

FEDERAL RESERVE BANK OF BOSTON
Research Department

OPPORTUNITIES FOR EMPLOYMENT IN NEW ENGLAND COMMUNITIES

In nearly every important center of population in New England, as well as in most of the smaller cities, community leaders have been asking where the jobs will be found that will make possible attainment of the goal of "full employment" after the country has returned to a peace economy. "What sort of jobs will be available and what occupations will the working population be qualified to fill?"

Much time and effort has been devoted to finding an answer to this question. Many companies have attempted to establish goals for high-level employment after the war and numerous community surveys have been undertaken to determine expected postwar levels of private employment.

These efforts on the part of private industry to anticipate postwar levels have been mainly concerned with manufacturing employment, since this is where the greatest problems of readjustment are expected. In concentrating upon the problem of attaining a high postwar level of manufacturing employment, however, the importance of nonmanufacturing industries as sources of jobs has not received the attention it deserves. Under normal peacetime conditions more than half of this region's working population is engaged in nonmanufacturing pursuits.

Purpose of the Study

This study, which deals with the characteristics of employment in 45 important centers of population in the Boston Federal Reserve District, has three principal objectives. A section of this report is devoted to each. The first is designed to show how wartime changes have altered the production pattern of this region and caused manufacturing employment to become disproportionately high in relation to the total. In peacetime (1940),

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nonmanufacturing employment accounted for 60 per cent of total, and manufacturing for the remainder, but the war has nearly reversed the usual relationship. After the war, it is expected that these conditions will return to somewhere near their prewar status. Details regarding the impact of the war on employment are available for only a few of the 45 areas, and these are discussed in the report.

The second objective is to study the normal distribution of employment during peacetime. There is a wide variation in the industrial patterns shown by the 45 different areas studied. Some are primarily manufacturing centers, others are centers of trade and service, transportation, seats of government, and the like. From the occupational standpoint the variations are likewise extensive. "Hand workers," as a group, predominate over "head workers" in every instance, but within these general groups there are significant differences in the importance of the various occupations. For example, semi-skilled workers are usually the largest division of "hand workers" but there are a few cases where either skilled or unskilled workers are more important. In the metropolitan districts greater weight, on the average, is attached to nonmanufacturing jobs than is the case in the smaller areas. The same is true of "head workers" as compared with "hand workers."

The third objective is to present a summary of underlying trends in the distribution of the labor force as disclosed by census data. From 1910 to 1930 there was a definite shift in every New England state from occupations concerned with the production of physical goods into distributive and service pursuits. In northern New England the shift into distribution and service was principally from agriculture; in southern New England, it was from manufacturing. This tendency probably continued from 1930 to 1940 but on account of changes in the scope of the census it is not readily susceptible of measurement.

A recent study of the United States Bureau of the Census comparing occupational statistics for the Nation as a whole over a period of years indicates that there has been a steady upward trend in the social-economic status of workers since 1910 (the earliest date studied) with more and more going over from the manual worker class to the white-collar class. This has considerable significance in its relation to changing markets for goods and services as it is obvious that "head workers" and "hand workers" have quite different spending habits over and above the necessities of life. The census study concludes with a discussion of probable future trends for each of the six social-economic classes analyzed. Because it seems reasonable to expect that the same general conditions would apply to New England as to the United States they are summarized at the end of this report.

I. Impact of the War on Employment in New England

The war has made substantial alterations in the production pattern of the District and has changed the relative importance of the various classes of occupations of the working population correspondingly. Before the war the manufacturing industries of this region were primarily producers of consumer goods; two-thirds of their output consisting of textile, leather, pulpwood, chemical and similar products that were rapidly used up. Today producer goods such as ships, aircraft, metal and machine products predominate.

In 1940 over one-half of the total number of employed workers in New England were engaged in nonmanufacturing occupations, a situation which was likewise true for 27 of the 45 areas which are discussed in this study. (See Table 1.) During the war manufacturing employment has increased sharply, particularly in centers of war production, and employment in non-manufacturing fields has declined. This was primarily due to the limitations

of the available labor force and the fact that the region's principal industrial areas have been areas of acute labor shortage or labor stringency.

The Bureau of Labor Statistics makes monthly estimates of employment in nonagricultural establishments by states and regions, which are comparable with census data. According to these sources, in April 1940 about 40 per cent of New England's civilian nonagricultural employment was engaged in manufacturing and 60 per cent in other occupations. By November 1943 (a month near the peak of war production) manufacturing employment had risen to 53 per cent of total and other nonagricultural occupations had fallen to 47 per cent. Similar shifts in the distribution of employment have occurred in each of the principal centers of war activity in this District.

Table 2 shows how the war affected manufacturing and other non-agricultural employment, percentagewise, in 6 metropolitan areas in the Boston Federal Reserve District. It will be noted that the largest percentage increase in manufacturing employment occurred in the Springfield area which also had the largest gain in total employment; and that the smallest gains were in the Fall River area. The industries where the principal expansion occurred were transportation equipment (ships and aircraft), electrical machinery, machinery, and ordnance and accessories. Other nonagricultural employment declined in every instance. The table also shows that manufacturing employment has declined from the wartime peak in each case since November 1943. Related data for changes in other nonagricultural employment since November 1943 are not available.

In a report entitled "Post-War Connecticut" recently issued by the Connecticut Post-War Planning Board the following data on wartime changes in employment of all workers covered by unemployment compensation are given. The areas shown are labor market areas as defined by the State Unemployment Compensation Division and do not correspond with the metropolitan

or municipal areas used in this study.

IMPACT OF THE WAR ON EMPLOYMENT IN CONNECTICUT

Labor Market		Industry with greatest Percentage Increase	
Area	% Change 1944 over 1940	Industry	% Change 1944 over 1940
New London	+118%	Trans. Equip't. (Submarines)	+40%
Hartford	+ 49	Trans. Equip't. (Aircraft Parts & Engines)	+195
New Haven	+ 42	Iron & Steel	+160
Waterbury	+ 39	Iron & Steel	+120
		Nonferrous Metals	+ 63

In Massachusetts the State Department of Labor and Industries conducts an annual census of manufactures. Comparison of the 1939 and 1943 data shows that there were 19 municipalities having over 1,000 factory wage-earners in 1939 where factory employment increased more than 50 per cent. These cities, arranged by size according to the number employed, were as follows:

IMPACT OF THE WAR ON FACTORY EMPLOYMENT IN MASSACHUSETTS*

Municipalities registering gains of 50 per cent or over

City	Wage Earners 1939	% Increase 1939-43	City	Wage Earners 1939	% Increase 1939-43
Worcester	26,573	82%	Waltham	4,321	221%
New Bedford	22,092	52	Malden	3,615	65
Springfield	14,030	73	Newton	3,104	120
Lowell	13,279	58	Athol	2,159	76
Lynn	12,450	175	W. Springfield	1,966	192
Quincy	8,311	235	Canton	1,672	108
Pittsfield	7,112	95	Hudson	1,636	100
Chicopee	6,902	159	Greenfield	1,309	267
Watertown	5,155	55	Palmer	1,157	93
			Wakofield	1,081	55

* Does not include employment in Government arsenals, Navy Yards, etc.

Before the war this District's manufacturing production and employment were mainly concentrated in its eight largest metropolitan areas. The war has resulted in a further increase in the concentration of industry. It has also initiated great movements of workers within the areas to new occupations, new industries and new places of employment. The net increase in manufacturing employment was the result of four principal movements:

- a. Transfer of workers from curtailed civilian goods industries to war industries.
- b. Transfer of workers from distributive and service fields to war industries.
- c. Migration of workers from rural areas to war production centers.
- d. Increased employment of women, young people of school age and elderly people.

The increased demand for workers which occurred in war industries led to severe labor shortages in the principal industrial centers. The fact that shipbuilding, aircraft and electrical machinery facilities were often located in the same industrial areas as textile mills, shoe factories and machine shops resulted in a competition for the available labor supply on the basis of wage rates and skills.

Today, manufacturing is a disproportionately high part of the national output and in most industrial areas manufacturing employment has been correspondingly expanded. By the same token, nonmanufacturing employment is disproportionately low. In the readjustment which will follow the war it will be necessary to have some shifting back from manufacturing to non-manufacturing occupations.

The shift back to a peacetime economy, with a few exceptions, is not expected to be as difficult for New England communities as for those in other regions of the country where entirely new war industries have been created, the peacetime future for which may be open to question in some cases. The amount of new plant construction by the Government has

been relatively small in New England. Barely 5 per cent of the Government's investment in industrial facilities from June 1940 to March 1945 was made in this region, while 9 per cent of all prime supply contracts were placed here. In 1939, the Census of Manufactures showed that the value of products manufactured in New England represented approximately this same proportion (9 per cent) of the Nation's total output.

New England's war business has been to a great extent in its regular lines. War products such as textiles and apparel, leather and shoes, some machinery and metal products, and possibly electronic equipment and devices are not expected to face any sharp curtailment after the war, because civilian demands on these industries will probably continue to be active for some time.

The ending of the war in Europe has so far not resulted in any significant surplus of labor in New England's largest war centers. Such cutbacks and terminations of war contracts as have already occurred have only served to lessen the labor shortage - not to eliminate it. It is significant that the five largest metropolitan areas in this District were still classified in the categories of acute or stringent manpower on May 18, 1945. The principal places where sizeable layoffs have occurred have been in the shipbuilding yards of South Portland, Maine; Hingham, Mass.; and Providence, Rhode Island. In Springfield, Mass., where a cut-back of 1,300 workers has occurred at the Springfield Armory, it is reported that a fairly heavy labor demand exists which is considered to be more than enough to absorb the workers who will be released.

The major decline in employment in New England, outside of shipbuilding and aircraft, is likely to occur in the manufacture of war munitions, while other industries, which have been generally underserviced during the war will tend to maintain or increase their employment. Textiles furnish what is probably the most critical problem in the war program

today, and New England is one of the principal centers of production in this field.

How to get workers back into their prewar civilian jobs is a difficult problem as long as labor shortages exist and war industries continue to pay substantially higher wages. The relatively much lower wages paid in the textile mills as compared with those paid in the shipyards has been an important factor affecting labor shortages in such textile centers as New Bedford. As long as the workers of New Bedford can get higher wages in the shipyards at Providence, Quincy and perhaps other fairly distant points, they will not be available for work in the textile mills of New Bedford.

In spite of these difficulties, New England communities appear to have an opportunity to capitalize on potential markets earlier than many other areas because their reconversion problems are less difficult. With 43 per cent of the population of the United States included in New England, the Middle Atlantic States and Ohio, a tremendous market is available for New England industry if it is properly planned for and developed.

II. The Distribution of the Working Population in 1940

The 45 areas covered by this study include 11 metropolitan districts, 3 groups of twin cities that have been paired because of their proximity, and 31 individual municipalities not included in the foregoing classes which in 1940 had a population of more than 10,000 persons each. The population of these 45 areas in total is equivalent to approximately four-fifths of the population of the District, and 88 per cent of the combined total is concentrated in the 11 metropolitan districts.*

* The term "metropolitan district" as used in this study refers to the metropolitan districts as defined in the 1940 Census of Population.

Statistical data on the number of employed workers 14 years old and over, by place of residence, are contained in the 1940 Census of Population. These data are available for all urban places of 10,000 and up and are broken down in two ways: by major occupation groups and by industry groups. The discussion which follows in this section is based upon information derived from this source.

In 1940, 40 per cent of the employed workers in the 45 areas studied were in manufacturing occupations and 60 per cent in nonmanufacturing. An analysis of the distribution of employment between these two major classifications for the 45 areas is given in Table 1. Because of the fact that metropolitan districts are usually important centers of distribution and service, the 11 areas so designated show a higher average proportion of the working population engaged in nonmanufacturing occupations (62 per cent) than is the case with the 34 smaller areas (54 per cent).

Of the 12 major industry groups of employed workers shown in the census, only the eight largest are important enough to consider in this discussion. The percentage which each of these groups represented in relation to total employment for the 45 areas is as follows:

Manufacturing	40%
Wholesale & Retail Trade	19
Professional & Related Services	9
Personal Services	8
Transportation & Utilities	6
Construction	4
Finance, Ins. & Real Estate	4
Government	4
All Other	6
Total	100%

"Agriculture, forestry and fishing" and "mining" the so-called "extractive industries," included under "All Other," represented less than 2 per cent of the total. The two other minor groups not shown separately consisted of "business and repair services" and "amusement,

recreation and related services." Table 3 shows, for each of the 45 areas analyzed, the percentage of total employment which each of these eight major industries represented in 1940.

There was a considerable amount of variation between the 45 centers as regards the importance of each major industry as a source of jobs. (See Table 3.) In Southbridge, Mass., for example, manufacturing provided nearly three-fourths of the jobs, whereas in Bangor only one-seventh of the total were so engaged. Those two areas were the "high" and the "low" areas with respect to manufacturing employment. Corresponding data for all eight principal industries were as follows:

VARIATIONS IN THE CONCENTRATION OF EMPLOYMENT BY INDUSTRY GROUPS

Major Industry Groups	High		Low	
	Area	Per Cent [#]	Area	Per Cent [#]
Manufacturing	Southbridge	70%	Bangor	15%
Wholesale & Retail Trade	Bangor	27	Southbridge	10
Professional Services, etc.	Concord, N.H.	18	Southbridge	4
Personal Services	Bangor	14	Webster	4
Transp. & Utilities	Rutland	17	Southbridge	2
Construction	Westerly	7	Gardner, Mass.	2
Finance, Insur. & Real Est.	Hartford	8	Berlin, N.H.	1
Government	New London	15	Webster	1

In four of the 45 areas studied the largest single group of employed workers for any of the eight industry groups listed above was in the field of wholesale and retail trade. These areas and the percentages of total employed in trade were: Bangor, 27 per cent; Portland, 26 per cent; Burlington, 25 per cent; Rutland, 24 per cent. Each of these cities is a focal point of trade and distribution for a much larger surrounding area than is included within its own boundaries. In Concord, N. H. the most important industry group was "Professional and Related Services."

[#] Since these percentages refer only to employed workers residing in the area they do not necessarily indicate the distribution of workers employed in the area. In small areas these two approaches may differ considerably. The larger the area, the closer they agree.

The reasons are not obvious in every case why these particular eight areas happen to be the "high" points for the eight industry groups shown above. For example, Southbridge, where the American Optical Company is the principal industry, shows the heaviest concentration of manufacturing workers. Bangor's leading position in trade is the result of its being the trading center for a large surrounding rural area. This may also explain its relatively high position in the personal services group. Rutland is the home office of the Rutland Railroad which no doubt explains its prominence in transportation. Hartford is the leading insurance center of the country which accounts for its high standing in the field of finance, insurance and real estate. And at New London, naval installations undoubtedly account for the high level of government employment.

The analysis of the working population on the basis of occupations has been made to conform with a social-economic grouping of the Nation's labor force which was used in a recent study of trends, 1910 to 1940, made by the Census Bureau, which will be referred to in the third part of this study. Six principal occupational groups of workers are used:

- (1) Professional Persons
- (2) Proprietors, Managers & Officials
- (3) Clerks & Kindred Workers
- (4) Skilled Workers & Craftsmen
- (5) Semi-skilled Workers
- (6) Unskilled Workers

The first three groups together, may be termed the "head workers" and the last three groups together may be termed the "hand workers." It is suggested in the Census Bureau's analysis that a comparison of the proportion of "head workers" as between different areas would be, at least, a rough measure of the relative social-economic status of the areas. Table 4 presents such a comparison for the 45 centers in the Boston Federal Reserve District.

A comparison of Table 3 and Table 4 shows that areas having a high percentage of employment in the "head workers" group are generally high in nonmanufacturing employment. Since the spending habits of "head workers" often differ from those of "hand workers" this approach should find some application in analyzing markets.

As with the distribution of employment by industries, it was also true for social-economic groups that the range of variation between individual areas was fairly broad. The high and low items for each social-economic class were as follows:

VARIATIONS IN THE CONCENTRATION OF EMPLOYMENT BY OCCUPATIONS

Occupational Groups	High		Low	
	Area	Per Cent#	Area	Per Cent
<u>Social-Economic Groups</u>				
Professional Persons	Burlington	13%	Webster	4%
Proprietors, Managers & Officials	Bangor	14	Webster	5
Clerks & Kindred Workers	Rutland	26	Biddeford	12
Skilled Workers & Craftsmen	Bath	32	Augusta	9
Semi-skilled Workers	Webster	61	Barre	21
Unskilled Workers	Berlin	24	Pittsfield	8
<u>Head Workers vs. Hand Workers</u>				
Head Workers	Burlington	49%	Webster	22%
Hand Workers	Webster	78	Burlington	51

There was a larger percentage of "hand workers" than "head workers" in every area studied in the District; but the percentage of "head workers" was higher in the metropolitan districts than in the smaller areas. The reverse was true of "hand workers."

Since these percentages refer only to employed workers residing in the area they do not necessarily indicate the distribution of workers employed in the area. In small areas these two approaches may differ considerably. The larger the area, the closer they agree.

III. Trends in the Distribution of the Labor Force

The foregoing analysis of the distribution of the working population in 1940 gives only a static picture of conditions and is incomplete without some discussion of trends. It is unfortunate that there are no comparable statistics of employed workers by industries and by occupations in the earlier censuses. The concept of "gainful workers" which was used prior to 1940 was considerably larger than that of "employed workers" since it included all persons who reported a gainful occupation regardless of whether they were working or not at the time of the census. While this is not exactly comparable with the 1940 concept of "labor force," it is very close if new workers be excluded. In addition to this basic change, the 1940 classifications of occupations and industries were altered considerably.

Even if these changes had not been made it would still be difficult to measure trends because of area considerations. The 1940 census was the first to be tabulated for metropolitan districts or for municipalities having from 10,000 to 25,000 inhabitants. Such areas include most of the population involved in the present study. Because of the decentralization of population which has been taking place in most large metropolitan areas in recent years, it would be meaningless to attempt to use the statistics for a central city alone as a measure of the changes in composition of the working population of such an area. In every metropolitan area in New England the population of the central city has been increasing at a much slower rate than in the outlying communities and in a majority of cases (Boston, Springfield, Holyoke, New Haven, Lawrence, Worcester, New Bedford, Waterbury), it has actually been declining. The people who have moved out into the suburbs are not necessarily typical of those who remain, so that the decentralization movement tends to affect the character of the working population remaining behind.

Although changes in the scope of the 1940 Census render its comparisons with earlier censuses impracticable, - insofar as the working population is concerned, - there was no great change made in the scope of the Census between 1910 and 1930, and during that period in every New England state there was a definite shift from occupations concerned with the production of physical goods into distributive and service pursuits. In the table which follows, "Production of Physical Goods," includes agriculture, forestry, fishing and mining, as well as manufacturing and mechanical industries.

PERCENTAGE DISTRIBUTION OF GAINFUL WORKERS IN NEW ENGLAND
Two Principal Occupational Divisions
1910 - 1930

State	Percentage of Total Gainful Workers			
	Production of Physical Goods		Distribution and Service	
	1910	1930	1910	1930
<u>NEW ENGLAND</u>	<u>59.8%</u>	<u>50.1%</u>	<u>40.2%</u>	<u>49.9%</u>
Maine	65.3	57.0	34.7	43.0
New Hampshire	68.8	59.2	31.2	40.8
Vermont	66.8	58.5	33.2	41.5
Massachusetts	55.6	46.2	44.4	53.8
Rhode Island	61.5	54.4	38.5	45.6
Connecticut	62.8	51.4	37.2	48.6

In the case of the three northern New England states the decline in occupations concerned with the production of physical goods was principally in extractive industries; in the three southern New England States it was mainly in manufacturing and mechanical industries. In all cases the distributive and service occupations showed approximately the same gain in importance.

The Connecticut Post-War Planning Board's recent report, "Post War Connecticut," shows how the relative importance of manufacturing as a source of employment has been declining in that state. "In 1919," the report states, "approximately one-half of all workers in the state were

classified as manufacturing workers. By 1929 this proportion had declined to 37 per cent, and by 1939 to 30 per cent."

According to a recent study covering the period 1910 to 1940 made by the United States Bureau of the Census and contained in a report entitled "Comparative Occupation Statistics 1870-1940" "the social-economic status of the Nation's labor force was rising rather rapidly from 1910 to 1940. The trend was definitely upward - definitely away from heavy, arduous, unskilled labor, and definitely toward more highly skilled manual pursuits and intellectual pursuits." Statistics given for the Nation as a whole show that "head workers" increased in importance from 37.6 per cent of total gainful workers in 1910 to 41.5 per cent in 1940, whereas "hand workers" decreased from 62.4 per cent of total to 58.5 per cent.

If agricultural workers, (a group which as a whole has been declining sharply in percentage of total), were excluded in the foregoing national comparison (in order to observe the trends for a group of workers more nearly typical of New England), the following facts would be disclosed:

1. In 1910, 31 per cent of all nonagricultural "gainful workers" were classed as "head workers," - in 1940, 38 per cent. This represented more than a doubling of the number, which was 7.9 million in 1910, 16.3 million in 1940.
2. The sharpest increase within the "head workers" class was in the group, "clerks and kindred workers," the so-called white collar workers which increased in total from 3.8 million in 1910 to 8.9 million in 1940, and in relation to all non-agricultural employment from 15 per cent to 21 per cent.

In summarizing probable future trends by economic groups the Census study lists the following changes as to be expected for the Nation as a whole. It seems reasonable to suppose that corresponding trends may be expected also in New England:

1. The professional class will grow in relative importance.
2. Farmers will decrease and other proprietors will increase in relative importance.
3. Clerks and kindred workers may continue to increase in relative importance.
4. Skilled workers probably will decrease in relative importance after the war.
5. Semi-skilled workers will become the largest group.
6. Unskilled workers will continue to decrease in relative importance.
7. The upward trend in the social-economic status of the labor force will continue.

May 1945

**EMPLOYMENT IN MANUFACTURING AND NON-MANUFACTURING INDUSTRIES
45 LEADING CENTERS IN THE BOSTON FEDERAL RESERVE DISTRICT, 1940**

<u>Area</u>	<u>Total Employed</u>		<u>Manufacturing</u>		<u>Non-Manufacturing</u>	
	<u>Number</u>	<u>% of 45</u>	<u>Number</u>	<u>% of Area</u>	<u>Number</u>	<u>% of Area</u>
TOTAL - 45 AREAS	2,294,231	100.00%	906,089	39.5%	1,388,142	60.5%
11 METROPOLITAN DISTRICTS	2,005,739	87.13%	772,395	38.5%	1,233,344	61.5%
Boston	827,506	36.07	234,343	28.3	593,163	71.7
Providence	264,336	11.52	123,611	46.8	140,725	53.2
Hartford-New Britain	204,014	8.89	88,832	43.5	115,212	56.5
Springfield-Holyoke	146,053	6.37	60,654	41.5	85,399	58.5
New Haven	120,936	5.28	47,185	39.0	73,751	61.0
Lowell-Lawrence-Haverhill	120,871	5.27	63,626	52.6	57,245	47.4
Worcester	107,860	4.70	49,550	45.9	58,310	54.1
Fall River-New Bedford	100,775	4.39	54,619	54.2	46,156	45.8
Waterbury-Naugatuck#(a)	47,968	2.09	28,828	60.1	19,140	39.9
Portland Area#(b)	37,037	1.61	7,879	21.3	29,158	78.7
Manchester#(c)	28,353	1.24	13,268	46.8	15,085	53.2
34 SMALLER AREAS	288,492	12.57%	133,694	46.3%	154,799	53.7%
Lewiston-Auburn	24,340	1.06	13,551	55.7	10,789	44.3
Fitchburg-Leominster	23,916	1.04	12,786	53.5	11,130	46.5
Pittsfield(Mass.)	18,124	.79	8,581	47.4	9,543	52.6
Adams-N. Adams	14,205	.62	8,621	60.7	5,584	39.3
Nashua	13,769	.60	8,100	58.8	5,669	41.2
Taunton	11,827	.52	5,366	45.4	6,461	59.6
Torrington	11,460	.50	7,333	64.0	4,127	36.0
New London	11,369	.50	2,570	22.6	8,799	77.4
Bangor	10,422	.45	1,588	15.2	8,834	84.8
Burlington	9,740	.42	2,195	22.5	7,545	77.5
Concord(N. H.)	9,448	.41	1,682	17.8	7,766	82.2
Norwich(Conn.)	8,757	.38	3,443	39.3	5,314	60.7
Biddeford	8,402	.37	5,436	64.7	2,966	35.3
Gardner(Mass.)	7,719	.34	4,685	60.7	3,034	39.3
Augusta	7,444	.32	2,533	34.0	4,911	66.0
Southbridge	7,081	.31	4,928	69.6	2,153	30.4
Waterville	6,171	.27	2,307	37.4	3,864	62.6
Greenfield	5,982	.26	1,813	30.3	4,169	69.7
Rutland	5,842	.26	1,073	18.4	4,769	81.6
Dover(N. H.)	5,777	.25	2,654	45.9	3,123	54.1
Berlin(N. H.)	5,680	.25	3,004	52.9	2,676	47.1
Milford(Mass.)	5,585	.24	3,274	58.6	2,311	41.4
Keene	5,349	.23	1,961	36.7	3,388	63.3
Portsmouth	5,316	.23	2,118	39.8	3,198	60.2
Willimantic	4,954	.22	2,346	47.4	2,608	52.6
Webster	4,927	.21	3,274	66.5	1,653	33.5
Claremont	4,803	.21	2,591	54.0	2,212	46.0
Laconia	4,662	.20	1,828	39.2	2,834	60.8
Rochester	4,582	.20	2,473	54.0	2,109	46.0
Athol	4,557	.20	2,704	59.3	1,853	40.7
Plymouth	4,551	.20	1,748	38.4	2,803	61.6
Bath	4,003	.17	2,171	54.2	1,832	45.8
Barre(Vt.)	3,937	.17	1,352	34.3	2,585	65.7
Westerly	3,791	.17	1,605	42.3	2,186	57.7

Metropolitan district data not available. (b) Portland, So. Portland & Westbrook.

(a) Waterbury and Naugatuck.

(c) Manchester city only.

Source: U. S. Census of Population, 1940

Table 2

IMPACT OF THE WAR ON EMPLOYMENT - 6 METROPOLITAN AREAS IN THE BOSTON FEDERAL RESERVE DISTRICT

Metropolitan Areas	Percentage Change April 1940 to November 1943*			% Change Nov. 1943- Nov. 1944 Mfg. Empl.†	Type of Industry Where Greatest Wartime Employment Increase Occurred
	Manufacturing Employment‡	Other Non- Agr. Empl.	Total Non- Agr. Empl.		
Boston Area	+64%	-10%	+18%	(-12% (a)) (-11% (b)) (-10% (c)) (-20% (d))	(Transportation Equip. Electrical Machinery)
Providence Area	+55%	-11%	+25%	-11%	Transportation Equip.
Hartford Area	+88%	- 3%	+43%	-21%	(Transportation Equip. Machinery)
Springfield Area	+96%	- 1%	+46%	-13%	(Ordnance & Accessories Machinery)
Worcester Area	+44%	-11%	+21%	-16%	(Machinery (Stone, Clay & Glass Prod.)
Fall River Area	+23%	-10%	+11%	(- 7% (e)) (-12% (f))	Machinery

* This was a month near the peak of war production.

† Includes employment in government arsenals and navy yards.

(a) Exclusive of Cambridge, Lynn and Somerville.

(b) Cambridge.

(c) Lynn.

(d) Somerville.

(e) Fall River.

(f) New Bedford.

Source: U. S. Department of Labor, Bureau of Labor Statistics.

Table 3

DISTRIBUTION OF EMPLOYMENT BY LEADING INDUSTRY GROUPS, 1940
45 Principal Centers of Population in the Boston Federal Reserve District

45 Principal Centers Arranged in Order of Total Employment	Number Employed in Thousands	Percentage of Total Employed*								
		Mfg.	Trade	Prof'l. Serv.	Pers'l. Serv.	Transp. & Util.	Constr.	Finance Etc.	Gov't.	
TOTAL - 45 AREAS	2,294.2	39.5%	18.5%	8.9%	8.1%	6.2%	4.3%	4.2%	4.1%	6.2%
11 METROPOLITAN DISTRICTS	2,005.7	38.5%	18.8%	9.0%	8.1%	6.3%	4.4%	4.5%	4.2%	6.2%
Boston	827.5	28.3	21.7	10.5	9.6	7.9	4.9	5.5	5.1	6.5
Providence	264.3	46.8	16.9	7.2	7.2	4.8	4.6	2.8	4.5	5.2
Hartford-New Britain	204.0	43.5	15.2	7.9	6.9	3.7	4.1	8.4	3.4	6.9
Springfield-Holyoke	146.1	41.5	18.0	9.4	7.6	5.6	3.9	3.8	3.5	6.7
New Haven	120.9	39.0	17.9	9.7	7.7	8.4	4.7	3.0	3.1	6.5
Lowell-Lawrence-Haverhill	120.9	52.6	15.4	7.3	6.2	4.7	3.3	2.1	3.0	5.4
Worcester	107.9	45.9	16.2	9.4	6.8	5.1	3.8	2.9	3.1	6.8
Fall River-New Bedford	100.8	54.2	15.4	6.0	6.0	4.3	3.5	1.7	2.9	6.0
Waterbury-Naugatuck#(a)	48.0	60.1	14.2	6.2	5.3	3.3	4.3	2.0	2.4	2.2
Portland Area#(b)	37.0	21.3	26.0	9.0	10.7	11.4	4.3	4.7	6.9	5.7
Manchester#(c)	28.4	46.8	18.5	7.0	6.7	5.0	4.1	3.4	3.5	5.0
34 SMALLER AREAS	288.5	46.4%	16.5%	8.1%	8.0%	5.7%	3.9%	2.3%	3.6%	5.5%
Lewiston-Auburn	24.3	55.7	14.6	6.4	7.4	3.5	3.3	1.8	1.9	5.4
Fitchburg-Leominster	23.9	53.5	15.2	6.7	6.3	4.9	3.5	1.8	2.4	5.7
Pittsfield(Mass.)	18.1	47.4	17.4	8.2	7.1	4.9	3.5	3.8	2.7	5.0
Adams-N. Adams	14.2	60.7	12.8	5.8	5.6	3.9	2.6	1.5	1.8	5.3
Nashua	13.8	58.8	13.6	6.8	6.5	3.4	2.7	1.6	2.2	4.4
Taunton	11.8	45.4	15.9	10.6	7.0	7.6	3.4	1.9	3.3	4.9
Torrington	11.5	64.0	12.8	4.8	4.4	2.7	3.7	1.5	1.9	4.2
New London	11.4	22.6	19.1	9.7	9.9	11.4	5.7	2.4	14.5	4.7
Bangor	10.4	15.2	26.6	12.5	14.3	11.0	4.4	3.4	4.2	8.4
Burlington	9.7	22.5	25.3	14.7	12.7	6.7	4.2	4.0	4.1	5.8
Concord(N. H.)	9.4	17.8	17.4	18.0	9.9	9.5	5.7	3.8	10.2	7.7
Norwich(Conn.)	8.8	39.3	20.2	9.7	8.7	4.9	6.4	2.3	3.9	4.6
Biddeford	8.4	64.7	12.6	5.0	5.6	2.5	3.1	1.3	1.8	3.4
Gardner(Mass.)	7.7	60.7	11.8	7.8	6.9	3.5	2.2	1.6	1.7	3.8

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Table 3
(Continued)

45 Principal Centers Arranged in Order of Total Employment	Number Employed in Thousands	Percentage of Total Employed*								
		Mfg.	Trade	Prof'l. Serv.	Pers'l. Serv.	Transp. & Util.	Constr.	Finance Etc.	Gov't.	All Other**
<u>34 SMALLER AREAS (Continued)</u>										
Augusta	7.4	34.0%	14.1%	11.1%	9.3%	5.4%	4.7%	2.3%	12.1%	6.7%
Southbridge	7.1	69.6	10.2	3.8	4.4	1.9	3.5	1.3	1.3	4.0
Waterville	6.2	37.4	18.2	10.6	10.0	10.5	3.4	2.2	2.5	5.2
Greenfield	6.0	30.3	19.8	8.7	10.5	11.9	4.6	2.6	4.4	7.2
Rutland	5.8	18.4	24.1	10.4	11.7	17.1	3.8	3.8	3.5	7.2
Dover (N. H.)	5.8	45.9	17.5	6.8	7.4	6.2	5.2	2.0	2.5	6.5
Berlin (N. H.)	5.7	52.9	15.2	7.0	8.5	4.3	3.0	1.1	3.1	4.9
Milford (Mass.)	5.6	58.6	13.7	6.8	5.9	4.2	2.5	2.0	1.8	4.5
Keene	5.3	36.7	18.6	7.9	9.7	6.4	6.1	4.6	2.2	7.8
Portsmouth	5.3	39.8	18.2	7.2	9.3	6.9	4.5	2.4	5.5	6.2
Willimantic	5.0	47.4	17.5	8.6	7.7	5.6	3.9	2.2	2.4	4.7
Webster	4.9	66.5	12.3	4.6	4.4	3.8	2.8	1.5	1.2	2.9
Claremont	4.8	54.0	14.7	5.1	8.2	4.1	3.1	1.6	1.9	7.3
Laconia	4.7	39.2	19.0	7.8	9.4	5.3	5.5	2.3	4.9	6.6
Rochester	4.6	54.0	13.7	6.4	8.3	4.3	3.5	1.6	1.8	6.4
Athol	4.6	59.3	13.7	4.4	6.3	3.5	3.3	1.4	1.9	6.2
Plymouth	4.6	38.4	18.8	6.8	9.3	4.3	5.8	2.4	4.6	9.6
Bath	4.0	54.2	14.3	6.4	9.2	3.6	2.6	1.8	3.3	4.6
Barre (Vt.)	4.0	34.3	23.0	7.1	10.3	5.8	4.5	3.6	4.3	7.1
Westerly	3.8	42.3	16.0	7.5	9.2	4.1	7.3	2.4	2.5	8.7

* Based upon industrial classifications of employed workers.

** Includes agriculture; forestry & fishing; mining; business services; and miscellaneous not reported separately.

Metropolitan district data not available.

(a) Waterbury and Naugatuck.

(b) Portland, South Portland and Westbrook.

(c) Manchester city only.

Source: U. S. Census of Population, 1940.

Table 4

DISTRIBUTION OF EMPLOYMENT BY SOCIAL-ECONOMIC GROUPS 1940
45 Principal Centers of Population in the Boston Federal Reserve District

45 Principal Centers Arranged in Order of Total Employment	Number Employed in Thousands	Percentage of Total Employed*							
		Head Workers				Hand Workers			
		Total	Profes- sional	Prop's. Mgrs. Etc.	Clerical Sales Etc.	Total	Skilled Workers Etc.	Semi- skilled	Un- skilled
TOTAL - 45 AREAS	2,294.2	38.5%	8.6%	8.8%	21.1%	61.5%	14.1%	36.8%	10.6%
11 METROPOLITAN DISTRICTS	2,005.7	39.1%	8.7%	8.8%	21.6%	60.9%	14.1%	36.1%	10.1%
1. Boston	827.5	45.2	10.3	9.5	25.4	54.8	13.7	30.5	10.6
2. Providence	264.3	33.5	7.1	8.4	18.0	66.5	14.4	42.8	9.3
3. Hartford-New Britain	204.0	39.0	7.9	8.4	22.7	61.0	16.0	34.0	11.0
4. Springfield-Holyoke	146.1	38.0	8.5	9.4	20.1	62.0	15.0	36.5	9.5
5. New Haven	120.9	38.4	8.7	9.2	20.5	61.6	15.2	34.8	11.6
6. Lowell-Lawrence-Haverhill	120.9	29.3	6.7	7.7	14.9	70.7	11.1	50.4	9.2
7. Worcester	107.9	31.4	8.8	7.7	19.4	68.6	16.2	37.7	14.7
8. Fall River-New Bedford	100.8	26.1	5.7	7.0	13.4	73.9	11.2	52.8	9.9
9. Waterbury-Naugatuck#(a)	48.0	31.5	7.1	6.6	17.8	68.5	17.5	38.4	12.6
10. Portland Area#(b)	37.0	44.6	8.5	10.7	25.4	55.4	12.3	32.1	11.0
11. Manchester#(c)	28.4	32.6	6.5	7.9	18.2	67.4	10.4	49.4	7.6
34 SMALLER AREAS	288.5	34.0%	8.0%	8.7%	17.3%	66.0%	14.1%	40.1%	12.8%
12. Lewiston-Auburn	24.3	28.9	5.6	7.3	14.0	71.1	9.1	52.2	9.8
13. Fitchburg-Leominster	23.9	30.7	6.7	7.6	16.4	69.3	14.1	46.5	8.7
14. Pittsfield(Mass.)	18.1	40.1	11.0	8.0	21.1	59.9	14.4	37.3	8.2
15. Adams-North Adams	14.2	25.2	5.9	6.3	13.0	74.8	11.3	47.5	16.0
16. Nashua	13.8	27.2	6.1	7.1	14.0	72.8	11.1	49.3	12.4
17. Taunton	11.8	32.7	7.9	8.6	16.2	67.3	14.0	42.6	10.7
18. Torrington	11.5	27.3	5.1	7.2	15.0	72.7	19.0	37.6	16.1
19. New London	11.4	37.9	9.6	11.9	16.4	62.1	16.6	32.7	12.8
20. Bangor	10.4	49.0	10.3	13.7	25.0	51.0	10.4	27.3	13.3
21. Burlington	9.7	49.5	13.1	10.9	25.5	50.5	10.4	26.5	13.6
22. Concord(N. H.)	9.4	45.6	12.1	10.5	23.0	54.4	14.8	27.3	12.3
23. Norwich(Conn.)	8.8	34.6	7.0	8.6	19.0	65.4	12.2	40.5	12.7
24. Biddeford	8.4	22.0	4.7	5.4	11.9	78.0	16.1	49.3	12.6
25. Gardner(Mass.)	7.7	30.7	6.9	7.6	16.2	69.3	14.1	46.2	8.7

(Continued on next page)

Table 4
(Continued)

45 Principal Centers Arranged in Order of Total Employment	Number Employed in Thousands	Percentage of Total Employed*							
		Head Workers				Hand Workers			
		Total	Profes- sional	Prop's. Mgrs. Etc.	Clerical Sales Etc.	Total	Skilled Workers Etc.	Semi- skilled	Un- skilled
<u>34 SMALLER AREAS (Continued)</u>									
26. Augusta	7.4	40.8%	8.6%	9.5%	22.7%	59.2%	9.1%	35.6%	14.5%
27. Southbridge	7.1	27.2	5.0	6.5	15.7	72.8	23.6	40.5	8.7
28. Waterville	6.2	37.5	9.2	9.6	18.7	62.5	12.1	37.7	12.7
29. Greenfield	6.0	42.6	9.8	11.2	21.6	57.4	20.3	26.4	10.4
30. Rutland	5.8	46.9	10.1	10.5	26.3	53.1	16.0	22.7	14.4
31. Dover(N. H.)	5.8	31.8	5.7	10.2	15.9	68.2	13.8	42.6	11.8
32. Berlin(N. H.)	5.7	30.0	7.9	7.5	14.6	70.0	14.1	31.6	24.3
33. Milford(Mass.)	5.6	29.6	6.9	7.4	15.3	70.4	16.4	44.2	9.8
34. Keene	5.3	37.4	8.1	10.6	18.7	62.6	13.7	35.6	13.3
35. Portsmouth	5.3	35.3	8.6	9.7	17.0	64.7	21.7	30.9	12.1
36. Willimantic	5.0	31.2	7.1	8.5	15.6	68.8	10.1	46.1	12.6
37. Webster	4.9	21.8	4.4	5.2	12.2	78.2	11.1	60.5	6.6
38. Claremont	4.8	31.2	6.4	10.0	14.8	68.8	16.5	40.5	11.8
39. Laconia	4.7	36.7	8.1	10.1	18.5	63.3	17.8	32.5	13.0
40. Rochester	4.6	27.0	5.4	9.5	12.1	73.0	10.1	49.3	13.6
41. Athol	4.6	27.8	4.9	8.3	14.6	72.2	13.2	47.6	11.4
42. Plymouth	4.6	34.1	6.6	10.6	16.9	65.9	10.7	38.7	16.5
43. Bath	4.0	30.4	7.5	8.3	14.6	69.6	31.5	26.0	12.1
44. Barre(Vt.)	4.0	44.9	8.7	13.4	22.8	55.1	22.2	20.6	12.3
45. Westerly	3.8	32.8	8.1	10.4	14.3	67.2	15.6	40.2	11.4

* Based upon occupational classifications of employed workers.

Metropolitan district data not available.

(a) Waterbury and Naugatuck.

(b) Portland, South Portland and Westbrook.

(c) Manchester city only.

Source: U. S. Census of Population, 1940.