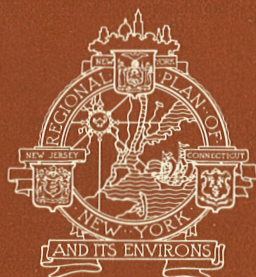


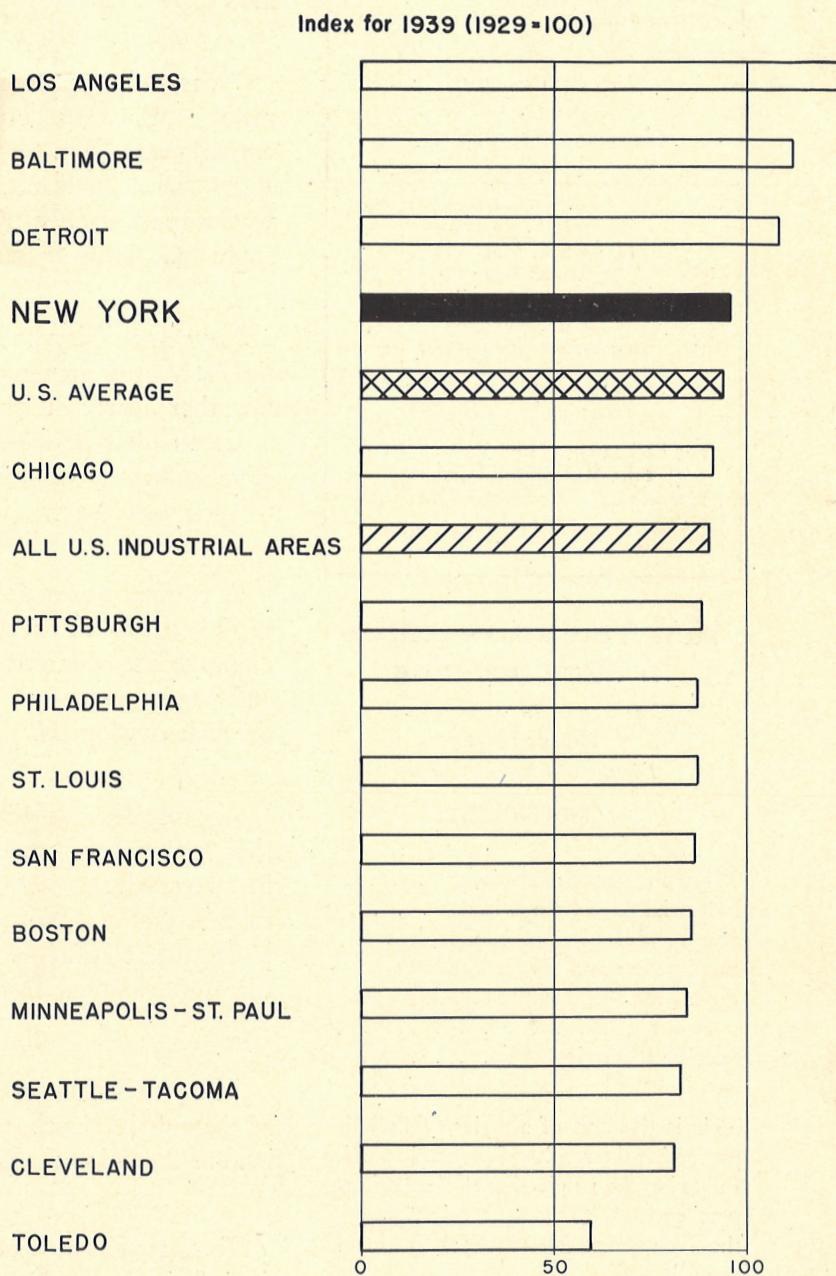
# REGIONAL PLAN *Bulletin*



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## New York's Competition In Manufacturing

Trend of Manufacturing Employment  
in the New York Region and Its  
Principal Competitors Since 1929



Bulletin No. 64

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**New York's Competition  
In Manufacturing**

by

Homer Hoyt  
*Director of Economic Studies*

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This is the first of a series of Bulletins  
presenting the results of economic studies  
following the publication of the basic re-  
port entitled "The Economic Status of  
the New York Metropolitan Region in  
1944."

The basic report is available at the  
offices of the Association at \$3.50 per  
copy (\$2.50 to members of the Regional  
Plan Association).

## Major Findings Summarized

The number of manufacturing jobs the New York Region can supply  
in the postwar period depends, first, on the national level of factory  
employment and income and, second, on New York's ability to com-  
pete on a favorable cost basis with other cities and regions.

▲ ▲ ▲

The comparative trend in factory employment in different regions  
before the war, or from 1929 to 1939, is one of the most significant  
indicators of New York's industrial strength.

▲ ▲ ▲

Measured against its leading competitors, the New York Region  
made a relatively better showing in the trend of factory wage-earner  
employment from 1929 to 1939 than Chicago, Philadelphia, Boston,  
Pittsburgh, Cleveland, St. Louis and 18 other large industrial areas, and  
was surpassed only by Los Angeles, Baltimore and Detroit, and by a  
slight margin by four smaller industrial areas.

▲ ▲ ▲

New York City had a lower rate of gain in factory employment than  
the New York area and many other industrial areas, but this is due to the  
fact that nearly all central cities have declined relatively to industrial  
areas on their peripheries. If central cities alone be compared, the de-  
cline in factory wage-earner employment in New York City from 1929  
to 1939 was less than in any other large central city except Los Angeles.

▲ ▲ ▲

A comparison of leading industrial areas only, however, omits some  
of the regions in the United States where the greatest gains in factory  
employment occurred from 1929 to 1939; namely, the states of North  
and South Carolina, Virginia and Georgia, where factories are scattered  
through rural areas.

▲ ▲ ▲

A comparison of the trend of factory employment with wages shows  
that some of the greatest gains in jobs from 1929 to 1939 were made  
in states where average factory wages were lowest. New York State  
ranked 31st and New Jersey 17th among the states in relative increase  
in factory employment, while both ranked 12th from the top among  
the states ranked from highest to lowest average industrial wages in  
1939.

▲ ▲ ▲

The purchasing power of New York State is not increasing as rapidly  
as that of the Southeast and the Pacific Coast, its share of the national  
income declining from 17.53 per cent in 1929 to 12.57 per cent in 1943.

▲ ▲ ▲

To ascertain in what respects the New York Region is in a superior  
or inferior competitive position with respect to other regions, it is  
necessary to make comparison of trends of employment in specific  
industries in the New York Region with those in other areas. Accord-  
ingly, in the last section of this report comparative trends are presented  
for many detailed industries.



## INDUSTRIAL AREA COMPARISONS

*The New York Region had a relatively greater rate of gain than most other large industrial areas from 1929 to 1939 and New York City made a better showing in factory employment than any other large American city except Los Angeles in the same period.*

### Employment Trend 1929 to 1939 by Industrial Areas

One of the best ways to gauge the future is by the trends that were operating before the war. In this bulletin we will seek to answer the question of how the trend of manufacturing employment in the New York area for the ten-year period from 1929 to 1939 compared with trends in factory employment in other leading industrial areas and with the United States as a whole. What was the score between New York, Chicago, Philadelphia, Detroit, Los Angeles, Baltimore and other industrial areas in the struggle to increase the number of jobs in factories before war speeded up the normal trends?

In 1939, the New York industrial area had 95.6 per cent as many factory wage earners as in 1929. Despite this slight absolute loss, the New York area made a relatively better showing than the United States as a whole, which had only 94.2 per cent as many industrial wage earners in 1939 as in 1929; and it is a considerably better record than was made by all the leading industrial areas in the United States combined, which had only 90.3 per cent as many factory wage earners in 1939 as 10 years before.

As Table 1 shows, the New York area with its 95.6 per cent, outstripped the Chicago industrial area (91.8 per cent), the Philadelphia industrial area (88.7 per cent), the Boston industrial area (85.4 per cent), the Pittsburgh area (88.7 per cent), the Cleveland area (81.9 per cent), the St. Louis area (87.2 per cent), and 18 other large industrial areas whose percentages of employment in 1939 ranged from 59.4 to 94.2 per cent of 1929 levels. Only Los Angeles (with a factory wage earner employment index of 124.9 in 1939 compared with 100 in 1929), Baltimore (with an index of 114.0) and Detroit (with an index 107.6) made an appreciably better showing in providing factory jobs in 1939 than New York,

TABLE 1  
INDEX OF MANUFACTURING WAGE EARNERS IN LEADING  
UNITED STATES INDUSTRIAL AREAS 1929, 1935, 1937 AND 1939  
(1929=100)

|                                | 1935        | 1937        | 1939        |
|--------------------------------|-------------|-------------|-------------|
| United States                  | 86.1        | 103.6       | 94.2        |
| Total Industrial Areas         | 84.3        | 99.9        | 90.3        |
| Total Outside Industrial Areas | 88.5        | 105.7       | 99.2        |
| <i>Industrial Areas</i>        |             |             |             |
| <b>New York</b>                | <b>86.3</b> | <b>95.5</b> | <b>95.6</b> |
| Los Angeles                    | 92.6        | 126.9       | 124.9       |
| Baltimore                      | 79.9        | 112.6       | 112.8       |
| Detroit                        | 115.0       | 140.7       | 107.6       |
| Youngstown                     | 80.2        | 111.0       | 97.1        |
| Allentown-Bethlehem            | 84.5        | 99.2        | 96.6        |
| Hartford                       | 85.0        | 99.2        | 96.5        |
| Wheeling                       | 105.4       | 112.1       | 96.5        |
| Bridgeport-New Haven-          |             |             |             |
| Waterbury                      | 91.4        | 109.3       | 96.1        |
| Worcester                      | 88.1        | 106.1       | 94.2        |
| Reading                        | 94.2        | 104.5       | 93.6        |
| Chicago                        | 79.9        | 102.1       | 91.8        |
| Pittsburgh                     | 80.5        | 104.9       | 88.7        |
| Philadelphia-Camden            | 85.0        | 94.0        | 87.5        |
| Kansas City                    | 83.7        | 94.4        | 87.4        |
| St. Louis                      | 79.4        | 97.0        | 87.2        |
| San Francisco-Oakland          | 87.0        | 100.4       | 86.4        |
| Boston                         | 81.5        | 88.9        | 85.4        |
| Minneapolis-St. Paul           | 81.3        | 96.6        | 84.8        |
| Buffalo                        | 75.5        | 97.0        | 84.0        |
| Providence-Fall River-         |             |             |             |
| New Bedford                    | 77.3        | 86.2        | 83.5        |
| Seattle-Tacoma                 | 69.0        | 88.1        | 83.2        |
| Rochester                      | 71.6        | 92.8        | 82.5        |
| Scranton-Wilkes Barre          | 86.7        | 86.8        | 82.0        |
| Cleveland                      | 80.6        | 95.2        | 81.9        |
| Dayton                         | 82.5        | 112.0       | 81.2        |
| Cincinnati                     | 79.0        | 92.9        | 80.3        |
| Indianapolis                   | 74.0        | 89.1        | 71.1        |
| Milwaukee                      | 71.6        | 87.2        | 71.0        |
| Springfield-Holyoke            | 74.9        | 86.8        | 68.7        |
| Albany-Schenectady-Troy        | 64.1        | 75.0        | 61.4        |
| Akron                          | 74.4        | 79.0        | 60.1        |
| Toledo                         | 72.6        | 80.8        | 59.4        |

while Youngstown (97.1 per cent), Allentown-Bethlehem (96.6 per cent), Wheeling (96.5 per cent), and Hartford (96.5 per cent of 1929) had a very slight margin of superiority.

While the New York industrial area thus made a better showing than most other industrial areas, it and most other metropolitan centers failed to register as great a gain in factory employment as the states of Virginia, North Carolina, South Carolina and Georgia, where the factories are scattered through rural areas and not concentrated in large cities.

### Employment Trend from 1929 to 1937 by Industrial Areas

The comparison in factory employment for the period 1929 to 1939 is also more favorable to the New York area

than the comparison from 1929 to 1937. The year 1937 was the all-time prewar factory employment peak for the United States, with employment of wage earners 2.4 per cent higher than for 1929, and for most of the industrial areas in the United States. There was a sharp recession after 1937, particularly in durable goods industries, which affected especially the heavy industry centers; and the lost ground was not entirely regained by 1939.

On the other hand, the number of factory wage earners in the New York industrial area was slightly higher (less than 1 per cent) in 1939 than in 1937, notwithstanding an 8 per cent decline in the number of industrial wage earners in the entire United States for the same period. New York, therefore, by holding its own in the face of a national decline



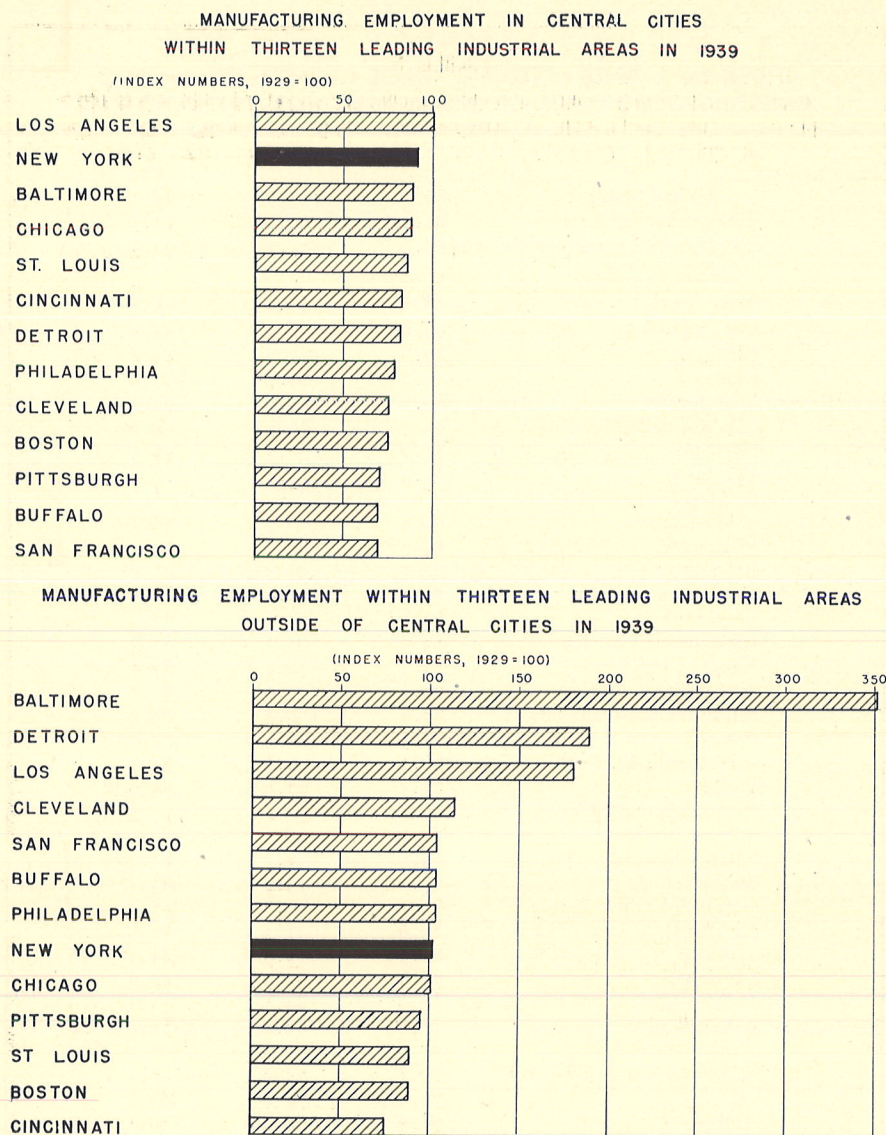


Figure 1

in factory employment from 1937 to 1939, made a relatively better record for 1939 than for 1937.

Thus, if factory wage-earner employment for 1937 is compared, with 1929 as 100, New York with an index of 95.5 was outstripped not only by Detroit with an index of 140.7, Los Angeles with 126.9, Baltimore with 112.6—which were also ahead in 1939—but by Chicago with 102.1, Pittsburgh with 104.9, St. Louis with 97.0, Buffalo with 97.0, Worcester with 106.1, San Francisco with 100.4, Youngstown with 110.0, Hartford with 107.9, Allentown-Bethlehem with 99.3, Minneapolis and St. Paul with 96.6, Wheeling with 112.1, Reading with 104.5, and Dayton with 112.0. The New York area even in 1937, with an index of 95.5, led Philadelphia (94.0), Boston (88.9), Providence-Fall River (86.2),

Cleveland (95.2), Milwaukee (87.2), Cincinnati (92.9), Rochester (92.8), Akron (79.0), Indianapolis (89.1), Kansas City (94.4), Seattle-Tacoma (88.1), Springfield-Holyoke (86.8), Albany-Schenectady-Troy (75.0), Scranton-Wilkes Barre (86.8), and Toledo (80.8).

These trends from 1929 to 1937 suggest that with the revival of construction, and with the satisfaction of the backlog of deferred demand for automobiles, refrigerators, and other durable goods, cities like Chicago, Pittsburgh, Detroit and Dayton may experience more rapid increases in factory employment than the producers of non-durable goods. Nevertheless, the comparison of the trend of manufacturing employment in the New York Region for the entire period from 1929 to 1939 shows that the position with respect to factory jobs in the New York

Metropolitan Region, as a whole is as favorable as most other large metropolitan centers.

### Employment Trend in New York City and Other Central Cities, 1929 to 1939

New York City is only a segment of the New York Metropolitan Region, and its economic activity cannot be fairly measured without taking into account the trends of adjacent urban communities. Nevertheless, some reports have been made indicating that manufacturing employment in New York City is declining relatively to other sections of the Nation. *This unfavorable comparison is the result of comparing New York City not with other central cities but with other industrial areas, which include both central cities and environs.* If the comparison of trends be confined to central cities only, it will be found that in the thirteen largest industrial cities in the United States, New York City was second only to Los Angeles. As Table 2 and Fig. 1 indicate, New York City had 91.9 per cent as much factory employment in 1939 as in 1929, while eleven others of the largest central cities had a lower proportion.

The fact is that nearly every central city has been losing ground industrially to its environs and suburbs. Only one of the thirteen largest industrial areas—Cincinnati—had a greater rate of gain in factory employment in the central city than in the suburbs for the ten year period from 1929 to 1939.

In most industrial areas, the rate of gain in the environs far outstripped that in the central city. In Baltimore, as Table 2 also shows, the percentage of gain in 1939 over 1929 in the suburbs was 251 per cent, while employment in Baltimore City dropped 10.4 per cent. In Detroit, factory employment just outside the city rose 89.7 per cent, that inside fell 17.7 per cent. In Los Angeles, employment in the city merely maintained itself, that just outside jumped 80.2 per cent.

Thus, we see that New York is not alone in experiencing industrial decentralization; the outward trend of employment is almost universal.

As further evidence of industrial decentralization, Table 1 shows that areas outside of the industrial areas experienced percentages higher than either those of the United States as a whole or all important industrial areas combined in 1935, 1937 and 1939.



## STATES AND SECTIONS OF NATIONS

*New York State ranked 31st and New Jersey 17th in order of rate of gain in factory employment from 1929 to 1939.*

A comparison of factory employment trends by cities fails to take into account regional movements which include factories outside the corporate limits of cities. Many new factories have been established in rural areas or in sections far removed from the larger industrial cities. As Table 3 shows, the greatest rate of gain in manufacturing wage earner employment from 1929 to 1939 was in the South Atlantic states, which had 15.9 per cent more factory workers in 1939 than in 1929; while factory employment in the Middle Atlantic states dropped 8 per cent and in the New England states 11.8 per cent.

### Employment Trends by States 1929 to 1939

The areas of greatest relative gain are indicated better by taking state rather than regional figures, however, because there are great differences within regions. North Carolina led all the states in the rate of gain, with 31 per cent more factory jobs in 1939 than in 1929, as Table 4 and Figure 2 show. Other South Atlantic states—Virginia, South Carolina, Maryland and Georgia—reported gains of from 11.7 to 22.4 per cent in this period. On the other hand, Maine in New England increased its factory employment 9.6 per cent, Tennessee gained 10.2 per cent, Texas 6.8 per cent and California 3.6 per cent.

While these South Atlantic and Far Western states were increasing their industrial employment, the number of factory workers in New York State dropped 9.6 per cent and New Jersey just held its own.

### EMPLOYMENT AND WAGES BY STATES

*States with lowest average wages have had greatest employment gains.*

An examination of Table 5 in which wages are graded from the lowest at the

TABLE 2  
MANUFACTURING WAGE-EARNER EMPLOYMENT IN 1929 AND 1939  
IN 12 LEADING INDUSTRIAL AREAS, WITH A COMPARISON BETWEEN  
THE CENTRAL CITY AND AREA OUTSIDE THE CENTRAL CITY  
(For Index Numbers 1929=100)

|                               | 1929    | 1939    | Index Numbers |
|-------------------------------|---------|---------|---------------|
| New York Industrial Area      | 888,285 | 849,608 | 95.6          |
| New York City                 | 557,906 | 512,666 | 91.9          |
| Outside City                  | 330,379 | 336,942 | 102.0         |
| Chicago Industrial Area       | 526,824 | 483,593 | 91.8          |
| Chicago (city)                | 391,905 | 347,839 | 88.8          |
| Outside City                  | 134,919 | 135,754 | 100.6         |
| Philadelphia Industrial Area  | 367,546 | 321,725 | 87.5          |
| Philadelphia (city)           | 246,908 | 196,356 | 79.5          |
| Outside City                  | 120,638 | 125,369 | 103.9         |
| Detroit Industrial Area       | 289,459 | 311,332 | 107.6         |
| Detroit (city)                | 221,471 | 182,373 | 82.3          |
| Outside City                  | 67,988  | 128,959 | 189.7         |
| Boston Industrial Area        | 278,159 | 237,496 | 85.4          |
| Boston (city)                 | 75,907  | 57,764  | 76.1          |
| Outside City                  | 202,252 | 179,732 | 88.9          |
| Pittsburgh Industrial Area    | 216,339 | 191,903 | 88.7          |
| Pittsburgh (city)             | 61,503  | 43,631  | 70.9          |
| Outside City                  | 154,836 | 148,272 | 95.8          |
| Cleveland Industrial Area     | 171,832 | 140,653 | 81.9          |
| Cleveland (city)              | 146,709 | 112,092 | 76.4          |
| Outside City                  | 25,123  | 28,561  | 113.7         |
| St. Louis Industrial Area     | 145,443 | 126,831 | 87.2          |
| St. Louis (city)              | 103,834 | 89,533  | 86.2          |
| Outside City                  | 41,609  | 37,298  | 89.6          |
| Los Angeles Industrial Area   | 101,383 | 126,391 | 124.7         |
| Los Angeles (city)            | 70,850  | 71,366  | 100.7         |
| Outside City                  | 30,533  | 55,025  | 180.2         |
| Baltimore Industrial Area     | 93,770  | 105,737 | 112.6         |
| Baltimore (city)              | 85,464  | 76,556  | 89.6          |
| Outside City                  | 8,306   | 29,181  | 351.3         |
| Buffalo Industrial Area       | 108,912 | 91,328  | 84.3          |
| Buffalo (city)                | 65,353  | 45,869  | 70.2          |
| Outside City                  | 43,559  | 45,459  | 104.4         |
| Cincinnati Industrial Area    | 108,824 | 87,384  | 80.3          |
| Cincinnati (city)             | 63,637  | 52,847  | 83.0          |
| Outside City                  | 45,187  | 34,537  | 76.4          |
| San Francisco Industrial Area | 88,017  | 76,374  | 86.8          |
| San Francisco (city)          | 45,482  | 31,788  | 69.9          |
| Outside City                  | 42,535  | 44,586  | 104.8         |

top to the highest at the bottom, reveals that many of the greatest gains in employment from 1929 to 1939 were made in states where the averages of all factory workers were relatively low. Of the 24 states in the lower wage half, 11 reported gains in employment ranging from 2.5 to

31 per cent, while of the 24 states in the higher wage half, only 5 reported gains ranging from 0.2 per cent to only 3.6 per cent. There is by no means a perfect correlation.

In some states with low wages, like Mississippi and Arkansas, industrial



**MANUFACTURING EMPLOYMENT IN STATES OF NEW YORK AND NEW JERSEY IN 1939**  
**COMPARED WITH EMPLOYMENT IN OTHER STATES**  
 INDEX NUMBERS, 1929=100

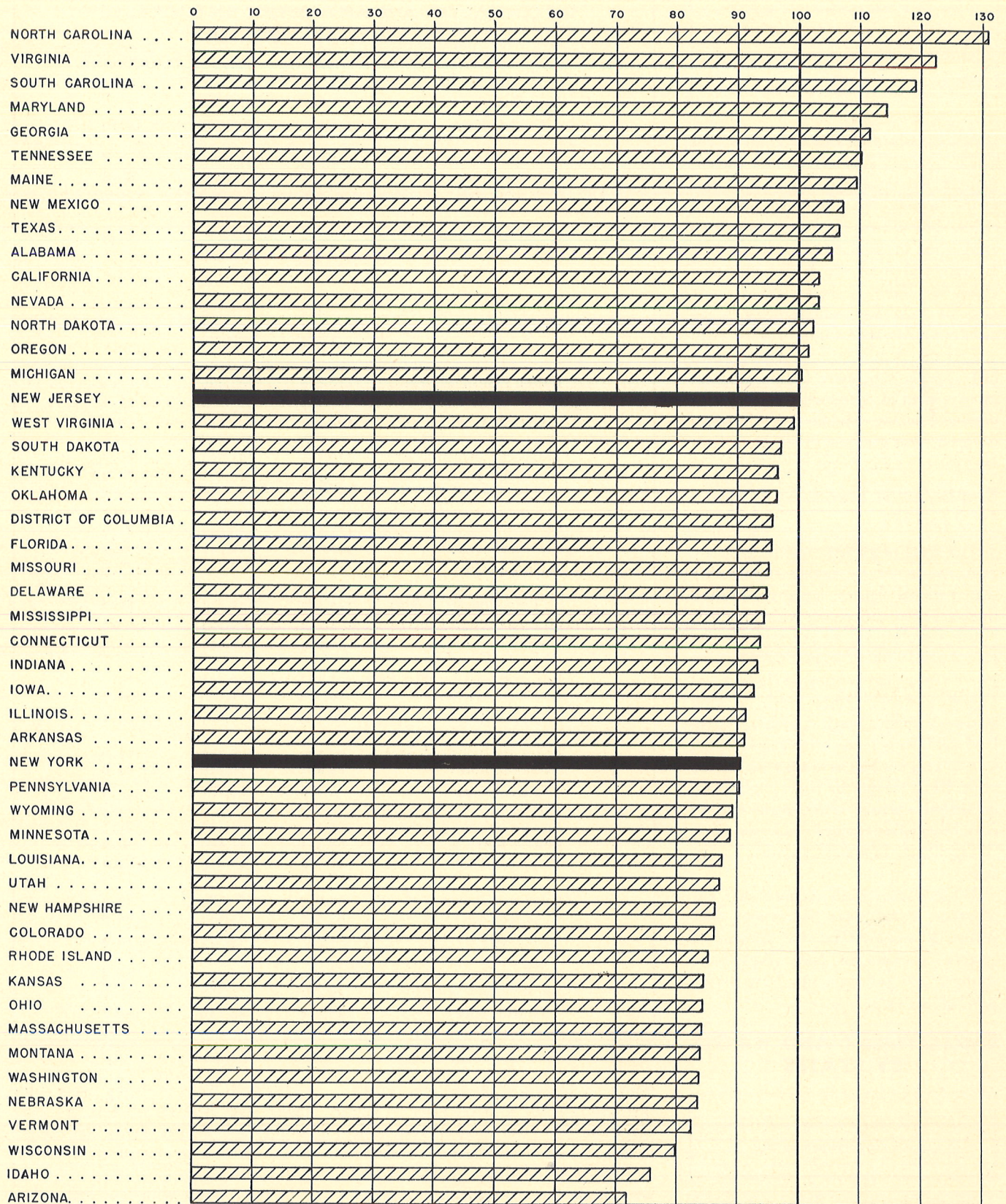


Figure 2



facilities may not have expanded. In other states, like Michigan, the high wages represent a larger proportion of skilled mechanics. Where capital equipment and natural resources are favorable, high wages can be paid while output and employment are expanding. This is true in Michigan and California.

It is significant to note, however, that in the ten states which showed the greatest gains in factory employment from 1929 to 1939, the average wages paid were below the national median wage. The ten state average annual wage was \$982. compared with a median annual wage of \$1291.

Compared with this average annual factory wage of \$982 in the ten states with highest gains in employment, the average wage in New York and New Jersey was \$1416.

For some industries, like textiles, the lower wages of the Southeastern states have been an effective element in pulling industry and employment from the New England and Middle Atlantic states. A favorable wage differential evidently has been an important factor in increasing employment in the Southeastern states in the decade from 1929 to 1939.

## POPULATION SHIFTS AND PURCHASING POWER

*New York State and the New York Region increased their population and purchasing power less rapidly than other areas from 1929 to 1943.*

The growth of population and purchasing power causes an increase in employment in the manufacture of those types of consumers' goods that are usually produced near where they are consumed, such as many food products and some building materials. The South and Far West gained relatively to New York in population growth from 1930 to 1940. Thus, while the population of New Jersey increased 2.9 per cent from 1930 to 1940 and that of New York State increased 7.1 per cent in the same period, the percentage of gain in the South Atlantic states was 12.0 and in California 21.7.

The relative loss in purchasing power in New York State was even greater than in population. From 1929 to 1943, its share of the national income payments dropped from 17.53 to 12.57 per cent. In the same period, the Southeast's share of

**TABLE 3**  
**MANUFACTURING WAGE EARNERS BY GEOGRAPHIC DIVISIONS**  
**Indexes of Average Number of Wage Earners in Manufacturing Industries—**  
**1929, 1937, 1939**

|                        | 1929       | 1937        | 1939        |
|------------------------|------------|-------------|-------------|
| South Atlantic         | 100        | 117.9       | 115.9       |
| East South Central     | 100        | 108.4       | 103.7       |
| Pacific                | 100        | 107.8       | 98.7        |
| West South Central     | 100        | 101.9       | 97.8        |
| <b>Middle Atlantic</b> | <b>100</b> | <b>97.7</b> | <b>92.0</b> |
| West North Central     | 100        | 97.7        | 91.8        |
| East North Central     | 100        | 105.4       | 90.4        |
| New England            | 100        | 94.7        | 88.2        |
| Mountain               | 100        | 95.0        | 84.4        |

**Absolute Number of Wage Earners**  
**in Manufacturing Industries—1929, 1937, 1939**

|                        | 1929             | 1937             | 1939             |
|------------------------|------------------|------------------|------------------|
| New England            | 1,098,278        | 1,039,915        | 969,080          |
| <b>Middle Atlantic</b> | <b>2,560,153</b> | <b>2,500,807</b> | <b>2,354,937</b> |
| East North Central     | 2,542,052        | 2,680,337        | 2,297,157        |
| West North Central     | 474,080          | 463,260          | 435,026          |
| South Atlantic         | 912,243          | 1,075,423        | 1,057,198        |
| East South Central     | 377,870          | 409,593          | 391,952          |
| West South Central     | 297,723          | 303,329          | 291,046          |
| Mountain               | 102,370          | 97,275           | 86,411           |
| Pacific                | 463,191          | 499,299          | 457,226          |

the national income rose from 10.51 to 13.82 per cent and that of California from 6.31 to 8.76 per cent. This greater rate of gain in population and purchasing power in the South and Pacific Coast favored the more rapid expansion of many types of industries in those areas.

The New York Metropolitan Region fared no better than New York State in holding its former proportion of the national income.

According to estimates of spendable money income made by *Sales Management*, an advertising magazine which publishes income data annually by counties, the combined income of the twenty-two counties of the New York Metropolitan Region increased less rapidly after 1932 than the spendable income of the rest of the Nation. The spendable income of the New York Metropolitan Region, according to this authority, increased from \$7,659,698,000 in 1932 to \$10,122,859,000 in 1940 and to \$17,506,530,000 in 1943. The current dollar income of the Region was 31 per cent greater in 1940 than in 1932, and 127 per cent more in 1943 than in 1932, and yet it failed to keep pace with the rise in the national income in current dollars, which, in terms of effective buying income as estimated by *Sales Management*, was 240 per cent

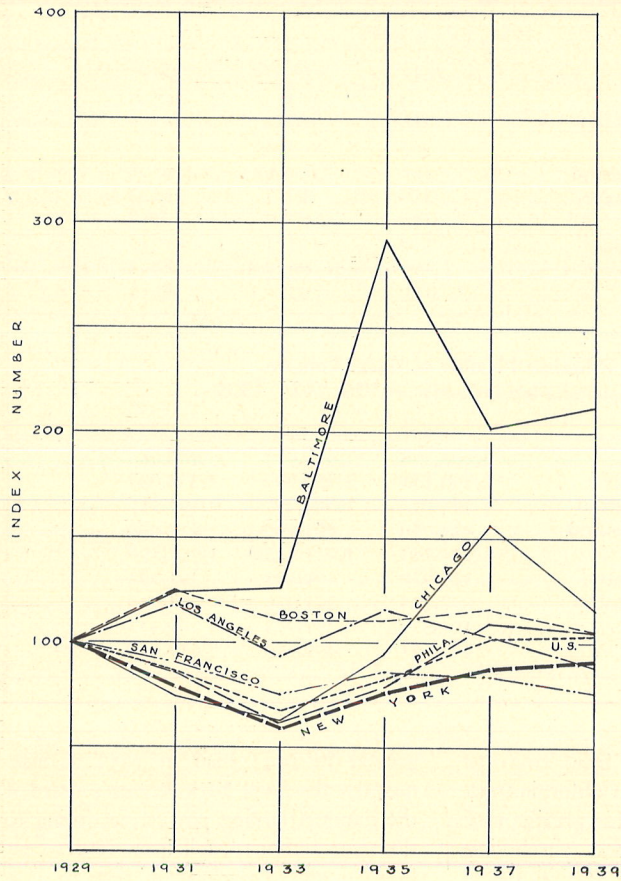
greater in 1943 than in 1932. Consequently, the New York Region's share of the national buying power, according to the same authority, fell from 16 per cent in 1929 and 18 per cent in 1932 to 13.6 per cent in 1940 and to 12.3 per cent in 1943.

New York City even lagged behind the New York Region in its relative share of buying power. The buying power of the City increased from \$5,254,872,000 in 1932 to \$6,323,915,000 in 1940 and to \$10,279,528,000 in 1943, according to *Sales Management*, a gain of slightly less than 100 per cent in current dollar buying power from 1932 to 1943.

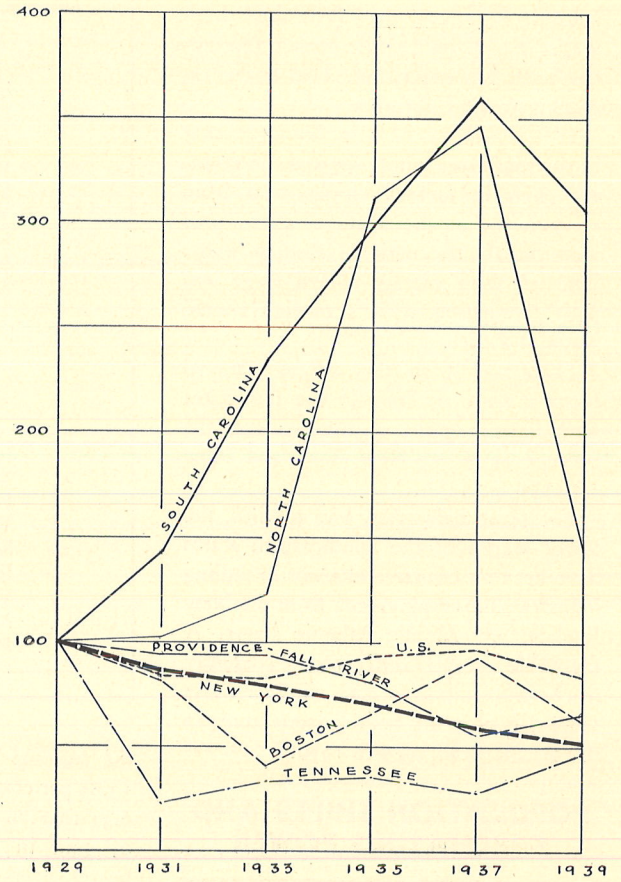
Meanwhile, the effective income of the 17 counties of the New York Region outside of New York City increased from \$2,404,826,000 in 1932 to \$7,227,002,000 in 1943, a gain of 200 per cent in dollar income or double the rate of gain of New York City. This relative decline in purchasing power in the New York Region, and particularly in New York City, may be attributed to the failure of the income from dividends, rents, profits, professional salaries and clerical wages, which comprise so large an element in New York's income, to rise as rapidly as income from agricultural products and manufacturing wages in war industries.



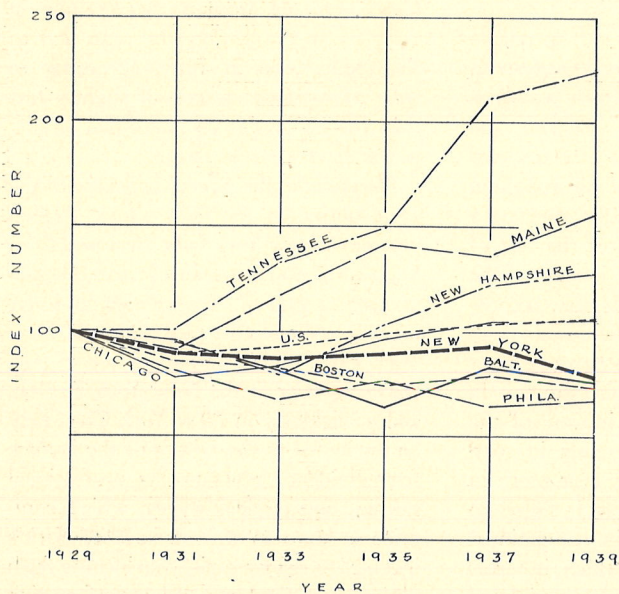
# NEW YORK INDUSTRIAL AREA AND ITS LEADING COMPETITORS FACTORY WAGE EARNERS' EMPLOYMENT IN SELECTED INDUSTRIES By Index Numbers 1929-1939



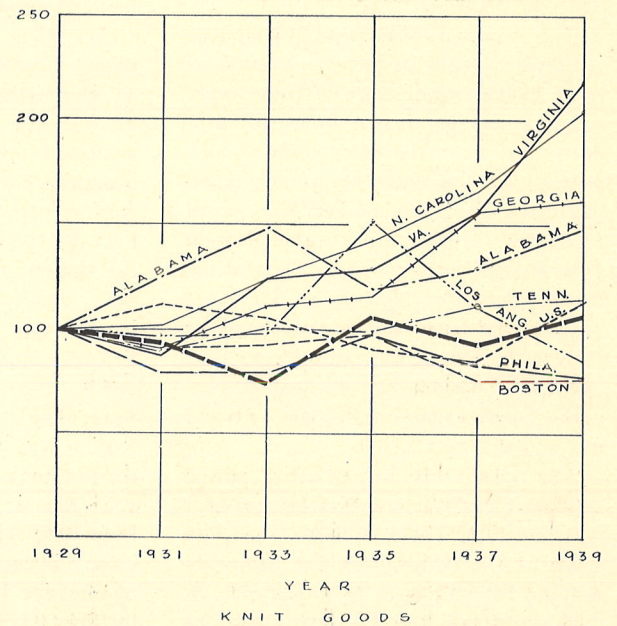
BOOKBINDING AND RELATED INDUSTRIES



DYEING AND FINISHING



FOOTWEAR, EXCEPT RUBBER



KNIT GOODS

Figure 3



The property income in New York State increased from \$2,292,000,000 in 1940 to \$2,459,000,000 in 1943, a gain of only 7 per cent compared with a 19 per cent gain for the United States. All other components of the income payments lagged in New York State compared with the Nation, salaries and wages rose only 62 per cent from 1940 to 1943 compared with 100 per cent for the Nation, and proprietors' income in New York State increased only 45 per cent compared with 100 per cent for the United States. Doubtless, the fact that wages in many clerical and professional lines, which are predominant in New York, rose only 15 to 25 per cent, while wage earners in factories received 100 per cent more in 1943 than in 1939, was responsible for the lower average gain in wages and salaries in New York State than in states like California and Washington, where war employment has had such an early and rapid rise.

Since wages in war manufacturing plants and agricultural prices, which have risen so rapidly in the war period, are more likely to decline than wages and prices in the civilian industries, trades and professions which predominate in New York, this Region will probably not experience the shock of declining incomes that may be felt in war-manufacturing or food-producing regions in the reconversion period immediately following the war. In fact, New York's share of the national income may well increase over present levels in the post-war period.

### SPECIFIC INDUSTRIES

*Comparative employment trends in specific industries tend to indicate whether production costs are higher or lower in New York than elsewhere.*

Changes in census classification between 1929 and 1939 make it impossible to compare the employment trends in every specific industry in the New York industrial area with the same industry in other areas and regions. In Table 6, however, comparative data are presented for a number of industries which show several types of trends. In the important women's clothing industry, for instance, the New York area had 36 per cent more employees in 1939 than in 1929, and made a relatively greater gain than Chicago, Los Angeles, Boston, Baltimore, St.

TABLE 4  
MANUFACTURING EMPLOYMENT IN STATES OF NEW YORK AND NEW JERSEY IN 1939 COMPARED WITH EMPLOYMENT IN THE OTHER STATES

(For index numbers, 1929=100)

|                      | 1937         | 1939         |
|----------------------|--------------|--------------|
| North Carolina       | 125.8        | 131.0        |
| Virginia             | 122.3        | 122.4        |
| South Carolina       | 122.1        | 119.1        |
| Maryland             | 118.2        | 114.4        |
| Georgia              | 116.3        | 111.7        |
| Tennessee            | 113.3        | 110.2        |
| Maine                | 109.5        | 109.6        |
| New Mexico           | 117.9        | 107.4        |
| Texas                | 109.8        | 106.8        |
| Alabama              | 110.4        | 105.4        |
| California           | 114.0        | 103.6        |
| Nevada               | 103.9        | 103.5        |
| North Dakota         | 106.4        | 102.5        |
| Oregon               | 105.8        | 101.8        |
| Michigan             | 126.9        | 100.7        |
| <b>New Jersey</b>    | <b>101.1</b> | <b>100.2</b> |
| West Virginia        | 110.2        | 99.2         |
| South Dakota         | 89.4         | 97.1         |
| Kentucky             | 105.9        | 96.6         |
| Oklahoma             | 101.7        | 96.5         |
| District of Columbia | 105.6        | 95.8         |
| Florida              | 99.7         | 95.8         |
| Missouri             | 100.0        | 95.3         |
| Delaware             | 98.4         | 94.9         |
| Mississippi          | 95.3         | 94.5         |
| <b>Connecticut</b>   | <b>105.6</b> | <b>93.9</b>  |
| Indiana              | 105.2        | 93.4         |
| Iowa                 | 96.9         | 92.7         |
| Illinois             | 102.4        | 91.5         |
| Arkansas             | 94.4         | 91.3         |
| <b>New York</b>      | <b>94.1</b>  | <b>90.4</b>  |
| Pennsylvania         | 100.1        | 90.2         |
| Wyoming              | 97.0         | 89.2         |
| Minnesota            | 99.6         | 88.9         |
| Louisiana            | 93.6         | 87.5         |
| Utah                 | 98.0         | 87.0         |
| New Hampshire        | 87.5         | 86.3         |
| Colorado             | 94.0         | 86.1         |
| Rhode Island         | 86.7         | 85.2         |
| Kansas               | 91.3         | 84.5         |
| Ohio                 | 97.6         | 84.4         |
| Massachusetts        | 90.8         | 84.2         |
| Montana              | 100.0        | 84.0         |
| Washington           | 93.6         | 83.9         |
| Nebraska             | 87.7         | 83.5         |
| Vermont              | 89.8         | 82.5         |
| Wisconsin            | 92.6         | 79.8         |
| Idaho                | 88.7         | 75.9         |
| Arizona              | 83.5         | 71.9         |

Louis or Cleveland, but a lesser gain than Philadelphia, Detroit or the average for the United States. In the rate of gain in the employment in work clothing, New York led all other important areas by a wide margin. In the increase in employment in men's clothing, New York surpassed all other regions except Philadelphia and Los Angeles.

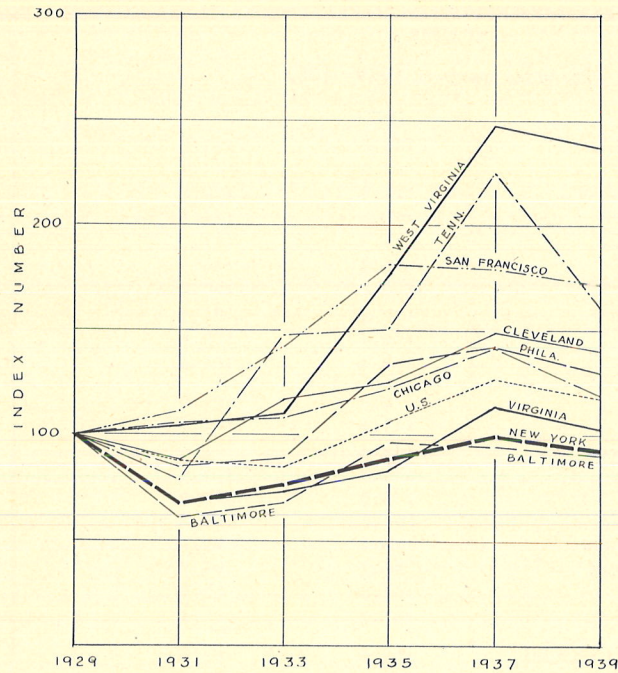
On the other hand, in dyeing and finishing, as Figure 3 shows, employment from 1929 to 1939 declined in New York, Boston and Providence, while it gained greatly in North and South Carolina. While employment in knit goods gained slightly in the prewar decade in the New York area, it moved upward at a much greater rate in North Carolina, Virginia,



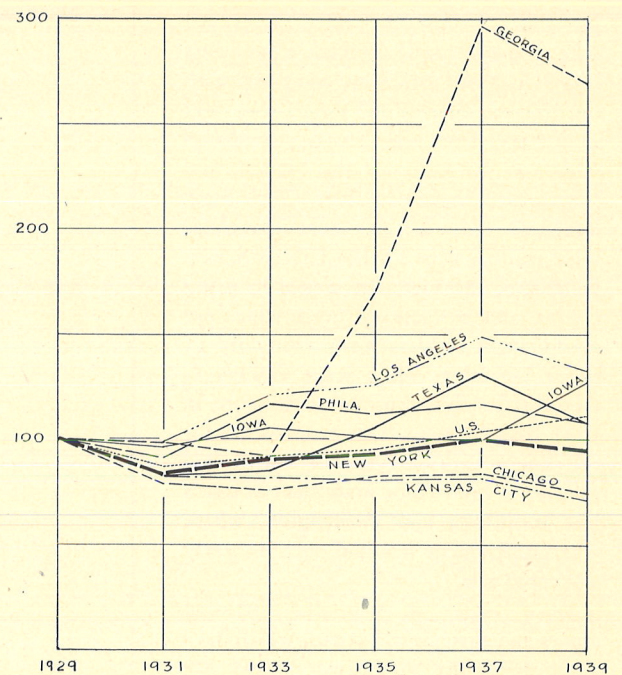
# NEW YORK INDUSTRIAL AREA AND ITS LEADING COMPETITORS

## FACTORY WAGE EARNERS' EMPLOYMENT IN SELECTED INDUSTRIES

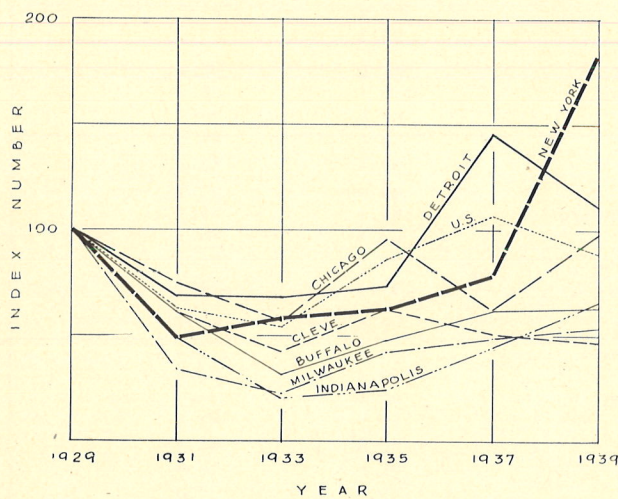
By Index Numbers 1929-1939



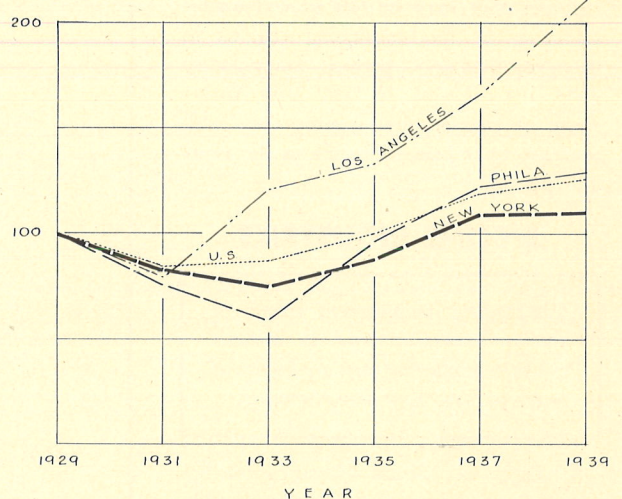
CHEMICALS, NOT ELSEWHERE CLASSIFIED



MEATPACKING



AUTOMOBILE AND AUTO EQUIPMENT



RUBBER GOODS EXCEPT TIRES OR INNER TUBES

Figure 4

Georgia and Alabama, as Figure 3 also shows. In footwear, except rubber, New York employment dropped, while the number working in Tennessee, Maine and New Hampshire showed marked gains (Figure 3). In bookbinding and related industries, New York lost ground from 1929 to 1939, while Baltimore,

Chicago, Boston and Philadelphia all gained (Figure 3).

As Figure 4 shows, in chemicals not elsewhere classified, employment in the New York area dropped slightly, while it gained greatly in West Virginia, Tennessee, San Francisco, Philadelphia, Cleveland and Chicago. In meatpacking, New

York maintained its employment better than Chicago and Kansas City, the leading meatpacking centers, but lost ground to Georgia, Texas and Los Angeles (Figure 4).

In automobile assembly, the rate of gain in employment in New York outstripped every center except Los Angeles



(Table 6 and Figure 4). In rubber goods except tires, while New York gained from 1929 to 1939 it was at a lesser rate than Los Angeles or Philadelphia (Figure 4).

In some industries, such as electrical machinery, there were heavy declines in employment in the New York area from 1929 to 1939 but there was an even greater drop in other large cities like Chicago, Philadelphia, Baltimore, San Francisco and Pittsburgh (Table 6). In electrical machinery, however, Los Angeles and Detroit registered heavy gains in employment at the same time. Again, except for Los Angeles, there was a falling off in the manufacture of wooden boxes in all large industrial areas, with declines of 64 per cent in Philadelphia and Baltimore, 63 per cent in Boston compared with 34 per cent in New York. Likewise, the number of workers engaged in the manufacture of non-alcoholic beverages declined in all large industrial areas from 1929 to 1939, although the decrease in employment in New York was greater than in most other areas (Table 6).

On the other hand, in paper boxes the 32 per cent increase in employment in New York exceeded the gain in all other areas except Los Angeles and Pittsburgh. Likewise, New York had a slight gain in employment in fur goods from 1929 to 1939 while the other large industrial areas, except Los Angeles, reported losses (Table 6).

In industries like stamped and pressed metal, the loss in employment in the New York area was slight from 1929 to 1939, only 5.1 per cent, but at the same time Boston gained 232.5 per cent in employment, Pittsburgh 109.5 per cent, Los Angeles 73 per cent, Philadelphia 40 per cent, Detroit 20.5 per cent and Chicago 15.3 per cent (Table 6).

In other industries, the New York area occupied an intermediary position between the areas gaining the most employment and those losing the most jobs. Thus, in the manufacture of surgical instruments, where New York employment dropped 8 per cent from 1929 to 1939, that in St. Louis gained 61 per cent and that in Chicago rose 42 per cent while on the other hand it fell 35 per cent in San Francisco and Pittsburgh, (Table 6).

In ship and boat building, likewise, the gain in employment in the New York area from 1929 to 1939 stood between

TABLE 5  
AVERAGE ANNUAL SALARY WAGE OF MANUFACTURING EMPLOYEES IN 1939 COMPARED WITH INDEX OF EMPLOYMENT IN 1929, BY STATES

(For index numbers 1929=100)

|                      | <i>Average Wage</i> | <i>Employment Index</i> |
|----------------------|---------------------|-------------------------|
| Mississippi          | \$726               | 94.5                    |
| South Carolina       | 758                 | 119.1                   |
| Arkansas             | 777                 | 91.3                    |
| Georgia              | 822                 | 111.7                   |
| North Carolina       | 840                 | 131.0                   |
| Florida              | 862                 | 95.8                    |
| Alabama              | 907                 | 105.3                   |
| Maine                | 989                 | 109.6                   |
| Tennessee            | 991                 | 110.2                   |
| New Mexico           | 999                 | 107.4                   |
| Louisiana            | 1,001               | 87.5                    |
| Virginia             | 1,025               | 122.4                   |
| New Hampshire        | 1,047               | 86.3                    |
| Vermont              | 1,148               | 82.5                    |
| Rhode Island         | 1,170               | 85.2                    |
| Kentucky             | 1,187               | 96.6                    |
| Texas                | 1,209               | 106.8                   |
| North Dakota         | 1,210               | 102.5                   |
| Idaho                | 1,232               | 75.9                    |
| Utah                 | 1,266               | 87.0                    |
| South Dakota         | 1,267               | 97.1                    |
| Arizona              | 1,283               | 71.9                    |
| Maryland             | 1,283               | 114.4                   |
| Delaware             | 1,291               | 94.9                    |
| Missouri             | 1,298               | 95.3                    |
| Iowa                 | 1,307               | 92.7                    |
| Massachusetts        | 1,321               | 84.2                    |
| Nebraska             | 1,327               | 83.5                    |
| Pennsylvania         | 1,335               | 90.2                    |
| Kansas               | 1,339               | 84.5                    |
| Oklahoma             | 1,340               | 96.5                    |
| <b>Connecticut</b>   | <b>1,374</b>        | <b>93.9</b>             |
| West Virginia        | 1,380               | 99.2                    |
| Colorado             | 1,384               | 86.1                    |
| <b>New York</b>      | <b>1,416</b>        | <b>90.4</b>             |
| <b>New Jersey</b>    | <b>1,416</b>        | <b>100.2</b>            |
| Nevada               | 1,421               | 103.5                   |
| Washington           | 1,441               | 83.9                    |
| Indiana              | 1,449               | 93.4                    |
| Wyoming              | 1,455               | 89.2                    |
| Minnesota            | 1,458               | 88.9                    |
| Oregon               | 1,487               | 101.8                   |
| Wisconsin            | 1,504               | 79.8                    |
| Illinois             | 1,534               | 91.5                    |
| Montana              | 1,562               | 84.0                    |
| California           | 1,564               | 103.6                   |
| Michigan             | 1,678               | 100.7                   |
| District of Columbia | 1,736               | 95.8                    |

gains of 153 per cent in Baltimore and 95 per cent in Philadelphia and losses 10 per cent in Los Angeles and 79 per cent in Detroit. Also, in paints and varnishes, the employment in the New York area dropped 9.7 per cent from 1929 to 1939, which was midway between gains of 37

per cent in Los Angeles, 9.8 per cent in Detroit and losses of 12 per cent in St. Louis and 45 per cent in Baltimore.

In the important printing and publishing industry the decline of 19 per cent from 1929 to 1939 in the New York area was a slightly greater rate of decline than



TABLE 6

## MANUFACTURING WAGE-EARNER EMPLOYMENT IN THE NEW YORK INDUSTRIAL AREA IN SELECTED INDUSTRIES IN 1939 COMPARED WITH TEN OTHER LEADING U. S. INDUSTRIAL AREAS

(For index numbers 1929=100)

| INDUSTRY                           | U. S. | New York | Chicago | Philadelphia | Detroit | Los Angeles | Boston | Baltimore | San Francisco | Pittsburgh | St. Louis | Cleveland |
|------------------------------------|-------|----------|---------|--------------|---------|-------------|--------|-----------|---------------|------------|-----------|-----------|
| Automobiles                        | 89.2  | 182.6    | 94.7    | 106.1        | 120.6   | 476.4       | *      | *         | 209.3         | 117.0      | *         | 46.9      |
| Beverages, non-alcoholic           | 75.2  | 50.9     | 70.2    | 57.2         | 73.2    | 70.8        | 58.1   | 74.8      | 43.1          | 67.8       | 47.5      | 52.7      |
| Bookbinding & related              | 103.2 | 91.2     | 115.1   | 105.5        | 111.6   | 88.6        | 105.9  | 212.6     | 76.6          | 82.5       | *         | 89.9      |
| Boxes, wooden                      | 82.9  | 65.8     | 68.3    | 36.0         | 53.7    | 113.6       | 36.9   | 35.9      | 34.1          | 62.9       | 19.9      | 67.9      |
| Chemicals, n.e.c.                  | 118.4 | 93.5     | 120.0   | 130.5        | *       | 185.3       | *      | 90.7      | 172.2         | 115.7      | 106.0     | 140.6     |
| Dyeing & finishing                 | 83.3  | 52.2     | 39.3    | 51.5         | *       | 166.1       | 62.3   | *         | *             | *          | *         | *         |
| Electrical machinery               | 75.5  | 55.9     | 46.3    | 37.8         | 134.7   | 184.0       | 56.9   | 50.9      | 35.3          | 9.8        | 93.3      | 63.9      |
| Embroideries                       | 132.1 | 124.6    | *       | 72.5         | *       | *           | 231.1  | 133.3     | *             | *          | *         | *         |
| Engraving & printing               | 52.9  | 48.0     | 54.7    | *            | *       | 37.9        | *      | *         | 60.0          | *          | *         | 41.6      |
| Fabricated steel                   | 64.6  | 42.2     | 47.6    | 65.4         | 20.7    | 105.9       | 57.9   | 67.9      | 24.8          | 76.6       | 63.2      | 29.0      |
| Footwear, exc. rubber              | 106.0 | 78.2     | 105.2   | 67.4         | *       | 189.5       | 73.0   | 75.3      | *             | *          | 78.8      | *         |
| Food prep., n.e.c.                 | 146.0 | 127.2    | 99.5    | 101.0        | 159.1   | 142.0       | 66.9   | *         | 103.8         | 117.1      | 319.7     | 455.0     |
| Fur goods                          | 83.2  | 102.3    | 44.5    | 23.1         | 28.0    | 139.8       | *      | 68.3      | *             | *          | *         | *         |
| House furnishings                  | 67.3  | 51.6     | 75.1    | 83.4         | *       | 86.4        | 23.3   | 200.0     | 9.7           | *          | *         | 31.1      |
| Knit goods                         | 113.5 | 106.6    | 106.3   | 77.5         | *       | 85.2        | 76.0   | *         | *             | *          | *         | 57.4      |
| Lithographing & photolithographing | 137.0 | 119.6    | 181.2   | 120.3        | *       | 120.9       | *      | 76.5      | 213.8         | *          | 291.9     | 77.0      |
| Machine shop products              | 73.6  | 63.1     | 79.9    | 69.6         | 88.9    | 47.7        | 61.9   | 136.5     | 67.9          | 64.2       | 59.2      | 73.8      |
| Meat packing                       | 110.7 | 94.4     | 75.6    | 108.0        | 79.2    | 133.3       | 89.4   | 105.7     | 94.3          | 88.0       | 92.0      | 75.0      |
| Men's & boys' shirts               | 117.8 | 89.7     | 196.8   | 71.2         | *       | 111.7       | *      | 277.8     | *             | 11.6       | 51.2      | *         |
| Men's clothing                     | 109.2 | 116.3    | 74.3    | 126.2        | 14.3    | 152.3       | 96.6   | 105.6     | *             | 45.3       | 85.3      | 90.5      |
| Paints & varnishes                 | 96.4  | 90.3     | 100.1   | 93.6         | 109.8   | 137.3       | *      | 55.2      | 95.2          | 54.1       | 88.1      | 85.1      |
| Paper boxes                        | 131.1 | 132.0    | 97.8    | 113.0        | 99.0    | 160.0       | 86.7   | 102.8     | 121.5         | 144.5      | 117.6     | 93.2      |
| Perfumes & cosmetics               | 79.1  | 73.3     | 83.1    | 92.0         | *       | 187.7       | *      | *         | *             | *          | 83.2      | 68.1      |
| Printing & publishing              | 89.4  | 81.1     | 84.6    | 95.8         | 86.1    | 100.7       | 69.7   | 95.1      | 80.3          | 82.1       | 85.8      | 77.8      |
| Rubber goods                       | 126.0 | 110.1    | *       | 129.6        | *       | 211.8       | *      | *         | 64.3          | *          | *         | *         |
| Ship & boat building               | 125.7 | 110.9    | *       | 195.1        | 20.9    | 90.1        | *      | 252.7     | 96.8          | *          | *         | *         |
| Silk & rayon                       | 91.8  | 43.3     | *       | 59.0         | *       | *           | 139.8  | *         | *             | *          | *         | *         |
| Stamped & pressed metal            | 118.5 | 94.9     | 115.3   | 139.9        | 120.5   | 173.1       | 332.5  | *         | *             | 209.5      | 68.8      | 81.5      |
| Stoves & ranges                    | 89.5  | 57.3     | 74.0    | 80.4         | 44.5    | 226.5       | *      | *         | 102.3         | 57.9       | 67.6      | 93.7      |
| Surgical instruments               | 107.1 | 92.1     | 141.9   | *            | *       | 83.9        | *      | *         | 64.6          | 64.6       | 161.0     | *         |
| Tin cans                           | 100.9 | 87.5     | 124.2   | 212.2        | *       | *           | *      | 84.5      | *             | 151.0      | 53.5      | 74.3      |
| Tools                              | 79.5  | 103.1    | 141.9   | 58.9         | 17.6    | 119.9       | 60.2   | *         | *             | 45.3       | 50.9      | 103.4     |
| Women's clothing                   | 148.9 | 136.1    | 115.5   | 171.5        | 262.3   | 117.6       | 109.0  | 40.2      | *             | *          | 99.3      | 64.8      |
| Work clothing                      | 149.1 | 414.6    | 197.3   | 264.7        | *       | *           | 181.5  | 135.1     | 96.3          | 96.3       | *         | 94.9      |

\* Data not available.

was registered in most other large industrial areas, although all showed employment losses except Los Angeles.

In the 34 industries reported in Table 6, the Los Angeles industrial area made the greatest employment gains or relative showing from 1929 to 1939 in 16, the Baltimore area in 6, the Boston area in 3, and New York and St. Louis each in 2. These industries are, of course, not all of the same relative importance and there are many other industries for which no specific comparative data are available. In some cases also the relatively large

relative gains are the result of the rapid expansion of an industry that was very small in the beginning and represent only small absolute numbers. Nevertheless, the more rapid rate of growth of employment in Los Angeles in so many lines is corroborated by its lead over all other areas in the overall rate of industrial growth, shown in the chart on the cover of this bulletin.

These comparisons of employment trends in specific industries in cities or regions competing with New York show where inroads into New York's pro-

duction are being made and suggest the need of making studies of comparative costs of production. The decisive or crucial cost factors for each specific industry should be determined, whether they be labor costs, power costs, transportation costs or otherwise, and attempts should be made to give each New York industry the same advantages as those possessed by other cities or regions with respect to the factors that are most important in determining its cost of producing goods or services.