222.2	220.2	246.4	421.3	419.4	408.4	454.6
Engines and turbines	365.0	363.2	362.1	378.9	790.2	807.6	766.4	820.1
Tractors	183.7	183.3	180.9	188.8	295.0	294.4	289.7	297.7
Agricultural machinery, excluding tractors	160.4	160.4	158.1	158.5	322.1	322.4	311.2	309.4
Machine tools	202.8	202.8	202.2	242.8	378.6	381.0	363.2	419.8
Machine-tool accessories	258.3	258.3	256.3	311.3	458.3	452.3	441.3	535.1
Textile machinery	122.0	124.8	124.4	130.2	235.1	240.9	233.3	235.8
Pumps and pumping equipment	304.5	304.7	303.8	345.0	648.7	650.2	626.5	744.4
Typewriters	79.1	77.9	75.8	76.2	162.0	153.8	154.7	155.9
Cash registers, adding and calculating machines	155.6	156.3	158.2	180.8	305.1	298.4	305.8	371.0
Washing machines, wringers and driers, domestic	160.9	156.3	153.0	197.8	290.7	298.0	268.3	343.2
Sewing machines, domestic and industrial	139.8	136.7	134.0	127.7	300.3	289.4	282.3	274.0
Refrigerators and refrigeration equipment	149.7	149.6	147.3	167.9	267.2	287.3	265.6	306.6
Transportation equipment, except automobiles [1]	1311.7	1320.7	1327.8	1613.1	2852.5	2893.7	2905.9	3221.2
Locomotives	525.0	548.7	549.0	562 8	1169.0	1321.8	1256.4	1289.2
Cars, electric- and steam-railroad	236.6	234.7	230.2	246.5	486.1	510.7	467.7	480.2
Shipbuilding and boatbuilding	1473.9	1494.0	1510.2	1804.6	3311.9	3435.6	3497.8	3599.4
Motorcycles, bicyles and parts	135.4	134.7	131.7	148.2	258.2	254.7	241.7	273.3
Automobiles [1]	169.4	168.3	166.3	190.4	319.3	312.6	307.6	358.0
Nonferrous metals and their products [1]	173.6	173.1	172.1	199.6	337.7	336.2	326.9	373.3
Smelting and refining, primary, of nonferrous metals	142.9	143.9	146.3	212.8	264.2	263.5	266.8	377.8
Alloying and rolling and drawing of nonferrous metals, except aluminum	181.9	179.2	177.8	192.1	354.5	347.8	333.7	359.1
Clocks and watches	126.4	128.1	127.8	125.5	270.3	276.9	272.8	249.6
Jewelry (precious metals) and jewelers' findings	92.1	93.5	92.8	102.0	160.5	168.7	159.5	160.2
Silverware and plated ware	90.8	91.7	91.4	94.5	163.0	168.9	164.6	169.0
Lighting equipment	127.2	129.6	128.3	128.0	235.9	238.6	229.4	226.3
Aluminum manufactures	283.9	274.1	272.5	365.1	529.6	512.4	497.0	657.0
Sheet-metal work, not elsewhere classified	169.5	172.8	174.2	162.1	334.0	341.0	337.8	308.6

See footnote at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*—Continued

Industry	Wage-earner employment				Wage-earner pay roll			
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944
Durable goods—Continued								
Lumber and timber basic products [1]	107.1	107.6	109.2	115.8	192.9	193.7	199.3	196.2
Sawmills and logging camps	76.1	76.6	78.5	81.8	137.7	138.3	143.8	139.0
Planing and plywood mills	96.9	97.0	95.6	107.0	167.4	167.9	167.3	174.0
Furniture and finished lumber products [1]	103.0	103.6	103.1	109.9	193.6	194.0	190.7	189.1
Mattresses and bedsprings	96.4	97.8	98.0	96.6	178.0	180.2	174.0	158.0
Furniture	95.6	96.3	95.9	104.9	179.9	179.8	177.2	181.3
Wooden boxes, other than cigar	108.3	108.4	107.3	110.3	211.3	219.6	215.0	197.6
Caskets and other morticians' goods	95.6	94.7	96.0	98.3	172.0	169.6	163.1	162.5
Wood preserving	87.9	87.8	85.9	87.7	187.5	185.6	185.7	157.6
Wood, turned and shaped	98.1	98.4	97.5	100.5	178.9	178.2	176.4	171.2
Stone, clay, and glass products [1]	111.6	112.3	111.4	118.6	188.6	192.2	189.5	189.8
Glass and glassware	126.1	125.8	124.9	131.6	201.8	203.8	200.8	207.4
Glass products made from purchased glass	106.7	106.9	106.3	108.0	185.3	186.5	179.6	170.2
Cement	69.1	72.1	71.7	79.2	107.3	114.1	116.2	110.2
Brick, tile, and terra cotta	73.0	73.6	72.9	80.7	118.0	118.9	119.8	119.7
Pottery and related products	119.3	120.9	120.5	123.5	184.5	193.6	190.9	176.7
Gypsum	81.2	80.0	80.6	92.5	142.6	140.4	143.0	160.5
Wallboard, plaster (except gypsum), and mineral wool	118.5	119.3	118.5	132.0	218.6	217.8	217.2	233.0
Lime	81.0	80.9	81.4	93.4	153.4	156.0	157.7	168.9
Marble, granite, slate, and other products	74.4	75.4	75.1	63.1	109.0	114.2	113.9	87.1
Abrasives	275.2	273.6	272.5	301.5	482.8	490.6	473.6	492.2
Asbestos products	127.7	128.4	125.6	138.2	264.9	266.0	255.0	267.7
Nondurable goods								
Textile-mill products and other fiber manufactures [1]	94.7	95.5	94.5	101.6	173.9	176.6	172.2	171.7
Cotton manufactures, except smallwares	109.3	109.5	108.3	116.0	210.3	212.3	206.8	199.1
Cotton smallwares	101.1	102.4	101.4	110.2	193.7	190.4	180.0	190.6
Silk and rayon goods	74.1	75.0	74.4	78.0	138.4	142.3	139.4	135.6
Woolen and worsted manufactures, except dyeing and finishing	98.3	99.4	98.4	106.0	193.5	194.9	189.4	197.2
Hosiery	63.3	64.4	64.1	69.7	102.9	105.9	104.7	106.6
Knitted cloth	94.2	95.0	93.6	104.5	169.4	170.6	163.8	174.7
Knitted outerwear and knitted gloves	101.2	104.4	103.7	109.2	184.9	193.0	193.2	189.6
Knitted underwear	89.2	89.9	89.3	100.3	164.7	166.8	165.6	174.8
Dyeing and finishing textiles, including woolen and worsted	89.6	90.1	88.7	97.7	152.2	156.5	150.6	154.8
Carpets and rugs, wool	79.4	79.7	79.4	81.3	138.6	140.6	136.6	135.3
Hats, fur-felt	64.4	65.1	64.5	67.2	125.3	127.6	124.9	122.2
Jute goods, except felts	90.4	92.5	92.4	98.5	179.3	184.2	182.6	182.0
Cordage and twine	125.1	127.4	124.9	136.9	235.3	244.1	235.2	240.0
Apparel and other finished textile products [1]	106.0	107.8	108.1	114.8	195.2	191.8	192.3	187.9
Men's clothing, not elsewhere classified	92.0	93.5	94.1	99.0	165.3	164.5	169.2	156.5
Shirts, collars, and nightwear	70.4	72.3	72.5	77.7	126.1	128.0	128.7	129.1
Underwear and neckwear, men's	73.8	75.0	75.6	76.3	147.6	150.6	152.4	140.0
Work shirts	104.6	106.3	107.8	125.4	204.1	204.4	210.5	223.1
Women's clothing, not elsewhere classified	79.0	79.8	80.1	84.2	149.1	143.5	141.1	141.4
Corsets and allied garments	77.8	80.4	80.1	85.5	135.5	138.9	141.4	139.9
Millinery	79.6	78.0	75.5	79.5	131.0	113.2	104.6	113.8
Handkerchiefs	54.5	57.7	58.2	70.5	100.6	107.0	110.6	115.1
Curtains, draperies, and bedspreads	64.5	75.7	76.7	88.4	129.2	150.7	154.3	163.8
Housefurnishings, other than curtains, etc	108.7	111.9	111.2	119.9	204.0	215.2	212.8	219.8
Textile bags	116.5	116.6	116.1	128.2	204.2	202.0	198.9	202.2
Leather and leather products [1]	89.5	89.8	89.4	90.8	162.5	160.8	157.4	149.9
Leather	83.7	83.8	82.9	86.4	147.0	145.5	143.3	139.9
Boot and shoe cut stock and findings	84.8	85.8	85.7	87.1	146.8	146.1	141.6	136.8
Boots and shoes	79.4	79.5	79.0	80.3	147.9	145.7	141.9	134.0
Leather gloves and mittens	123.1	125.6	127.7	134.0	208.9	209.0	222.6	222.5
Trunks and suitcases	154.8	154.7	156.1	141.9	252.5	261.8	249.7	221.0

See footnote at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*—Continued

Industry	Wage-earner employment				Wage-earner pay roll			
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944
Nondurable goods—Continued								
Food [1]	118.6	123.3	125.7	119.5	195.8	205.0	203.8	191.5
Slaughtering and meat packing	128.4	129.0	123.7	143.0	221.9	227.6	211.4	243.2
Butter	115.2	116.0	117.6	109.3	180.8	181.4	180.1	162.9
Condensed and evaporated milk	134.2	132.1	134.3	124.5	219.7	213.1	211.4	188.7
Ice cream	84.5	87.1	88.8	82.8	122.0	125.8	126.5	111.5
Flour	119.2	118.3	116.8	120.9	206.0	198.8	195.1	200.0
Feeds, prepared	138.1	133.7	132.3	141.2	231.3	229.4	219.3	230.2
Cereal preparations	119.6	115.9	113.3	128.9	215.9	210.3	197.3	224.5
Baking	111.4	114.8	114.8	112.1	168.2	176.5	174.5	160.6
Sugar refining, cane	108.1	107.4	106.2	100.3	179.3	184.0	164.4	156.4
Sugar, beet	49.6	149.5	209.3	51.5	66.6	189.4	298.6	75.9
Confectionery	118.7	125.5	122.0	118.7	198.6	210.8	205.1	187.9
Beverages, nonalcoholic	121.2	122.7	124.7	122.0	157.3	162.7	166.2	151.9
Malt liquors	137.4	141.5	142.2	130.5	194.0	204.8	204.1	178.2
Canning and preserving	78.3	84.6	99.9	70.5	153.9	162.9	188.7	131.8
Tobacco manufactures [1]	88.1	90.7	90.1	94.1	166.4	177.8	172.7	158.1
Cigarettes	128.3	132.7	130.6	130.1	211.1	222.8	215.6	190.1
Cigars	65.3	67.5	68.0	74.5	134.2	147.2	144.0	138.1
Tobacco (chewing and smoking) and snuff	93.9	94.1	91.9	94.9	159.0	162.7	155.9	138.4
Paper and allied products [1]	116.5	117.4	116.0	121.2	195.6	197.6	194.0	188.6
Paper and pulp	107.2	107.1	105.5	108.7	184.4	186.0	182.0	173.2
Paper goods, other	118.9	121.1	119.0	126.0	197.6	197.8	195.1	193.6
Envelopes	109.7	111.4	111.4	117.7	175.5	178.0	171.9	175.1
Paper bags	118.8	120.3	119.1	119.5	206.3	211.6	205.8	196.6
Paper boxes	112.4	114.3	113.9	121.4	181.9	185.0	183.3	184.6
Printing, publishing, and allied industries [1]	100.1	102.3	101.4	103.2	141.2	144.1	142.2	134.6
Newspapers and periodicals	92.3	93.8	93.3	93.1	118.4	121.5	120.8	112.3
Printing, book and job	104.2	107.2	106.4	108.4	156.8	159.6	156.8	147.6
Lithographing	93.6	95.1	93.7	95.7	133.5	136.2	136.5	130.3
Bookbinding	108.1	109.7	107.7	116.7	187.7	189.0	182.3	190.1
Chemicals and allied products [1]	217.8	215.4	210.6	230.7	384.2	377.8	366.2	395.7
Paints, varnishes, and colors	105.4	106.8	106.0	105.3	169.4	170.7	167.0	159.5
Drugs, medicines, and insecticides	179.6	181.6	181.0	183.0	271.8	272.1	269.7	267.6
Perfumes and cosmetics	118.5	122.2	123.2	112.6	163.8	172.3	182.6	150.3
Soap	99.9	100.3	99.4	99.6	169.4	172.9	168.2	159.8
Rayon and allied products	112.1	112.3	111.3	108.0	182.0	180.1	179.0	168.6
Chemicals, not elsewhere classified	165.5	166.0	165.5	175.8	293.2	291.1	289.2	297.7
Explosives and safety fuses	1311.3	1288.5	1244.3	1100.0	1999.1	1969.5	1865.1	1683.7
Compressed and liquefied gases	149.1	149.4	142.6	153.7	269.6	267.8	254.2	264.1
Ammunition, small-arms	1431.4	1291.8	1182.6	2257.9	2914.7	2632.5	2370.7	4509.2
Fireworks	2234.6	2319.0	2294.0	2468.3	6280.7	6444.3	6231.8	6771.1
Cottonseed oil	129.6	134.0	139.1	134.4	274.9	289.3	300.3	251.5
Fertilizers	122.9	114.4	106.5	125.1	269.1	249.8	233.6	248.3
Products of petroleum and coal [1]	126.0	125.3	125.1	118.3	220.1	220.4	219.2	196.7
Petroleum refining	125.6	124.7	124.0	113.6	213.4	214.9	214.2	185.0
Coke and byproducts	102.4	101.2	102.1	107.6	189.0	182.0	179.0	185.8
Paving materials	63.8	66.8	69.5	55.5	131.6	141.5	137.6	95.0
Roofing materials	117.8	119.5	119.7	121.5	211.5	217.5	217.6	210.3
Rubber products [1]	161.8	160.3	159.1	168.6	318.1	303.6	289.9	291.0
Rubber tires and inner tubes	176.1	171.7	171.4	174.1	338.8	316.1	298.2	288.9
Rubber boots and shoes	120.2	123.8	123.3	143.6	220.1	228.5	219.6	248.9
Rubber goods, other	137.8	137.9	135.9	148.1	262.2	256.7	250.6	260.1
Miscellaneous industries [1]	161.8	162.2	162.4	175.0	322.4	319.7	314.5	325.5
Instruments (professional and scientific), and fire-control equipment	531.6	533.5	535.1	616.2	1057.1	1058.2	1013.9	1138.4
Photographic apparatus	162.1	161.9	161.5	173.6	277.5	258.9	271.2	277.3
Optical instruments and ophthalmic goods	203.2	202.5	201.1	229.3	353.5	346.0	346.6	373.3
Pianos, organs, and parts	95.5	92.7	93.1	131.1	187.3	170.1	177.4	246.2
Games, toys, and dolls	88.4	90.1	90.6	85.3	182.7	188.6	186.7	156.9
Buttons	84.3	79.9	85.5	94.3	178.0	163.4	166.5	178.0
Fire extinguishers	496.8	503.6	516.3	741.6	1028.5	1045.9	1047.1	1431.1

[1] Indexes for the major industry groups have been adjusted to levels indicated by final 1942 and preliminary 1943 data made available by the Bureau of Employment Security of the Federal Security Agency. These indexes are not comparable with those published in mimeographed releases dated prior to February 1945 or the March 1945 issue of the Monthly Labor Review. Comparable indexes from January 1939 are available upon request. Indexes for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data.

TABLE 4.—*Estimated Number of Wage Earners in Selected Nonmanufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	January 1945	December 1944	November 1944	January 1944
Mining:				
Anthracite	65.4	65.6	66.1	69.1
Bituminous coal	338	338	340	370
Metal	69.0	69.2	69.9	89.4
Iron	23.3	23.8	24.7	28.9
Copper	22.3	22.2	22.2	30.6
Lead and zinc	15.0	14.8	14.6	18.7
Gold and silver	5.5	5.5	5.5	6.4
Miscellaneous	2.9	2.9	2.9	4.8
Telephone [1]	401	403	404	406
Telegraph [2]	45.2	45.8	45.8	46.3
Electric light and power [3]	200	200	201	205
Street railways and busses [3]	228	228	228	230
Hotels (year-round) [3]	355	356	356	350
Power laundries	240	243	243	248
Cleaning and dyeing	75.6	77.3	79.0	75.1
Class I steam railroads [4]	1,391	1,400	1,408	1,357
Water transportation [5]	143	144	140	104

[1] Data from January 1937 are available upon request. Salaried personnel are included.
[2] Data from January 1937 are available upon request. Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies. Salaried personnel are included.
[3] Data include salaried personnel.
[4] Source: Interstate Commerce Commission. Data include salaried personnel.
[5] Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries*

[1939 average=100]

Industry	Employment indexes				Pay-roll indexes			
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1944
Mining:								
Anthracite	79.0	79.2	79.9	33.4	137.7	148.8	137.7	146.0
Bituminous coal	91.3	91.3	91.8	99.8	215.5	199.8	197.7	228.9
Metal	78.2	78.5	79.2	101.4	125.1	127.7	125.0	157.4
Iron	115.6	118.3	123.2	143.5	177.1	183.4	192.5	218.9
Copper	93.4	93.2	92.9	128.6	156.6	163.8	152.7	209.9
Lead and zinc	96.6	95.2	94.1	120.3	183.3	179.7	174.3	214.4
Gold and silver	22.3	22.4	22.0	26.0	30.3	29.9	28.0	33.8
Miscellaneous	73.2	73.5	72.5	121.9	122.8	122.1	119.3	187.1
Quarrying and nonmetallic	75.6	79.6	82.2	83.7	135.8	144.3	153.8	139.6
Crude-petroleum production [1]	82.1	82.1	82.1	81.1	132.2	131.7	130.9	126.2
Public utilities:								
Telephone [2]	126.1	126.7	127.1	127.9	157.8	158.6	156.9	150.2
Telegraph [2]	120.2	121.7	121.7	123.1	172.3	174.0	172.1	171.9
Electric light and power	82.0	82.0	82.1	83.8	115.2	114.6	114.2	112.9
Street railways and busses	117.7	117.7	117.7	118.8	175.0	173.5	170.1	161.4
Wholesale trade	95.7	97.1	96.8	95.1	139.1	142.3	140.0	131.2
Retail trade	98.3	111.9	103.2	97.5	130.7	146.8	134.2	122.2
Food	107.2	110.2	109.0	106.8	141.4	145.0	141.9	132.7
General merchandise	114.2	152.2	127.4	110.4	144.3	190.7	155.9	132.1
Apparel	106.1	131.3	118.4	105.7	145.5	178.9	159.5	134.9
Furniture and housefurnishings	62.4	67.5	64.4	64.6	87.4	97.0	90.1	84.9
Automotive	67.7	68.9	67.2	65.9	100.9	102.8	99.3	91.7
Lumber and building material	88.9	91.4	91.2	89.1	129.9	132.4	130.5	123.4
Hotels (year-round) [3]	110.2	110.5	110.3	108.6	166.8	169.5	164.6	148.9
Power laundries	106.3	107.8	107.6	109.9	161.5	162.3	160.7	155.0
Cleaning and dyeing	112.0	114.5	117.1	111.2	175.2	176.6	181.9	163.5
Class I steam railroads [4]	140.8	141.8	142.5	137.4	(5)	(5)	(5)	(5)
Water transportation [6]	272.6	274.5	267.7	198.9	685.2	672.9	651.9	448.7

[1] Does not include well drilling or rig building.
[2] Data from January 1937 are available upon request.
[3] Cash payments only; additional value of board, room, tips, not included.
[4] Source: Interstate Commerce Commission.
[5] Not available.
[6] Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

AVERAGE EARNINGS AND HOURS

Average weekly earnings and hours and average hourly earnings for November and December 1944, and January 1945, 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 average hourly earnings.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944
							Cents	*Cents*	*Cents*
All manufacturing	$47.52	$47.45	$46.85	45.4	45.6	45.3	104.7	104.0	103.5
Durable goods	53.55	53.68	53.04	46.8	47.1	46.7	114.6	113.9	113.6
Nondurable goods	38.65	38.41	37.87	43.4	43.5	43.2	89.0	88.3	87.7
Durable goods									
Iron and steel and their products	51.65	51.85	50.98	46.9	47.4	46.8	110.1	109.5	108.9
Blast furnaces, steel works, and rolling mills	55.04	55.33	54.55	46.2	47.0	46.6	119.1	117.9	117.0
Gray-iron and semisteel castings	52.63	52.65	51.72	47.7	47.7	47.2	110.6	110.6	109.5
Malleable-iron castings	52.76	53.31	51.88	48.8	48.9	48.5	108.2	109.3	107.9
Steel castings	53.25	53.33	52.60	46.6	46.9	46.3	114.7	113.8	113.5
Cast-iron pipe and fittings	42.80	42.48	42.64	47.4	47.2	47.4	89.7	89.4	89.6
Tin cans and other tinware	41.50	41.03	39.61	45.2	45.3	44.3	91.4	90.5	89.4
Wirework	52.07	51.82	50.31	48.4	48.5	47.3	107.7	107.0	106.5
Cutlery and edge tools	45.69	44.92	44.31	46.6	46.4	46.1	97.5	96.7	96.1
Tools (except edge tools, machine tools, files, and saws)	47.67	47.42	45 93	47.8	47.8	46.7	99.8	99.3	98.6
Hardware	47.22	47.24	46.15	47.6	47.6	47.0	99.1	99.3	98.1
Plumbers' supplies	49.55	48.87	47.72	46.9	46.6	46.2	105.7	104.8	103.3
Stoves, oil burners, and heating equipment, not elsewhere classified	48.78	48.67	48.05	46.6	47.2	46.9	104.3	103.1	102.5
Steam and hot-water heating apparatus and steam fittings	50.69	50.06	50.05	47.8	48.1	48.1	105.6	104.1	104.0
Stamped and enameled ware and galvanizing	49.12	48.98	46.66	46.8	46.8	45.1	105.7	104.6	103.5
Fabricated structural and ornamental metalwork	53.47	54.63	54.19	47.1	48.1	48.2	113.6	113.6	112.5
Metal doors, sash, frames, molding, and trim	52.20	53.47	51.67	48.1	48.6	47.0	108.5	110 0	109.9
Bolts, nuts, washers, and rivets	49.95	49.57	48.88	46.7	47.3	46.9	106.9	104.8	104.2
Forgings, iron and steel	61.69	61.16	60.61	48.2	47.8	47.5	129.1	128.0	127.5
Screw-machine products and wood screws	52.20	50.74	50.25	49.0	48.0	48.0	106.6	105.7	104.6
Steel barrels, kegs, and drums	41.96	44.23	42.51	42.6	45.1	44.2	98.2	98.0	96.1
Firearms	57.46	59.14	60.70	45.1	46.6	46.8	127.2	126.8	129.6

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944
Durable goods—Continued							*Cents*	*Cents*	*Cents*
Electrical machinery	$49.76	$49.43	$48.54	46.6	46.7	46.3	106.8	105.9	104.9
Electrical equipment	52.45	52.06	50.99	47.1	47.0	46.6	111.8	110.7	109.5
Radios and phonographs	43.27	42.79	42.38	45.9	46.1	46.0	93.2	92.7	92.0
Communication equipment	45.90	46.35	45.92	45.2	45.9	45.5	101.2	100.7	100.3
Machinery, except electrical	55.88	56.05	54.72	48.5	48.9	48.2	115.1	114.6	113.4
Machinery and machine-shop products	54.92	54.76	53.84	48.5	48.7	48.2	113.2	112.4	111.6
Engines and turbines	61.18	62.82	59.81	48.5	49.7	48.5	126.3	126.4	123.5
Tractors	54.23	54.24	54.09	47.1	47.3	47.3	115.1	114.7	114.4
Agricultural machinery, excluding tractors	53.40	53.35	51.98	46.9	47.1	46.0	113.7	113.2	113.0
Machine tools	60.21	60.81	58.05	51.6	51.8	50.5	117.2	117.3	115.0
Machine-tool accessories	61.14	60.35	59.51	49.5	49.4	49.2	123.5	122.3	121.2
Textile machinery	50.33	50.20	48.77	49.6	49.6	48.3	101.6	101.3	101.0
Typewriters	49.27	47.53	49.14	49.3	48.0	49.5	100.0	99.1	99.2
Cash registers, adding and calculating machines	59.32	57.77	58.48	48.7	47.8	48.2	123.1	121.6	122.2
Washing machines, wringers, and driers, domestic	47.94	50.58	46.38	46.3	47.2	44.8	103.4	107.2	103.5
Sewing machines, domestic and industrial	58.01	57.10	56.88	51.7	51.5	51.4	113.3	112.2	111.7
Refrigerators and refrigeration equipment	50.57	54.42	51.21	45.4	48.0	46.0	111.6	113.4	111.2
Transportation equipment, except automobiles	62.73	63.29	63.04	47.9	48.4	47.8	130.8	130.9	131.8
Locomotives	63.44	68.36	64.94	47.1	49.6	48.3	134.7	137.7	134.4
Cars, electric- and steam-railroad	54.44	57.37	53.57	45.6	47.7	45.9	119.4	120.2	116.7
Aircraft and parts, excluding aircraft engines	57.35	56.45	55.64	47.7	47.6	47.2	120.3	118.7	117.8
Aircraft engines	62.63	61.23	59.90	46.4	46.0	45.2	134.8	132.9	132.6
Shipbuilding and boatbuilding	66.25	68.17	68.68	48.6	49.3	48.8	137.1	138.4	140.7
Mortorcycles, bicycles, and parts	52.83	52.31	50.79	49.0	48.5	47.7	107.9	107.9	106.4
Automobiles	59.38	58.41	58.23	45.2	45.7	45.5	131.4	127.9	128.0
Nonferrous metals and their products	50.80	50.83	49.66	47,2	47.5	46.9	107.7	106.9	105.8
Smelting and refining, primary, of nonferrous metals	49.20	48.74	48.52	45.8	46.0	45.9	107.4	105.9	105.8
Alloying and rolling and drawing of nonferrous metals, except aluminum	56.14	55.92	54.11	48.7	49.0	47.9	115.0	114.1	113.0
Clocks and watches	44.64	45.05	44.49	46.3	47.1	47.0	96.3	95.6	94.7
Jewelry (precious metals) and jewelers' findings	45.36	46.94	44.72	45.4	46.4	45.5	98.3	99.7	96.8
Silverware and plated ware	47.42	48.56	47.49	46.4	47.4	46.6	102.4	102.5	101.8
Lighting equipment	48.41	47.83	46.65	44.7	45.6	44.7	107.8	104.9	104.4
Aluminum manufactures	51.37	51.47	50.25	47.5	47.4	46.9	108.2	108.7	107.2
Lumber and timber basic products	33.65	33.62	34.00	42.5	42.3	43.0	79.1	79.4	79.1
Sawmills and logging camps	32.34	32.26	32.66	41.8	41.4	42.1	77.3	77.9	77.6
Planing and plywood mills	37.91	37.99	38.39	44.7	45.3	45.9	84.3	83.7	83.6
Furniture and finished lumber products	37.57	37.48	36.97	44.4	44.5	44.4	84.6	84.2	83.3
Furniture	38.34	38.00	37.51	44.3	44.3	44.2	86.8	86.2	85.3
Caskets and other morticians' goods	41.65	41.38	39.27	46.5	46.4	44.5	89.9	89.6	88.4
Wood preserving	33.94	33.60	34.52	43.8	42.5	43.8	77.5	79.0	78.9
Stone, clay, and glass products	39.80	40.35	40.10	43.4	44.2	44.1	91.7	91.4	91.0
Glass and glassware	40.32	40.73	40.36	42.0	42.8	42.6	96.3	95.5	95.0
Glass products made from purchased glass	36.20	36.38	35.23	44.0	44.4	43.7	82.3	82.1	80.4
Cement	41.64	42.66	43.60	44.6	45.9	46.6	93.4	92.9	93.6
Brick, tile, and terra cotta	33.39	33.43	34.04	41.1	41.4	42.1	80.9	80.4	80.3
Pottery and related products	35.92	37.27	36.88	40.7	42.2	42.1	89.5	89.5	88.9
Gypsum	45.47	45.53	46.03	48.5	49.1	49.6	93.8	92.7	92.8
Lime	37.17	37.87	38.01	47.0	47.2	48.6	79.5	80.6	78.4
Marble, granite, slate, and other products	38.53	39.81	39.92	42.7	44.1	43.7	88.3	88.8	90.9
Abrasives	49.15	50.33	48.76	48.2	49.0	47.7	102.1	102.7	102.2
Asbestos products	49.50	49.43	48.49	49.7	49.2	48.5	99.7	100.4	99.9

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944
Nondurable goods									
							Cents	*Cents*	*Cents*
Textile-mill products and other fiber manufactures	$30.80	$30.98	$30.54	42.3	42.8	42.3	72.8	72.5	72.2
Cotton manufactures, except smallwares	27.81	27.91	27.49	42.6	43.1	42.5	65.3	64.8	64.6
Cotton smallwares	35.74	34.73	33.14	44.4	43.8	42.7	80.7	79.5	77.5
Silk and rayon goods	29.81	30.41	30.04	41.9	42.9	42.5	71.0	70.8	70.7
Woolen and worsted manufactures, except dyeing and finishing	36.81	36.63	36.00	43.1	43.1	42.4	85.7	85.2	84.9
Hosiery	29.78	30.12	29.90	38.5	39.0	38.9	77.6	77.1	76.9
Knitted cloth	33.38	33.32	32.57	44.6	44.7	44.5	74.4	73.8	72.6
Knitted outerwear and knitted gloves	30.68	31.05	31.23	39.4	40.0	40.5	77.1	77.0	76.4
Knitted underwear	27.20	27.42	27.32	40.4	41.0	40.9	67.0	66.8	66.5
Dyeing and finishing textiles, including woolen and worsted	35.38	35.95	35.29	45.3	46.2	45.5	77.4	77.7	77.6
Carpets and rugs, wool	40.26	40.66	39.67	43.7	44.3	43.6	92.3	92.0	91.4
Hats, fur-felt	45.06	45.38	44.85	41.7	42.0	41.7	108.3	108.1	108.4
Jute goods, except felts	35.33	35.48	35.20	45.7	45.4	45.4	77.6	78.1	77.5
Cordage and twine	33.34	33.97	33.49	45.1	45.6	45.4	73.8	74.4	73.6
Apparel and other finished textile products	32.43	31.35	31.34	38.2	37.7	38.0	84.9	83.1	82.4
Men's clothing, not elsewhere classified	34.08	33.25	33.95	39.0	38.3	39.1	86.5	86.1	86.4
Shirts, collars, and nightwear	24.94	24.68	24.61	36.6	36.4	36.7	67.9	67.3	67.0
Underwear and neckwear, men's	26.77	26.84	26.96	36.8	37.4	37.1	72.8	72.0	73.0
Work shirts	21.17	21.21	21.58	36.8	36.6	37.4	56.3	56.8	55.8
Women's clothing, not elsewhere classified	40.35	38.45	37.67	37.0	36.7	36.4	105.4	101.7	100.1
Corsets and allied garments	30.40	29.99	30.68	40.2	40.5	41.3	75.3	74.2	74.4
Millinery	40.01	35.29	33.69	34.0	31.2	30.3	97.5	92.9	92.4
Handkerchiefs	24.10	24.19	24.83	37.6	38.3	38.1	64.5	63.3	65.2
Curtains, draperies, and bedspreads	26.94	26.83	27.11	36.7	37.0	37.7	73.3	71.5	71.2
Housefurnishings, other than curtains, etc.	32.91	33.47	33.38	41.1	42.2	42.0	79.2	79.2	79.6
Textile bags	30.81	30.26	29.95	42.4	42.2	42.5	72.5	71.7	70.8
Leather and leather products	34.75	34.27	33.70	41.9	41.6	41.2	82.9	82.4	81.9
Leather	43.93	43.42	43.07	45.5	45.3	45.4	96.5	95.7	95.1
Boot and shoe cut stock and findings	35.16	34.59	33.57	42.8	42.9	41.9	83.2	81.8	81.0
Boots and shoes	33.12	32.55	31.87	41.3	40.9	40.4	79.9	79.4	78.7
Leather gloves and mittens	29.72	28.98	30.34	37.8	37.1	37.9	78.4	78.2	80.5
Trunks and suitcases	34.15	35.28	33.36	41.6	42.6	40.6	81.4	82.3	81.1
Food	39.50	39.79	38.86	45.6	46.0	45.2	86.6	86.6	85.9
Slaughtering and meat packing	46.99	48.16	46.81	51.2	51.9	50.3	92.5	93.3	93.3
Butter	35.09	34.96	34.20	46.9	47.1	46.8	74.0	73.5	72.5
Condensed and evaporated milk	37.37	36.83	35.93	49.0	48.9	47.9	76.4	75.3	75.0
Ice cream	39.71	39.70	38.94	46.2	46.4	45.8	82.2	81.8	81.2
Flour	43.37	42.18	41.88	50.0	49.1	48.7	86.9	85.9	86.1
Cereal preparations	45.85	46.07	44.22	47.5	47.2	46.3	96.6	97.6	95.5
Baking	38.51	39.24	38.86	45.2	46.0	45.4	84.8	85.4	85.5
Sugar refining, cane	39.58	40.89	36.94	46.1	47.8	44.2	86.2	85.9	84.0
Sugar, beet	33.70	31.83	35.84	34.5	37.6	45.2	97.7	84.7	79.3
Confectionery	30.81	31.03	31.03	41.3	41.9	42.0	75.1	74.1	74.0
Beverages, nonalcoholic	34.12	34.75	35.00	42.2	43.3	43.6	80.5	80.4	80.6
Malt liquors	49.96	51.21	50.86	44.2	45.2	44.9	113.4	113.2	113.3
Canning and preserving	31.73	31.10	30.49	40.3	40.0	39.7	79.5	78.6	77.3
Tobacco manufactures	31.96	33.20	32.49	43.4	45.0	44.2	73.7	73.8	73.5
Cigarettes	35.07	35.77	35.18	44.8	46.0	45.3	78.2	77.8	77.6
Cigars	29.33	31.13	30.29	41.9	44.1	43.2	69.7	70.7	70.2
Tobacco (chewing and smoking) and snuff	29.89	30.41	29.97	43.1	44.3	43.5	69.4	68.6	68.9
Paper and allied products	40.25	40.40	40.11	46.3	46.6	46.5	87.0	86.7	86.3
Paper and pulp	43.55	43.96	43.73	48.1	48.8	48.6	90.5	90.4	89.9
Envelopes	38.23	38.18	36.85	45.3	45.5	44.6	84.3	83.8	82.5
Paper bags	35.30	35.76	35.13	44.4	45.5	45.2	79.7	79.3	78.3
Paper boxes	35.74	35.72	35.57	43.9	44.0	44.0	81.6	81.4	81.0
Printing, publishing, and allied industries	46.03	45.84	45.56	41.4	41.4	41.3	111.1	110.8	110.4
Newspapers and periodicals	49.42	49.85	49.63	38.4	38.6	38.5	126.5	126.8	126.8
Printing, book and job	45.14	44.75	44.52	43.2	42.8	42.5	104.9	104.2	103.7
Lithographing	46.53	46.74	47.53	43.9	44.3	45.2	106.5	106.0	105.6

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944	Jan. 1945	Dec. 1944	Nov. 1944
Nondurable goods—Continued									
							Cents	*Cents*	*Cents*
Chemicals and allied products	$44.33	$44.06	$43.70	45.6	45.7	45.7	97.1	96.4	95.6
Paints, varnishes, and colors	46.86	46.59	46.03	47.4	47.4	47.2	99.2	98.6	97.8
Drugs, medicines, and insecticides	36.23	35.72	35.45	43.1	43.6	43.6	83.6	82.1	81.6
Soap	48.63	49.11	48.19	48.0	48.7	48.2	101.3	100.9	100.0
Rayon and allied products	39.55	39.08	39.20	43.1	42.7	43.1	91.8	91.6	91.0
Chemicals, not elsewhere classified	53.31	52.64	52.48	46.9	46.8	46.8	113.3	112.5	112.1
Explosives and safety fuses	47.25	46.79	45.87	44.9	45.0	45.0	104.7	104.0	101.9
Ammunition, small-arms	46.01	46.04	45.29	46.8	46.6	46.3	98.2	98.8	97.8
Cottonseed oil	28.94	29.40	29.41	53.7	54.8	54.8	53.9	53.7	53.7
Fertilizers	30.57	30.48	30.83	44.8	44.2	43.7	68.3	69.0	70.5
Products of petroleum and coal	55.59	55.95	55.61	46.3	46.9	46.9	120.0	119.4	118.6
Petroleum refining	57.70	58.50	58.66	45.8	46.4	46.7	126.4	126.2	125.3
Coke and byproducts	50.59	49.31	48.08	47.7	47.5	46.6	106.4	104.0	103.1
Roofing materials	46.19	46.87	46.75	48.5	49.5	48.9	95.2	94.7	95.7
Rubber products	54.51	52.63	50.59	47.3	46.6	45.7	115.2	112.9	110.7
Rubber tires and inner tubes	64.29	61.71	58.30	49.0	47.9	46.4	132.0	129.3	125.8
Rubber boots and shoes	41.22	41.57	40.09	44.3	44.9	44.0	92.8	92.5	91.1
Rubber goods, other	44.68	43.68	43.29	45.8	45.4	45.3	96.6	95.5	95.1
Miscellaneous industries	45.54	45.04	44.40	45.8	45.7	45.5	99.4	98.6	97.5
Instruments (professional and scientific), and fire-control equipment	57.56	57.42	55.03	50.0	49.8	48.5	115.5	115.3	113.6
Pianos, organs, and parts	47.53	44.47	46.22	46.4	44.0	45.7	103.0	101.6	101.5

NONMANUFACTURING

							Cents	*Cents*	*Cents*
Coal mining:									
Anthracite	$44.81	$48.39	$44.39	38.9	41.5	38.6	115.4	117.6	115.6
Bituminous	54.25	50.39	49.66	45.4	43.1	42.6	120.5	118.7	117.3
Metal mining	45.07	45.89	44.53	44.2	44.8	43.7	101.8	102.0	101.5
Quarrying and nonmetallic mining	38.78	39.39	40.65	44.6	44.9	46.8	87.3	88.4	87.1
Crude-petroleum production	54.34	53.97	53.90	45.5	45.4	45.9	116.6	116.2	114.6
Public utilities:									
Telephone	39.49	39.74	39.19	42.4	42.7	42.3	93.4	93.5	93.0
Telegraph [2]	37.14	37.02	36.63	45.0	45.4	45.3	82.6	81.5	80.9
Electric light and power	48.90	48.84	48.89	43.4	43.3	43.4	112.2	111.9	111.6
Street railways and busses	50.15	49.71	48.68	51.5	51.8	50.8	96.0	95.5	94.6
Trade:									
Wholesale	43.15	43.55	42.91	42.8	43.3	43.0	101.0	100.2	99.6
Retail	26.99	26.41	26.20	39.5	39.8	39.4	75.1	72.8	73.6
Food	31.49	31.50	31.13	39.9	40.3	40.1	74.6	73.9	73.7
General merchandise	22.31	22.07	21.32	35.1	36.3	35.2	63.2	59.2	60.5
Apparel	29.07	28.78	28.44	36.2	36.7	36.1	79.7	78.4	79.0
Furniture and housefurnishings	38.20	39.11	38.39	44.0	43.9	44.0	87.7	88.5	88.1
Automotive	42.05	42.31	41.49	46.3	46.8	46.3	92.6	92.3	91.5
Lumber and building materials	37.86	37.40	37.07	42.8	42.9	42.6	89.4	89.1	88.2
Hotels (year-round) [3]	23.71	24.04	23.37	44.2	44.4	44.4	53.2	53.5	52.8
Power laundries	28.10	27.83	27.62	43.9	43.5	43.4	64.9	64.4	64.1
Cleaning and dyeing	31.68	31.22	31.75	43.7	43.4	43.5	74.9	74.3	74.7
Brokerage	58.52	58.58	55.76	[4]	[4]	[4]	[4]	[4]	[4]
Insurance	48.04	46.23	45.45	[4]	[4]	[4]	[4]	[4]	[4]
Private building construction	52.98	53.48	53.50	38.8	39.4	39.7	136.4	135.9	134.9

[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 slightly smaller sample than are weekly earnings. Data for the current and immediately preceding months are subject to revision.

[2] Excludes messengers and approximately 6,000 employees of general and divisional headquarters and of cable companies.

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

[4] Not available.

Civilian Labor Force, February 1945

THE civilian labor force increased by 470,000 persons between January and February 1945 to a total of 51,430,000, according to the Bureau of the Census sample Monthly Report on the Labor Force. During the month interval, gains of 100,000 in agricultural employment and 330,000 in nonagricultural, combined to increase the employment total by 430,000. The volume of unemployment increased by 40,000 to a total of 880,000.

Employment in February 1945—50,550,000—was 290,000 above the February 1944 total. The increase was about evenly divided between agricultural and nonagricultural industry. The number of women employed in February 1945 exceeded the total for February a year ago by 1,130,000—760,000 in nonagricultural employment and 370,000 in agriculture. On the other hand, employment of men in civilian activities, reflecting the growth in the armed forces during the year, was 840,000 lower than the level in the same month a year previous.

The level of unemployment this February closely approximated that in February 1944. For the most part, the unemployment is that of persons between jobs who find work within a relatively short period of time.

Civilian Labor Force in the United States, Classified by Employment Status and by Sex January and February, 1941–45 [1]

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over [2]									
	1945		1944		1943		1942		1941	
	February	January	February	January	February	January	February	January	February	January
Total civilian labor force	51,430	50,960	51,150	51,430	52,540	52,720	53,210	52,970	52,200	52,350
Unemployment [3]	880	840	890	1,080	1,330	1,370	3,650	3,890	6,370	6,800
Employment	50,550	50,120	50,260	50,350	51,210	51,350	49,560	49,080	45,830	45,550
Nonagricultural	43,760	43,430	43,610	43,750	44,130	44,240	42,060	41,750	38,360	38,000
Agricultural	6,790	6,690	6,650	6,600	7,080	7,110	7,500	7,330	7,470	7,550
Males										
Civilian labor force	33,660	33,650	34,520	34,640	36,410	36,850	39,860	39,720	39,840	40,010
Unemployment [3]	490	490	510	650	770	810	2,680	2,810	4,790	5,190
Employment	33,170	33,160	34,010	33,990	35,640	36,040	37,180	36,910	35,050	34,820
Nonagricultural	27,270	27,230	27,880	27,970	29,240	29,610	30,140	29,990	27,850	27,550
Agricultural	5,900	5,930	6,130	6,020	6,400	6,430	7,040	6,920	7,200	7,270
Females										
Civilian labor force	17,770	17,310	16,630	16,790	16,130	15,870	13,350	13,250	12,360	12,340
Unemployment [3]	390	350	380	430	560	560	970	1,080	1,580	1,610
Employment	17,380	16,960	16,250	16,360	15,570	15,310	12,380	12,170	10,780	10,730
Nonagricultural	16,490	16,200	15,730	15,780	14,890	14,630	11,920	11,760	10,510	10,450
Agricultural	890	760	520	580	680	680	460	410	270	280

[1] Estimates for period prior to November 1943 revised April 24, 1944.
[2] All data exclude persons in institutions.
[3] Includes persons on public emergency projects prior to July 1943.

Chronology of Labor Events, October–December 1944

OCTOBER

1944

Oct. 1. The War Production Board announced that its special Task Committee, appointed to work out the details of the WPB V–E Day plan for the removal of controls over the distribution of materials, had already developed and distributed a preliminary draft with seven proposals for comment and suggestions from various Government agencies. The proposals were in conformity with the following basic principles of the V–E Day policy unanimously adopted by the WPB on September 5, 1944: (1) Immediate removal of controls over materials immediately upon the defeat of Germany, except those necessary to assure war production to defeat Japan; (2) assistance and encouragement to industry in resuming civilian production and maintaining employment; and (3) maintenance of WPB organization and powers "until it is certain that the war production program is adequate for victory over Japan." (Source: War Production Board, WPB–6588.)

Oct. 2. The National War Labor Board announced that it had issued instructions to its Regional Boards and Industry Commissions authorizing them to approve at request a new plan of automatic wage-progression schedules, as an alternative to any properly existing plans. Under the instructions, automatic progressions from the minimum to the maximum of each properly established rate range are approvable if "the speeds for such progressions are no faster than 12 months for unskilled labor, 18 months for semiskilled jobs, and 24 months for skilled jobs." In cases in which an employer and a union agree on automatic progressions to the midpoints of established rate ranges, such progressions will be approved if the midpoints are not reached in fewer than 4 months for unskilled jobs, 6 months for semiskilled jobs, and 8 months for skilled jobs. The NWLB stated that, in general, the lowest third of an establishment's jobs are to be considered to be unskilled jobs, the middle third to be semiskilled, and the top third to be skilled jobs. (Source: National War Labor Board, B–1773.)

On October 5 the Board announced that it "has not formulated any general policy of ordering either automatic length-of-service progressions or merit increases within occupational rate ranges irrespective of the facts of a particular case." (Source: B–1779.)

Oct. 3. The President approved an act establishing the Office of War Mobilization and Reconversion. (For summary of provisions, see M. L. R. Jan. 1945, p. 120.)

Oct. 3. The President approved the Surplus Property Act of 1944, providing for the distribution of Government surplus property in a manner that would aid the reconversion from a war to a peace economy. A surplus Property Board of three members was established in the Office of War Mobilization, to supervise the disposition of surplus property and the transfer of surplus property between Government agencies. (Source: Public Law 457.)

Oct. 6. The NWLB denied approval of a proposed voluntary plan of deferred wage payments for the Milwaukee Electric Railway & Transport Co., calling it a hidden wage increase. The proposed plan provided that for the year 1944 a fund amounting to 6 percent of the employees' earnings, including monthly fixed bonuses and overtime, but not special cash payments such as year-end bonuses, "would be set aside by the employer in an irrevocable trust fund to be controlled and administered by an impartial trustee." (Source: B–1780.)

Oct. 13. The NWLB, in a case affecting Southwest lumber companies in Arizona and New Mexico, rejected as contrary to the principles of wage stabilization the demand of the Lumber and Sawmill Workers of America, A. F. of L., for an increase of 40 cents an hour in the basic rate, to eliminate interregional wage differences between the Pacific Northwest and Southwest lumber industries. However, the Board stated that the union had the right to renew its requests for wage increases "upon a certification by interested government agencies that these are 'rare and unusual' cases in which the critical needs of war production require the setting of wage rates above the minimum of the sound and tested area rates." (Source: B–1788.)

Oct. 21. The NWLB announced the approval of the substitution of an equivalent basic wage increase for the full-workweek attendance-bonus plan in effect in the Corning Glass Works, Wellsboro, Pa. The company stated that the bonus plan was difficult to administer and that it had not materially reduced absenteeism or increased production. (Source: B–1795.)

Oct. 27. The WPB and the National Housing Agency jointly announced an expansion of the H–2 housing program (see Chron. item for July 19, M. L. R. Dec. 1944), to provide for the construction of larger and better-quality housing in congested areas through the establishment of higher sales and rental ceilings. The expanded program provides for top sales prices of $8,000 and rental ceilings of $65 a month, and extends occupancy (formerly restricted to resident war workers) to families of military personnel and returning veterans. It was stated that new ceiling prices, together with the relaxation on the use of materials, will make it possible for builders to construct 3-bedroom houses approximating pre-war standards. (See also Chron. item for Dec. 2, this issue.) (Source: WPB–6743.)

Oct. 29. The Federal Security Administrator, in emphasizing the economic importance of the rehabilitation program, announced that more than 75,000 persons previously unable to hold a job because of physical disability were placed in employment in 1944 as a result of assistance provided under the Federal-State program for vocational training. This was a new annual record. (Source: Office of War Information, Federal Security Agency, OWI–3698.)

NOVEMBER

Nov. 1. The WPB announced an order outlining the organization and functions of the Office of Civilian Requirements. The OCR will (1) participate in the review of plans for cut-backs in the war programs and recommend the "facilities most suitable to release in order to resume or expand the production of goods and services * * * which are of the greatest benefit to the civilian economy," and (2) continue to exercise the following functions: (a) See to it that sufficient supplies are available for essential civilian requirements; (b) assure the fair distribution of scarce consumer goods throughout the country; (c) certify to the OPA, after consultation with the industry divisions, those cases in which production is held up because of price ceilings; and (d) protect American consumers by watching claims for the export of goods in short supply. (Source: WPB–6772.)

Nov. 1. The NWLB, with industry members dissenting, in a case concerning the Paul & Beekman Co., Philadelphia, upheld the denial of a 15-day escape period in a renewal of a union-security clause which had not contained an escape period. The Board stated that it would not reduce the degree of union security which had been agreed to voluntarily in collective bargaining. (Source: B–1808.)

Nov. 2. The NWLB announced the adoption of General Order No. 38, specifying the kinds of new incentive-wage or piece rates, as well as changes or modifications in established rates, that might be made without approval of the Board. Thus a rate may be changed "to reflect a change in method, product, tools, material, design, or production conditions," provided the established relationship between earnings and effort is maintained. Under the same proviso, an incentive-wage or piece-rate plan in operation in a plan may be extended to a new production item introduced into the plant. (Source: B–1813.)

Nov. 5. The NWLB denied the application of the Hunt Oil Co. (Dallas) for permission to extend its workweek for trucking-department employees to 60 hours at straight-time pay, to replace the current 48-hour week with time and a half after 40 hours. The workers concerned had agreed to the longer week as it would increase their total weekly earnings. The Board, however, stated that the resultant reduction in overtime hourly earnings is not approvable under the wage-stabilization program. The Board declared that its ruling did not conflict with the Interstate Commerce Commission regulations which make the payment of straight time up to 60 hours permissive, but not mandatory. (Source: B–1817.)

Nov. 6. The Chairman of the WMC announced the composition of an advisory committee to the National Roster of Scientific and Specialized Personnel, "to advise on the utilization of technically trained men and women in the war effort." It was announced that this committee would be asked to contribute also to plans for a post-war program, involving reconversion. (Source: OWI, WMC, PM–4705.)

On December 5 the WMC announced that the National Roster of Scientific and Specialized Personnel had placed approximately 50,000 persons since its establishment in June 1940. (Source: PM–4723.)

Nov. 11. The NWLB, with the industry members dissenting, upheld the order of its regional board in Boston which had directed the Holtzer-Cabot Electric Co. (Boston) to lay off or rehire workers according to length of continuous service, "provided the employee has the skill and ability to do the work." The Board stated that it was discretionary with regional boards whether the qualification of the rule of seniority shall be "skill and ability to do the work," or "equal skill and ability." (Source: B–1826.)

On December 7, 1944, the Board directed that "promotion of operators within a district in the traffic department of the American Telephone & Telegraph Co.'s Long Lines Department shall be made on the basis of seniority if other qualifications are substantially equal." The Board also specified that the seniority status of employees of the Long Lines Department "is to be determined on the basis of their service with the Bell System and not exclusively on their service with the Long Lines Department." (Source: B–1861.)

Nov. 12. The WPB, in announcing that more than 5,000 labor-management production committees were operating throughout the country, an increase of 500 in the last 4 months, stated that it had asked all of these committees to redouble their efforts on safety programs. Subcommittees of these bodies encourage safety ideas as a part of their employee-suggestion systems, promote nutrition education, and provide in-plant feeding facilities. (Source: WPB–6792.)

Nov. 13. The WMC in making public a report of its Apprentice-Training Service, announced that "wages earned by veterans who qualify for apprentice training will be supplemented by the monthly allowances provided by the 'G. I. Bill of Rights,'" to the extent of $50 to $75, depending on whether the trainee has dependents. There are more than 100 skilled occupations for which men are trained through apprenticeship agencies in the 26 States where such agencies have been established. The training usually requires 4 years. Apprenticeship programs have been established in more than 30,000 manufacturing plants, construction, and miscellaneous industries. Standards for apprenticeship programs have been developed by the Federal Committee on Apprenticeship. (Source: PM–4708.) (See Employment Aids for Veterans, M. L. R., Mar. 1945, p. 546.)

To date about 600 veterans have entered apprentice training, but fewer than 100 have applied for and are receiving monthly allowances. It is expected that eventually as many as 200,000 will apply for apprentice training. (Source: PM–4708.)

Nov. 15. The WMC announced reports from the U. S. Office of Education, that approximately 9,300 veterans of this war have taken advantage of war production training coordinated by the WMC's Bureau of Training. Of the veterans, 7,346 enrolled during the first 8 months of 1944, in war production training courses in public vocational schools, and 1,453 enrolled in short courses in colleges and universities under the Engineering, Science, and Management War Training program, also administered by the Office of Education. (See Chron. item for Nov. 13, this issue; see also M. L. R. Oct. 1944, p. 818.) (Source: PM–4711.)

On December 23, 1944, the Veterans Placement Service Board announced the creation of an interagency committee to coordinate governmental activities in behalf of veterans. (Source: OWI–3872.)

Nov. 16. The Maritime Commission ordered all Maritime Commission shipyards, despite their extremely high turnover, not to give employment to any experienced seagoing personnel applying for shore jobs. (Source: OWI–3772; WMC, PM–4699.) On November 20 the War Shipping Administration announced that the granting of a Nation-wide priority by the WMC for the recruitment of inexperienced men for merchant seamen training by the U. S. Maritime Service emphasized the urgent need for 8,000 trainees a month. Because of the long distances, there are required in the Pacific about three times the number of merchant ships used in trans-Atlantic shipping. (Source: OWI–3772.)

On November 19 the WMC announced that officers and seamen released by the closing of the Great Lakes navigation season would be placed in Merchant Marine jobs for the duration of the Lakes off-season. (Source: PM–4712.)

Nov. 16. The War Labor Board announced that by its interpretation of the Selective Training and Service Act of 1940, a veteran returning to his job must be "reemployed at the level to which he would have been entitled if there had been no break in his service with the company." This involves only automatic in-grade increases dependent solely upon length of service. (Source: B–1834 and B–1834a.)

On December 8, 1944, the President approved an act extending the time in which veterans may make application for reinstatement in their former jobs from 40 days after discharge from the armed forces to a period of 90 days. (Source: Public Law 548.)

Nov. 17. The President's Committee on the Cost of Living (see Chron. item for Nov. 5, 1943, M. L. R. Feb. 1944) transmitted its report to the President. (For summary, see M. L. R. Jan., 1945 p. 168.)

Nov. 17. The NWLB announced a revision of its General Order 30, providing that voluntary wage and salary increases which do not bring rates above 50 cents an hour may be granted by employers without prior approval by the Board. (Source: B–1836.)

On December 23, 1944, the labor members of the Board submitted to the full Board for adoption a resolution which declared that "a straight-time hourly rate of 72 cents per hour is the minimum below which the National War Labor Board shall consider any wage rate substandard," and that "voluntary applications to increase wage rates to 72 cents per hour shall be approved." (Source: B–1893.)

Nov. 19. The WPB announced the completion of plans for the creation of 12 new labor advisory committees (in addition to the 19 already functioning whose membership was given in detail) in order to assure labor a greater voice in advising on the expansion of war production and on post-war reconversion proposals. These labor committees cover major industries as a whole, and thus differ from the 761 industry advisory committees of the WPB which deal with the various specialized segments of industry. (See also Chron. item for June 17, 1944, M. L. R. Sept. 1944.) (Source: WPB–6838.)

On November 29, the WPB announced the establishment of the Production Readjustment Committee under the Production Executive Committee, to "develop policies designed to make certain that productive facilities and manpower released by readjustments in the war programs are used in essential war production." (Source: WPB–6911.)

Nov. 20. The WMC announced that interviewers would be assigned from the U. S. Employment Service to assist Army-camp commanders in the selection of 1,000 soldiers whose release had been authorized by the War Department for work in "must" forge and foundry shops. (Source: PM 4714.) On November 28 the Commission issued a list of 18 "must" or critical industries, with a table showing the number of workers urgently needed in each of these industries. Altogether 90,000 critical workers were needed immediately in the 18 industries. (Source: PM–4719 and PM–4719A.)

On December 9, the Director of War Mobilization and Reconversion announced that the Army and Navy had already released several thousand men for critical war plants, that the demands for such releases were increasing, and that he had requested the Selective Service to induct additional men in the higher age groups to replace men released by the Army and Navy. (Source: White House release of Dec. 9, 1944.) (See also M. L. R. Feb. 1945, p. 296.)

Nov. 20–30. The American Federation of Labor held its sixty-fourth annual convention in New Orleans. (For summary of proceedings, see M. L. R. Feb. 1945, p. 318.)

Nov. 20–25. The Congress of Industrial Organizations held its seventh annual convention in Chicago. (For summary of proceedings, see M. L. R. Feb. 1945, p. 324.)

Nov. 21. The Social Security Board announced that upon request it will recalculate the amount of old-age and survivors insurance benefits payable to once-retired workers who have returned to work and as a result have credit for wages received since the benefits were first claimed. Approximately 66,000 such once-retired workers were in war jobs. By law, benefits are suspended for any month in which the worker earns more than $14.99 in covered employment. (Source: OWI–3774.) (See M. L. R. Mar. 1945, p. 561, for data on benefits under Social Security Act.)

Nov. 24. The War Labor Board authorized its regional board at Cleveland to appoint a tripartite panel to hear the dispute between the Ohio Bell Telephone Co. at Dayton and the Ohio Federation of Telephone Workers (independent). (Source: B–1846 and B–1846a.) (See M. L. R. Jan. 1945, p. 116, for discussion of strike.)

On December 22, 1944, the NWLB announced that a national telephone panel would be established to make recommendations to it on all voluntary and dispute cases involving the telephone industry. (Source: B–1888.)

Nov. 25. The NWLB announced its decision in the dispute involving 86 "Basic Steel" companies. (For summary, see M. L. R. Jan. 1945, p. 41.)

Nov. 30. The War Manpower Commission announced that approximately 800 women were employed as apprentices in 18 skilled trades under procedures and methods developed by the Commission's Apprentice-Training Service. The trades include airline mechanics, cabinetmakers, carpenters, coremakers, machinists, draftsmen, instrument makers, radio technicians, dental mechanics, jewelers, printers, watchmakers, bookbinders, and meatcutters. Training methods suggested for women were like those for men except that additional practice and explanation is recommended to compensate for lack of industrial experience. (See Chron. item for Nov. 13, this issue.) (Source: PM–4720.)

On December 3, the WMC announced that the enrollment of women in all types of Federal-State war production training programs totaled 3,103,600 from July 1, 1940 to October 1, 1944. (Source: PM–4722.)

DECEMBER

Dec. 1. The WPB, the Army, the Navy, and the WMC issued a joint message to their field representatives, reemphasizing the urgency of war production and that reconversion must not interfere with war production. This was essentially a restatement of the original policy underlying Priorities Regulation No. 25 (see Chron. item for Aug. 15, 1944, M. L. R. Dec. 1944); however, the issuance of "spot" authorizations was forbidden, except in unusual cases, for a period of 90 days in group I labor areas (see Chron. item for May 20, 1944, M. L. R. Sept. 1944) and in certain other areas. (Source: WPB–6922.)

On December 16 the WPB took further action to prevent reconversion from interfering with war production, by announcing that WPB programs for the quantities of civilian items to be manufactured would continue, in general, to be on the same level as during the fourth quarter of 1944. Increases in civilian production would be authorized only through the "spot authorization" procedure under Priorities Regulation No. 25. (Source: WPB–7007.)

Dec. 2. The National Housing Agency announced that more than 1,730,000 units of housing for the exclusive use of war workers had been completed since the start of the emergency, that 81,800 were under construction, and that an urgent need for an additional 50,000 accommodations had developed to permit recruitment of necessary workers and the keeping of workers on the job. The 107 war housing centers of the NHA reported that, "on the average, there are three applications for housing for every existing unit that is listed for war workers' use," and urged that citizens in scores of communities open their homes to war workers. (See also Chron. item for Oct. 27, this issue.) (Source: OWI–3793.)

Dec. 3. The WMC announced that the total enrollment in all types of Federal-State war production training for the period July 1, 1940, to October 1, 1944, was 14,034,666, divided among the following programs: Vocational Training for War Production Workers, 6,859,708; Engineering, Science, and Management War Training, 1,609,001; Food Production War Training, 3,315,944; National Youth Administration, 772,756; and Training Within Industry Service, 1,477,257. (Source: PM–4722.)

Dec. 5. The Department of Labor issued a "Reconversion Blueprint For Women" adopted at a conference (Dec. 5, 1944) of the Women's Bureau with officials of 30 national organizations. The Blueprint presented a program to promote full employment and equal treatment of women workers in the post-war period. (Source: U. S. Dept. of Labor, Women's Bureau, release of Dec. 5, 1944.)

Dec. 8. The Director of the Committee for Congested Production Areas announced that, with the exhaustion of Congressional appropriations, the remaining 7 area offices of the original 18 offices of the committee, as well as the Washington office, would close on December 31, 1944. The committee, in existence since April 7, 1943, had no operating functions but directed its attention to the coordination and expedition of the work of Federal, State, and local agencies in the improvement of community facilities and services so as to reduce absenteeism and labor turnover. (Source: OWI–3807.)

Dec. 8. The President, by Executive order, authorized the Secretary of War to take possession of and operate the plants and facilities of Cudahy Brothers Co. of Cudahy, Wis., processors of meat products required for the war effort. The company had refused to comply with the terms of a directive order of the National War Labor Board, and a strike was impending as a consequence of a strike vote conducted on November 22, 1944, by the National Labor Relations Board. (Source: White House release of Dec. 8, 1944.)

Dec. 10. The WMC announced plans for an expanded employment-counseling service in local offices of the U. S. Employment Service. (See M. L. R. Mar. 1945, p. 546, for summary.)

Dec. 11. The Supreme Court of the United States in the case *Steele* v. *Louisville & N. R. Co.*, held that stipulations for racial discrimination in promotion in collective-bargaining agreements by railroad unions were a violation of the Railway Labor Act. (For discussion, see M. L. R., Feb. 1945, p. 339.)

Dec. 12–14. The Eleventh National Conference on Labor Legislation took place in Washington. (For summary of proceedings, see M. L. R. Feb. 1945, p. 330.)

Dec. 15. The WMC announced that a uniform Nation-wide system had been placed in effect for classifying manpower orders or requests of employers into five priority categories, ranging in importance from orders of exceptional national importance (Priority Category 1) to orders from essential and locally needed establishments (Priority Category 5). (Source: PM–4727.) (For details, see M. L. R. Feb. 1945, p. 295.)

Dec. 16. The President approved an act continuing for the calendar year of 1945 the 1-percent tax, under the Federal Insurance Contributions Act, on employer and employees. The act provided that for the years 1946, 1947, and 1948 the rate shall be 2½ percent, and after December 31, 1948, 3 percent. (Source: Public Law 495.)

Dec. 17. The WMC announced more than 5,000 manpower-utilization surveys had been made in the last year and a half and that about 500 were being made currently every month. As a result of such studies, conducted with the cooperation of both management and labor, many millions of man-hours per month were gained for the war effort. It was stated that "present production problems in many tight labor areas could be partly, if not wholly, solved by proper use of available labor." Since the WMC could not conduct surveys in all war production factories, it has developed available procedures for self-analysis by managements. (Source: PM–4728.)

On January 1, 1945, the Social Security Board announced that about 530,000 unemployed workers had collected unemployment benefits at some time during 1944. (Source: OWI–3885.)

Dec. 20. The NWLB announced that it had, by a vote of 7 to 5, directed the Standard Fruit & Steamship Co., an American corporation which operated five merchant ships under the Honduran flag between

the ports of the United States on the Gulf of Mexico and Central America, to pay unlicensed seamen on these five vessels the same pay that unlicensed seamen receive on ships flying the American flag. The seamen concerned were members of the National Maritime Union, C. I. O., but were receiving on the average about 17 percent less in pay than fellow unionists on ships flying the American flag. (Source: B–1883.)

Dec. 21. The National War Labor Board, in a case involving the Corn Products Refining Co., Argo, Ill., ruled that its regional Board at Chicago could only recommend rather than order the company to negotiate with a union whose certification by the National Labor Relations Board the company had refused to recognize. The National War Labor Board stated that its policy is "not to direct employers and unions to negotiate terms of employment, which is a function of the National Labor Relations Board." (Source: B–1886.)

Dec. 23. The WMC announced that "as a result of proposals of labor members of the Management-Labor Policy Committee of the War Manpower Commission, wider use of the facilities of organized labor will be made in order more effectively to approach critical in-plant war production problems and to recruit workers for war industries." The Committee, in stating that recruitment alone would not solve production problems, issued a 10-point program, and stressed the fullest use of workers already within a plant as the best solution in many cases. (Source: PM–4734) (For details of 10-point program, see M. L. R. Feb. 1945, p. 296.)

Dec. 26. The OPA, in explaining that civilian supplies of sugar, butter, and commercially canned fruits and vegetables were at the lowest point since the war began, cancelled all unused blue and red ration stamps (about 2½ months' supply) that had become good before December 1944, and tightened the rationing program. Five canned vegetables (peas, corn, green and wax beans, asparagus, and spinach) were added to the ration list, and the ration-point value of butter was increased. On December 28, the OPA announced that beginning December 31, 1944, about 85 percent of the civilian meat supply would require red points, as compared with 37 percent before that date. (Source: OPA–5126, OPA–5129, and OPA–5135.) (See Chron. item for Sept. 6, 1944, M. L. R. Dec. 1944.)

Dec. 27. The NWLB announced the adoption of a resolution providing for treating as "rare and unusual" the case of any foundry or forge shop whose name appears on a "blanket certification list" of critical foundries and shops to be supplied to the NWLB Committee on Regional Instructions jointly by the WPB and the WMC. In such cases the NWLB stated it would approve or grant average wage increases up to 10 cents above the established approvable rate. (Source: B–1896.)

Dec. 27. The President, by Executive order, authorized and directed the Secretary of War to take possession of and operate the plants and facilities of Montgomery Ward & Co. in Chicago, Detroit, St. Paul, Portland (Oreg.), and certain other cities. The company had "refused to put into effect the terms and conditions in the directive orders of the NWLB settling labor disputes." (Source: Federal Register, Vol. 9, p. 15079.) (See Chron. item for April 25, 1944, M. L. R. Sept. 1944.)

Dec. 27. The WPB announced the issuance of a new regulation authorizing "the withdrawal or modification of material priorities or allocations when the War Production Board determines that materials or facilities are not being used most effectively as a result of failure to comply with war manpower programs." (Source: PM–4735.)

Dec. 30. The WMC, at the request of the Director of War Mobilization and Reconversion, announced the withdrawal of all employment ceiling authorizations for race-track operators. All such operators were ordered to cease operations by January 3, 1945, and not to resume operations until war conditions permit. (Source: PM–4738, and PM–4740.)

Recent Publications of Labor Interest

April 1945

Cooperative Movement

Annual report of operations [of] Federal credit unions, December 31, 1943. Washington 25, Federal Deposit Insurance Corporation, 1945. 21 pp., charts. 10 cents, Superintendent of Documents, Washington 25.

Balance sheet and details of operation of credit unions chartered under the Federal Credit Union Act. Data are given by States and by type of membership.

Report of the Administrator of the Rural Electrification Administration, 1944. St. Louis, Mo., 1944. 20 pp.

Gives operating statistics of REA-financed systems and of the loan record of borrowers, and reviews court decisions relative to REA organizations and developments regarding taxation. Besides making loans for the installation of power lines and generating plants, REA has made loans for the financing of 21 cold-storage locker plants. The Administrator estimates that some 5¼ million farm and nonfarm rural establishments can be electrified after the war; as of July 1, 1944, the total number of electrified farms was 2,557,000.

Cooperative contracting in New Zealand. By Anthony E. C. Hare. (In International Labor Review, Montreal, February 1945, pp. 167–190. 50 cents. Distributed in United States by Washington branch of International Labor Office.)

Describes the workers' cooperative associations which take contracts for jobs on construction of public works and in mining, sawmilling, and various other industries in New Zealand. "The employer provides the necessary tools and equipment and a detailed plan or specification of the work to be done, but does not supervise the workmen apart from seeing that the work is carried out according to the specification." The article describes the method of work in certain of the industries in which the cooperative contracting is found, and gives statistics of number of men engaged on cooperative contracts in public works.

Cooperative living in Palestine. By Henrik F. Infield. New York, Dryden Press, 1944. 192 pp., bibliography, illus. $3.

Account of the cooperative communities (Kvutza) of Palestine, in which there is no private property (everything belonging to the group as a whole) and in which all participate in all the tasks, however menial. The author, who lived in various of these colonies for many months, describes how the work is divided; the methods of social control in the group; the effect of communal living on the family; the psychological, practical, and social problems; and the remarkable accomplishments of these communities in the reconstruction of some of the most barren parts of the country.

La organización cooperativa en la República de El Salvador en 1943: El sistema del crédito rural. By Alfonso Rochac. (In Boletín del Instituto de Investigaciones Sociales y Económicas, Panamá, July 1944, pp. 289–349.)

Deals with the development of rural credit unions in El Salvador from 1938, including information on the variety of their functions as consumer, production, and sale cooperatives, etc., and on the laws of 1942 and 1943, with statistics of membership and funds as of June 30, 1943.

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.

Cost and Standards of Living

The American standard of living: Earning and spending our money. By Faith M. Williams and Mary P. Keohane. Washington 6, National Education Association, National Association of Secondary School Principals and National Council for the Social Studies, 1944. 60 pp., bibliography. (Problems in American life, Unit No. 19.) 30 cents.

Contains convenient summaries of information relating to meaning of terms, family budget studies, national income, distribution of families by income, occupational and regional differences in income, and intercity differences in living costs. There is a section on wartime conditions as affecting cost and standards of living. Since the study was designed primarily for use in schools, the second part consists of teaching aids.

Classification of consumer expenditures by income-elasticity. By Louis J. Paradiso. (In Survey of Current Business, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Washington 25, January 1945, pp. 7–10; chart. 20 cents, Superintendent of Documents, Washington 25.)

The study is an attempt to classify expenditures on the basis of their relationship to changes in income during the period 1929–42. Under "household operation," for example, various items, such as fuel and utilities, are classified as "insensitive" to changes in income; certain other items, such as refrigerators and washing and sewing machines, are described as "somewhat sensitive"; and still other items, such as furniture and domestic service, are classified as "sensitive."

Family food consumption in the United States, spring 1942. Washington 25, U. S. Department of Agriculture, 1944. 157 pp. (Miscellaneous publication No. 550.) 20 cents, Superintendent of Documents, Washington 25.

Published as part of the study of family spending and saving in wartime conducted by the U. S. Bureau of Human Nutrition and Home Economics in cooperation with the U. S. Bureau of Labor Statistics.

Family income in wartime: Third survey of consumer requirements, conducted April 17–22, 1944. Washington 25, U. S. War Production Board, Office of Civilian Requirements, Civilian Surveys Division, 1944. 46 pp.; mimeographed.

Brazil overhauls her diet. By Allen Haden. (In Inter-American, Washington, February 1945, pp. 26–28; illus.)

Account of the operation by the Brazilian Government of low-cost restaurants in Rio de Janeiro.

Employment and Rehabilitation of Veterans

Post-war migration plans of soldiers; Soldiers' plans to own businesses after they leave the Army; Soldiers' plans for farming after they leave the Army; Soldiers' plans for Government jobs after they leave the Army. Washington 25, U. S. War Department, Army Service Forces, Information and Education Division, 1944 and 1945. Four pamphlets, 14, 16, 52, and 14 pp., respectively. (Post-war plans of the soldier series, reports Nos. B–128, B–130, B–131, and B–132.)

Four reports based on replies to inquiries addressed to officers and enlisted men regarding the section of the country to which they intend to return, and plans for owning a business, farming, or entering Government service, after their release from the Army.

Reemployment of veterans (developing a company program). Washington 6, Petroleum Industry War Council, 1944. 35 pp.

Designed, the preface states, "to stimulate thinking and to present practical suggestions regarding the development of policies which will insure sound and equitable treatment of returning veterans."

What industry wants to know about veterans: 3, The plant's obligation. (In Factory Management and Maintenance, New York 18, February 1945, pp. 82–88; illus.)

This article, the last of three reports concerning the reemployment of veterans by private industry, reviews plant procedures and makes recommendations with respect to fitting the discharged serviceman into civilian employment.

You and Joe and his job. San Diego 12, Calif., Pacific Coast Electrical Association, 1944. 61 pp. $1.

Compilation of information concerning the rights and problems of returning servicemen and the obligations of employers.

Jobs for G. I. Joe in America's hotels. New York 19, American Hotel Association, Public Relations Committee, 1944. 26 pp.

Presents a program to help discharged servicemen and servicewomen obtain employment in hotels, with special emphasis on job description and job requirements. Also outlines basic provisions of the legislation protecting the veteran and the official machinery for veteran placement.

Veteran employment program, RCA Victor Division, [Radio Corporation of America], Camden, N. J., plant: In the interest of veterans of World War II. Camden, N. J., Radio Corporation of America, RCA Victor Division, [1944?]. 25 pp. and forms; processed.

Sets forth policies and procedures for the reemployment of former servicemen and servicewomen and gives a brief interpretation of the Selective Service Act and a brief analysis of the G. I. Bill of Rights.

Apprentice training for veterans. Washington 25, U. S. War Manpower Commission, Bureau of Training, Apprentice-Training Service, [1945]. 10 pp.; processed.

Explanation of apprentice training as it applies to returning veterans, with lists of the Apprentice-Training Service publications and State apprenticeship agencies.

Adjustment and reemployment guide and directory (of facilities and program for the training, education, adjustment, and reemployment of war veterans and displaced war workers in Connecticut). Hartford, Connecticut Reemployment Commission, 1944. 80 pp.

While this pamphlet emphasizes facilities available in Connecticut, it describes the programs and functions of various Government and private agencies of national scope.

Suggestions for organization and activities of local reemployment and veterans' advisory committees. Hartford, Connecticut Reemployment Commission, 1944. 46 pp.

The [British] Army education scheme (release period). By C. H. Philips. (In Adult Education, Quarterly Journal of the British Institute of Adult Education, London, W. C. 1, December 1944, pp. 68–74. 1s. 6d.)

Discusses the methods to be used in continuing the education scheme in the British Army during the period when men are being released. Administration is to be by units, under a full-time education officer in each case. Training is to range from basic education to independent work by those who already have a high standard of education.

Report of the New Zealand Rehabilitation Board for year ended March 31, 1944. Wellington, 1944. 43 pp. 1s.

Describes New Zealand's administrative machinery and program for returning former servicemen and servicewomen to civilian status. The program covers education, training for employment in industry and agriculture, settlement on farms, financial assistance, housing, and special provision for the disabled.

Family Allowances

Mid-war developments in civilian family allowances. By Mary T. Waggaman. Washington 25, U. S. Bureau of Labor Statistics, 1944. 16 pp. (Bull. No. 803, reprinted from Monthly Labor Review, November 1944; supplement to Bull. No. 754.) 10 cents, Superintendent of Documents, Washington 25.

The family allowances controversy in Canada. By Charlotte Whitton. (In Social Service Review, Chicago 37, December 1944, pp. 413–432. $1.25.)

Critical analysis of the Canadian Family Allowances Act, 1944.

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Health and Industrial Hygiene

Health research in industry. London, Medical Research Council, Industrial Health Research Board, 1945. 27 pp. 6d. net.

Proceedings of a conference on industrial health research held at London School of Hygiene and Tropical Medicine in September 1944.

The improvement in nutrition as protection against industrial toxicity. By W. E. Crutchfield, Jr. (In Milbank Memorial Fund Quarterly, New York 5, January 1945, pp. 97–108.)

Shows the importance of diet in the prevention and treatment of certain types of industrial poisoning.

Protecting the health of the industrial worker: Nutrition. By Robert S. Goodhart, M.D. (In Milbank Memorial Fund Quarterly, New York 5, January 1945, pp. 77–88.)

Deals with the organization, accomplishments, and major tasks ahead in the Government's industrial feeding program.

Dermatitis in the fish industry. By Louis Schwartz, M.D., and Irving R. Tabershaw, M. D. (In Journal of Industrial Hygiene and Toxicology, Baltimore 2, Md., January 1945, pp. 27–30. 75 cents.)

The article describes various dermatological conditions and their causes as well as methods of treatment and prevention of dermatitis, said to be the chief occupational hazard in the fish industry.

Lead poisoning. By Abraham Cantarow and Max Trumper. Baltimore, Williams & Wilkins Co., 1944. 264 pp. $3.

Covers both medical and industrial aspects of lead poisoning, preventive measures, and treatment.

Report on the quartz crystal industry. By Harry F. Schulte. (In Industrial Medicine, Chicago, January 1945, pp. 68–71. 50 cents.)

Describes health hazards (and their control) in the manufacture of quartz crystals for radio oscillators, an industry which has expanded greatly due to the requirements of the armed forces for communications equipment.

Industrial Accidents and Workmen's Compensation

Coke-oven accidents in the United States, calendar year 1943. By W. W. Adams and V. E. Wrenn. Washington 25, U. S. Department of the Interior, Bureau of Mines, 1945. 20 pp., chart. (Technical paper 675.) 10 cents, Superintendent of Documents, Washington 25.

Developing safe employees. New York 10, Metropolitan Life Insurance Co., Safety Bureau, Welfare Division, [1945?]. 46 pp., illus.

Based on a study of accident-prevention activities in various industrial plants.

Industrial safety and health—a bibliography, 1945 edition. Chicago 6, National Safety Council, Inc., 1945. 54 pp.; processed.

Twenty-eighth annual report of United States Employees' Compensation Commission, July 1, 1943, to June 30, 1944. Washington 25, 1945. 56 pp. 15 cents, Superintendent of Documents, Washington 25.

Report of operations under the several laws providing workmen's compensation for injury or death of persons engaged in employments coming under Federal jurisdiction. An appendix gives brief excerpts from the unpublished twenty-seventh annual report.

Industrial Relations

Guide to [U. S.] National War Labor Board policy. By Sidney D. Podolsky. Washington 2, Bureau of National Affairs, Inc., 1944. 79 pp.

Compendium and analysis of the Board's decisions which, in the opinion of the author, indicate the essence of Board policies.

Report and findings of a panel of the National War Labor Board in certain disputes involving supervisors. Washington 25, U. S. National War Labor Board, 1945. 175 pp.; mimeographed. Free.

Utilization of foremen and supervisors—bibliography. Compiled by Amy R. Jennings. Washington 25, U. S. National Labor Relations Board, Library, February 1945. 7 pp.; mimeographed.

Where we stand on collective bargaining for engineers. By V. T. Boughton. (In Engineering News-Record, Albany 1, N. Y., February 8, 1945, pp. 142–144. 25 cents.)

Industry Reports

Program for regional development of industry. Washington 25, U. S. War Production Board, Office of Production Research and Development, 1944. 27 pp.; mimeographed.

One of the purposes for initiating the program was to render technical collaboration to labor unions for improving working conditions and earning power of State industries. Contracts and proposed contracts are listed by State.

Statistical handbook of civil aviation. Washington 25, U. S. Department of Commerce, Civil Aeronautics Administration, 1944. 86 pp., loose-leaf, maps, charts. Limited free distribution.

Includes statistics of operations by years and months, the personnel employed, accidents, certification of aircraft and airmen, etc., with some text discussion.

Economic problems of prefabrication. By S. Moos. (In Bulletin of Institute of Statistics, Oxford, England, September 2, 1944, pp. 202–208. 2s. 6d.)

Deals with the technical and economic sides and methods of coordinating prefabricated and other construction.

Stabilizing the construction industry. By Miles L. Colean. Washington 6, National Planning Association, 1945. 38 pp., charts. (Planning pamphlet No. 41.) 25 cents.

One of a series of reports on policy problems related to the attainment of full employment. A proposed policy in the general field of construction is outlined. There is a section on the problem of annual wages in the construction industry.

Lumber and labor. By Vernon H. Jensen. New York, Farrar & Rinehart, Inc., 1945. 314 pp., bibliographies. $3.

Story of the lumbering industry in the United States and of the efforts to unionize it. Describes the interunion conflicts, industrial struggles, and impact of the war upon this migratory, frontier industry. Fifth in the series on "Labor in Twentieth Century America" by the same publishers.

Labor and Social Legislation

Kentucky labor laws, revised 1944. Frankfort, Department of Industrial Relations, [1944?]. 35 pp.

Compilation of Kentucky labor laws on employer-employee relationships but not including legislation concerning unemployment or workmen's compensation.

Laws affecting veterans and their dependents, [Connecticut]. Rocky Hill, Conn., Veterans' Home Commission, 1944. 126 pp.

[*Addendum and second addendum to the code of Canadian labor laws of 1943.* Edited by Gustave Francq.] Montreal, Mercantile Printing Co., Ltd., [1944?]. 78 and 28 pp. (In French and English.)

Includes the Canadian National Selective Service Civilian Regulations as consolidated with amendments to December 2, 1943; the Wartime Wages Control Order of December 9, 1943; the Wartime Labor Regulations of February 17, 1944; and the Quebec Labor Relations Act of February 3, 1944.

Ley del trabajo a domicilio (No. 12,713), [Argentina]. By Carlos R. Desmarás. Buenos Aires, Editorial Guillermo Kraft Ltda., 1942. 2 vols., 336 and 371 pp.

Presents an analysis, article by article, of the Argentine law governing home work, parliamentary discussion and judicial interpretation of the measure, and pertinent regulatory decrees for its implementation.

Direito Brasileiro do trabalho. By Arnaldo Sussekind, Dorval de Lacerda, and J. de Segadas Viana. Rio de Janeiro, Empresa "A Noite," Livraria Jacinto, 1943. 2 vols., 627 and 743 pp.

This treatise on Brazilian labor legislation, by the authors of the bill for the consolidation of laws for protection of labor, contains the text of the consolidation adopted in May 1943, with an annotated account of the legal background of each of its major topics and explanation of its provisions.

Aspectos teóricos y prácticos de los riesgos profesionales. By Oscar Barahona Streber and Harry Zurcher Acuña. San José, Costa Rica, [Banco Nacional de Seguros?], 1943. 152 pp.

Commentary upon that section of the labor legislation of Costa Rica that deals with workmen's compensation for industrial accidents and diseases.

A guide to the law and legal literature of Cuba, the Dominican Republic, and Haiti. By Crawford M. Bishop and Anyda Marchant. Washington 25, U. S. Library of Congress, 1944. 276 pp. (Latin American series No. 3.) $1.75.

First in a series of guides to the law and legal literature of the Latin American republics to be issued by the Law Library of the Library of Congress. Includes references to compilations of labor legislation and cites important labor laws of the three countries.

Labor Organizations and Their Activities

Democracy and the free labor movement. Washington 1, American Federation of Labor, [1944?]. 20 pp.

Labor in America. By Harold U. Faulkner and Mark Starr. New York, Harper & Bros., 1944. 305 pp., bibliography, illus. $1.60.

The aims, methods, and problems of American trade-unions are set forth in non-technical language. The book is primarily intended for use as a high-school textbook.

Report of proceedings at the 76th annual [British] Trades Union Congress, held at Blackpool, October 16–20, 1944. London, Trades Union Congress, [1944?]. 548 pp.

In addition to the proceedings of the conference, the general council's report is given. Appendixes contain reports on trade-union structure and closer unity, the Government's White Papers on social insurance and a national health service, the Anglo-Soviet trade-union committee, and the Trades Union Congress' interim report on post-war reconstruction.

Report of the 17th national delegate conference of the Amalgamated Union of Building Trade Workers of Great Britain and Ireland, held at Morecambe, September 19-22, 1944. London, Amalgamated Union of Building Trade Workers, [1944?]. 263 pp.

The unionization of foremen. New York 18, American Management Association, 1945. 36 pp., bibliography. (Research report No. 6.) $1.25.

Part 1 of a study of the foreman's role in industry.

Occupations and Occupational Adjustment

Classification of jobs in small companies. By Robert D. Gray. Pasadena 4, California Institute of Technology, Industrial Relations Section, 1944. 43 pp. (Bull. No. 5.) $1.

How you can get a better job. By Willard K. Lasher and Edward A. Richards. Chicago, American Technical Society, 1945. 206 pp. $1.50.

This popularly written volume is in four parts entitled, respectively, The human element, Self-management, Selling yourself, and Getting ahead.

Vocational interests and job orientation—a ten-year review. By Harold D. Carter Stanford University, Calif., Stanford University Press, 1944. 85 pp. (Applied psychology monographs of American Association for Applied Psychology, No. 2.) $1.50.

Survey of the major psychological studies of the last 10 years dealing with problems of vocational orientation. A list of the 262 studies referred to in the report is appended.

Industrial and occupational trends in New York State. By Edmund H. Crane. Albany, University of the State of New York, 1944. 45 pp., charts. (Bull. No. 1271.)

Post-War Reconstruction

Post-war planning. Washington 25, U. S. Treasury Department, Library, November 30, 1944. 75 pp.; mimeographed.

Bibliography of materials on economic, labor, social, and other topics relating to post-war reconstruction in the United States and foreign countries.

Post-war problems and policies. By E. A. Goldenweiser. (In Federal Reserve Bulletin, Board of Governors of the Federal Reserve System, Washington 25, February 1945, pp. 112–121. 20 cents.)

Among the policies included in a proposed comprehensive program is the maintenance of the income of wage earners by wage adjustments to take account of increases in cost of living, with further increases as productivity rises. It is proposed also that the Government should guarantee to every American a minimum standard by expanding the social-security program and by affording jobs to workers who are otherwise unable to obtain work.

Post-war public works programs. Chicago 37, Council of State Governments, 1944. 31 pp.; mimeographed. (BX–243.) 50 cents.

Summary of the accomplishments of the States in the preparing of advance plans, including financial plans, for a public-works reserve. Some legislation bearing on the subject is included.

Reconversion policies and problems. New York 18, American Management Association, 1945. 31 pp. (Production series, No. 155.)

Includes a discussion of the post-war labor outlook.

Reconversion problems in the Buffalo industrial area. Washington 25, U. S. Bureau of Labor Statistics, 1945. 20 pp. (Bull. No. 804; reprinted from Monthly Labor Review, December 1944.) 10 cents, Superintendent of Documents, Washington 25.

Reviews the wartime manpower and production situations as well as reconversion plans and prospects of industrial plants in the area.

Report and recommendations, for the period ending December 31, 1944, of the California State Reconstruction and Reemployment Commission. Sacramento 14, 1945. 122 pp.

Describes the effects of the war on California, discusses economic problems and opportunities, including post-war employment and the raising of the standard of living, and outlines briefly the Commission's pending studies and reports.

Post-war reconstruction in New Zealand. Washington 25, U. S. Bureau of Labor Statistics, 1945. 9 pp. (Serial No. R. 1720; reprinted from Monthly Labor Review, January 1945.) Free.

Social Security (General)

Ninth annual report of the Social Security Board, fiscal year 1943-44. Washington 25, 1944. 82 pp., charts. (Section 5 of annual report of Federal Security Agency.) 15 cents, Superintendent of Documents, Washington 25.

In presenting an analysis of the year's work and of unmet needs in present systems of old-age and survivors insurance and unemployment insurance in the United States, the Social Security Board also recommended the adoption of disability and sickness insurance (including medical care), and of a single, comprehensive national system of social insurance (with decentralization of administration at local levels) supported by contributions from employers, employees, and the Federal Government.

Climbing toward security. By Rachel Rowe Swiger and Olaf F. Larson. Washington 25, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1944. 65 pp.; mimeographed.

A study of experience, over a period of 4 years, in efforts to rehabilitate a group of needy rural families, who are described as having been too poor even to qualify for help under the regular program of the Farm Security Administration.

Problems of labor health security in a tax-maintained system of health insurance—a workbook for the classroom and for discussion groups. By Alfred J. Asgis. New York 17, Health Council Institute, 1944. 54 pp., bibliographies; processed.

The medical-care provisions of the Wagner-Murray-Dingell social security bill: An analysis of the report of the American Bar Association. (In Lawyers Guild Review, New York and Washington, November–December 1944, pp. 24–33. 50 cents.)

Documented defense of the medical-care provisions of the bill, under the heads of need, constitutionality, the private practice of medicine and the authority of the Surgeon General under the bill, and other related subjects.

Sickness indemnification. A panel discussion by R. A. Hohaus and others. Pittsburgh 13, Industrial Hygiene Foundation, 1945. 55 pp., charts. (Transaction series, Bull. No. 1; Part II of proceedings of ninth annual meeting of Industrial Hygiene Foundation, November 1944.) 50 cents.

Régimen jurídico de las jubilaciones, retiros y pensiones de la República Argentina. By Juan D. Ramírez Gronda. Buenos Aires, Editorial Ideas, 1943. 574 pp.

Annotated text of Argentine legislation, through March 17, 1943, governing eight social-insurance schemes for the country as a whole and one each for the Province and the city of Buenos Aires, with pertinent court decisions and explanations and comparisons of the various schemes.

Legislação Brasileira de previdência social. (In Boletim do Ministério do Trabalho, Indústria, e Comércio, Rio de Janeiro, September 1944, pp. 335–344.)

List of the Brazilian laws and decrees through February 29, 1944, providing social insurance for workers in 9 industrial groups, chronologically arranged by industry, with the text of the first such Brazilian decree, that of January 24, 1923, for workers on privately owned railways.

Income tax in relation to social security. By A. T. Haynes and R. J. Kirton. (In Journal of the Institute of Actuaries, Vol. LXXII, Part 1, No. 333, London, 1944, pp. 79–103; abstract of discussion, pp. 104–118. 6s. net.)

Proposals for reform of the British personal-income-tax system and correlation of income taxes and social-security payments.

Wages and Hours of Labor

Clerical salary rates paid in October 1944. (In Conference Board Management Record, National Industrial Conference Board, Inc., New York 17, January 1945, p. 8.)

Data by occupation for 20 cities of the United States.

Wages and production costs. New York 18, American Management Association, 1945. 44 pp. (Production series, No. 159.)

Discussions by representatives of management, with a union view of cost reduction presented by a representative of the International Ladies' Garment Workers' Union.

Wage incentive practices. New York 17, National Industrial Conference Board, Inc., 1945. 44 pp., charts. (Studies in personnel policy, No. 68.)

Summary of developments in this field, including a discussion of U. S. National War Labor Board principles and decisions. The study is devoted mainly to a survey of the plans of selected companies. There is a section on union-contract provisions.

Payment by results, essential work (building and civil engineering) order, 1942: Notes for guidance on the application of the system. London, Ministry of Works, 1944. 6 pp. 1d. net.

Written in question and answer form, this pamphlet shows how the piece-rate system operates in the building and civil engineering industry of Great Britain.

Women in Industry

Changes in women's employment during the war. By Mary Elizabeth Pidgeon. Washington 25, U. S. Department of Labor, Women's Bureau, 1944. 29 pp. 10 cents, Superintendent of Documents, Washington 25.

Employment opportunities in characteristic industrial occupations of women. By Elisabeth D. Benham. Washington 25, U. S. Department of Labor, Women's Bureau, 1944. 50 pp. (Bull. No. 201.) 10 cents, Superintendent of Documents, Washington 25.

Employment of women in Army supply depots in 1943. Washington 25, U. S. Department of Labor, Women's Bureau, 1945. 33 pp. (Bull. No. 192–8.) 10 cents, Superintendent of Documents, Washington 25.

The outlook for women in occupations in the medical services: Physical therapists. Washington 25, U. S. Department of Labor, Women's Bureau, 1945. 14 pp. (Bull. No. 203, No. 1.) 10 cents, Superintendent of Documents, Washington 25.

Other reports in this series already published or in course of publication deal with the following occupations: Medical laboratory technician; medical record librarian; occupational therapist; practical nurse; and professional nurse.

War and post-war employment and its demands for educational adjustments. New London, Conn., Institute of Women's Professional Relations, 1944. 226 pp.; processed. $2.

Proceedings of a conference, arranged by the Institute of Women's Professional Relations, held in Washington, D. C., in May 1944.

Women's wages in wartime. Washington 25, U. S. Department of Labor, Women's Bureau, November 1944. 10 pp. Supplement, February 1945, 10 pp. Mimeographed. Free.

The job of the industrial counselor for women. By Frances W. Trigg. Washington 25, Federal Security Agency, Office of Education, 1944. 34 pp.; processed.

Prepared to meet the need for a simple and orderly presentation of information for women's counselors who are obliged to assume new responsibilities for which they have had little preliminary training.

General Reports

Improvement of labor-utilization procedures. Washington 25, U. S. Bureau of Labor Statistics, 1945. 44 pp. (Bull. No. 807.) 10 cents, Superintendent of Documents, Washington 25.

Subjects discussed include absenteeism, labor turnover, employment of women, wage structure, supervision, employee morale, etc.

Normal production, income, and employment, 1945 to 1965. By Clark Warburton. (In Southern Economic Journal, Chapel Hill, N. C., January 1945, pp. 219–245; charts. $1.)

The author's estimates of production, value of finished commodities, and the value of delivered final products, extending from 1879 to 1943, make use of the period from 1923 to 1928 as to production and prices, and the data for that period are projected backward, and also forward to 1965, by the use of average annual percentage increases. Estimates of "normal" employment are also given for the years 1945 to 1950 and for 1955, 1960, and 1965. The estimates are not predictions but are based on certain assumptions, and it is argued that the actual achievement of "full employment" depends basically on monetary policy, and the encouragement of investment and business venturesomeness.

Index to publications and articles on Latin America issued by the United States Bureau of Labor Statistics, 1902–43. Prepared by Eugene D. Owen. Washington 6, Pan American Union, 1945. vi, 39 pp.; mimeographed. (Bibliographic series No. 31.)

Latin America in the future world. By George Soule, David Efron, and Norman T. Ness. New York, Farrar & Rinehart, Inc., 1945. 372 pp., charts. $3.50.

The writers examine Latin America's basic economy and changes during the present war, and recommend policies and specific measures for the post-war period. Subjects given special emphasis include living levels, nutrition, health, and housing. There is a chapter on the social and political status of labor and one on labor and social-security legislation.

Argentine riddle. By Felix J. Weil. New York, John Day Co., 1944. 297 pp. $3.50.

Topics of labor interest include the standard of living of industrial and agricultural workers, labor unions, and industrialization.

Mensaje del Excelentisimo Señor Presidente de la Nación [Argentina], General Edelmiro J. Farrell, y memoria del primer año de labor. Buenos Aires, 1944. 252 pp.

Report on operation of the Argentine Government in the year following the revolution of June 1943. The account of the Secretariat of Labor and Welfare cites activities and contemplated action in regard to workers' housing, social welfare, and legislation, with statistics of strikes and index numbers of cost of living and employment.

Report to the Congress of Industrial Organizations on labor conditions in Bolivia By Martin Kyne. (In Bolivia, Vol. X, No. 21, 10 Rockefeller Plaza, New York, autumn-winter 1944, pp. 14–20; illus. 25 cents.)

Summarizes findings of the commission of experts sent from the United States to Bolivia, at the request of the Bolivian ambassador, to study working conditions in that country and to work out jointly with Bolivian authorities methods of improving the situation of the workers.

Informe a la nación, Junio y Julio de 1944, [del Ministro de Previsión Social y Trabajo, Ecuador]. Quito, 1944. 75 pp.

This report of the Ecuadoran Minister of Welfare and Labor for June and July 1944 (the first two months after the revolution of May 1944) includes a brief account of each of the principal labor disputes, with Government measures taken for their settlement, and information on workers' organizations and the National Workers' Congress.

Axis rule in occupied Europe. By Raphaël Lemkin. Washington 6, Carnegie Endowment for International Peace, 1944. xxxviii, 674 pp. $7.50.

Considerable space has been given to labor, including such aspects as control, procurement, and wages.

Administration report of the Controller of Labor, Ceylon, for 1943. Colombo, 1944. 46 pp. 95 cents, Ceylon currency.

Contains information on labor organizations, industrial disputes, employment, wages, and related labor matters.

Statistical report on prices, wage rates and hours of labor, unemployment, industrial accidents, etc., [in New Zealand], for the year 1941. Wellington, Census and Statistics Department, 1944. xiv, 137 pp. 5s.

Report of the commission appointed to inquire into the administration and finances of native locations in urban areas of Northern Rhodesia. Lusaka, Government Printer, 1944. 53 pp. 2s.

Summarizes census statistics of population and surveys the housing situation, as a basis for the concrete proposals offered respecting the future location and housing of natives.

U. S. GOVERNMENT PRINTING OFFICE: 1945