INDUSTRIAL PROGRESS AND REGULATORY LEGISLATION IN NEW YORK STATE

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FOREWORD

THE steady shifting of the center of manufacturing westward, the diffusion of industrial activity through the agricultural regions, and the sudden development of new and important industries outside the older industrial sections are among the most striking features of the past quarter century of our history. These developments have resulted from changes in agricultural conditions, improved transportation facilities, wider availability and use of electric power, and greater abundance and flexibility of capital. They are a sign that we are industrially still young and vigorously growing; but, like all growth, they have brought in their train new and perplexing problems.

Among the most difficult of these problems are those involved in the situation of certain of the old industrial states in the North Atlantic group. Through early and long development they have held and still largely hold their industrial leadership; but in recent years their supremacy has been challenged by the rapid growth of modern types of industry in the southern and western states. The manufacturers and business men of the northeastern states as well as the general public and their legislative representatives, knowing well that industrial ingenuity and business initiative are not geographically localized, have lately become concerned over this trend and have sought the probable reasons for it in many quarters.

In this rivalry between the old and the new among the industrial states there have been many factors. Railroad rate structure, sources of materials and power, changes in industrial technique and organization, and changes in standards of living and market conditions, as well as other things, have played a part. Interest has been centered largely, however, on the main circumstantial factor in interstate competition, that of differences in legislative policy toward industry arising from differences in taxation, corporate regulation and labor legislation.

There is no question of the far-reaching influence of local legislative environment upon relative economic progress of the various states and of the need for wise planning and intelligent application of legislative policy in the states in the light of the long-time economic and social interests of their populations. The ultimate solution of the questions involved in this aspect of interstate competition probably lies in the lap of time. The first step toward amelioration of the situation doubtless requires a careful stock-taking by each of the states of its economic and legislative situation with a view to coming to a clearer and more objective understanding of the real relation of its legislative policy to its present industrial position and future growth.

A noteworthy effort in this direction was begun in 1926 by New York State through the creation by its legislature of an Industrial Survey Commission charged to consider the industrial and business conditions of the state in the light of its legislative policy. Desiring to assist the Survey Commission in its work, Associated Industries of New York State, Inc., a state-wide organization of industrial employers, requested the National Industrial Conference Board to study the industrial legislation of New York and its bearing upon the relative industrial position and progress of the state. The present volume is one of a series growing out of this study.

The main results of this study of "Industrial Progress and Regulatory Legislation in New York State" were submitted in preliminary form in public hearings before the Survey Commission in January, 1927. In the present revised form, the material of the preliminary report has been rearranged and amplified to make the presentation clearer. Additional material which has since become available, and analyses of census data which could not be completed in time for the original draft, have been included, but these supplementary data have tended to confirm rather than to alter the original conclusions.

In assembling the data for the inquiry the Conference Board has drawn freely upon the publications of governmental agencies, and has held many conferences with officials, business executives and others who were able to be of assistance. Special obligation is felt to nearly five hundred

manufacturing establishments in New York State, which together employ about one-fifth of the state's wage-earning population, for information furnished, as well as to the committees of industrial executives which acted as coordinating agencies in various communities in the state in securing the widest possible cooperation from industrial concerns. The Board wishes to express to all these groups its appreciation of the assistance rendered.

This volume is the result of an investigation conducted by the Conference Board's Research Staff, under the supervision of the Staff Economic Council.

In the preparation of its studies the National Industrial Conference Board avails itself of the experience and judgment of the business executives who compose its membership, and of recognized authorities in special fields, in addition to the scientific knowledge and equipment of its Research Staff. The publications of the Board thus finally represent the result of scientific investigation and broad business experience, and the conclusions expressed therein are those of the Conference Board as a body.

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INTRODUCTION

THE growth of industry and its increasingly important rôle in the economic welfare of the community have inevitably brought with them a larger measure of social regulation and control. As it displaces the isolated, self-sufficient agricultural economy, industry touches the life of the community at ever more numerous points—in its health, its family life, its education, its citizenship, as well as in its material standards of living—and thereby sooner or later affects public interests, arouses social instincts and invites governmental surveillance and legislative regulation. The more important industry becomes in the life of a nation, the more successful, in other words, it is, the more it must be prepared for this intrusion of the public or of the community interest into its affairs.

This natural sequence, however, gives rise in its turn to new and difficult problems. It is precisely because governmental regulation is so inevitable that its character and direction become so important. The industry of a nation, however strong and vigorous it may appear to be when it is most flourishing and progressive, is peculiarly sensitive to an inappropriate or hostile legislative environment. Though it often astonishes by the vigor with which it overcomes technical or market obstacles, it as frequently is seen to languish and wither under some feature of public policy which seems at first sight to be disproportionately trifling. This is because industry and trade are fundamentally dependent for their vigor and growth upon the psychology of

the individual personalities who initiate and manage them. The uncertainty, lack of confidence and fear which are engendered by a hostile or oppressive legislative atmosphere are fatal even though intangible influences upon industrial development.

The force of these considerations is vastly increased in their application to American conditions by the fact that American industries have grown up and operate within the jurisdiction of forty-eight states, in almost each one of which the legislative environment is different. At the same time, the breadth of the market for their products and the excellence of transportation and communication facilities have tended to make competition nation-wide, or at least to compel the industries of each state to take the field against the manufacturers of many other states. The lack of uniformity in legislative regulation in the industrial states (not to mention the spread of industries to non-industrial states to escape legislative restriction) has in effect added to the ordinary legitimate competition of manufacturers in productive efficiency, quality and price of their product, and the questionable and almost insurmountable factor of competition in legislative interference. If some artificial or circumstantial obstacle to or advantage in trade or production is an element in defining the unfair competition which is forbidden by our common and statutory law, it would probably not be stretching the point to say that the very differences in industrial legislation as among our states constitute a continuing basis of unfair competition in American industry.

Yet the remedy for this evil is clearly not to invite greater ones by supplanting diverse state by uniform federal regulation. The principle of state regulation and the economic differences among the various states are deep rooted, and are too valuable a source of the flexibility and variety in our economic and political life to be dispensed with. We need not uniformity but intelligent diversity in this matter. The difficulty has been that our state industrial legislation has grown up or has been built up often hastily and usually blindly, without regard to the needs and possibilities of the local situation, the relative stage of industrial development,

and the potentialities of future progress. The prime need in almost every industrial state is to lay out the legislative program affecting industry with an eye not only to the immediate and local evils to be corrected, but with consideration for the industrial future of the state and the relation of its industries to those of the country as a whole, being careful, above all, to adjust the elevation of local legislative standards to the realities of the situation and to the general progress in that respect.

From this point of view it would appear to be eminently desirable for the manufacturers and business men of the various states, few of whom have not felt the force of this problem in recent years, to give careful study to the trend of industrial and business growth in their respective states, absolutely and in comparison with other states, and to approach the questions of industrial legislation and taxation, which are ever coming up, in the light of a clearer understanding of the true relative position of their states in the general industrial growth of the country.

The adverse effects of regulatory legislation on industrial progress and activity of a state fall first and hardest on the workers of the state because their welfare is inextricably bound with industrial prosperity and growth.

In a sense the industrialists and business men of a state are charged with a responsibility to the state itself in this matter, because there are many states in which the economic welfare rests almost wholly upon the strength, permanence and growth of industry. From a purely business standpoint it is easy—and is becoming easier with the mobility of capital today—for industries to shift their operations to other states for even relatively slight advantages, and many have done this in the older industrial states, leaving the general public to awaken too late to the consequences of its insufficiently far-sighted policies. But business men are not often indifferent to state and local sentiment, and will usually feel that, before acting in sheer self-interest or self-protection, they have a first duty to acquaint the public with the situation that confronts them as a result of untimely or ill-conceived economic policies.

In this they have no easy task. Though—to revert to

what has been said above concerning the effects of legislation upon industrial growth—tangible and obvious evidences of adverse effects are rarely lacking in such cases, for the most part the existence of an unfavorable or inappropriate legislative environment for industry is not immediately manifest. Its effects are subtle and continuing and make themselves concretely evident only indirectly and after a long time. For this reason these effects are difficult to impress upon the public even if they are detected where they do exist, and those who protest them or point the danger in them get scant hearing. The public, and particularly those who have devoted themselves to the advancement of regulatory legislation, demand ocular evidence in such matters; if, after the passage of a new law which they have advocated, factories do not immediately shut down in large numbers or move to other states, they are unconvinced that any damage has been done. The gradual change in the tone of the industrial life of the state, the gradual shifting in the kinds of industry found in the state, and the slow changes in features of industrial operation as manufacturers and business men try to adjust themselves to the new situation—all of which are seen only by those engaged in industry and trade or sometimes are buried beyond the knowledge of the public in official statistics—go unnoticed for a long time.

These considerations, among others, make very difficult, for any group interested, the scientific analysis and valid comparison of the regulatory legislation in the various states in the light of their industrial position—or, at least, the drawing from such study of conclusions effective as a practical guide to legislative policy. The difficulty is increased especially by one fact which is often ignored in discussions of this kind, as in many others. Laws are not merely a matter of paper and ink: they depend for their effectiveness and in their effects upon their administration; and this in turn depends not only upon the formal machinery established for the purpose, but upon the quality, intelligence and attitude of the men who operate that machinery. Since human qualities are difficult to measure and compare, it is practically impossible to present a complete comparison of the legal and governmental environment of industry, in the

various states, without intimate experience of the situation which is necessarily beyond the range of any objective investigator. The utmost that can be done in this matter is to note the more striking contrasts between the formal provisions of the law in the various states.

Beyond this fact is the obvious one that legislative influences are by no means the only ones that play upon industry. The geographical position of the state, its local natural resources, its transportation relationships to the rest of the nation, the peculiarities of its people, changes in its population, the organization, skill, education, race and attitude of its working force, the qualities of its industrial and business leadership, its fiscal policy, and many other factors affect the relative position of its industries, and it is difficult if not impossible to distinguish in this complex play of influences those of regulatory legislation and its administration exclusively.

New York State affords an unusually excellent illustration both of the importance of the intensive study of state conditions affecting industry and of its difficulty. Its tremendous industrial growth, which has put it in the position of industrial supremacy among the states, has brought with it increasing demands for legislative control of industry and for fiscal expansion which have raised increasingly difficult problems of public policy in relation to regulatory legislation, taxation, workmen's compensation, and other matters affecting the general economic welfare, until both the legislators and business men of the state have been compelled, as noted in the Foreword of this volume, to pause and take stock of the industrial position of the state by way of securing guidance in future legislative policy. Certain of the more special aspects of the legislative problem, such as the Workmen's Compensation Laws of the state, have been considered in detail separately.[1] Other broad subjects, such as the fiscal and the educational problems in their relation to industry, are being studied. Realizing that the whole question of industrial progress resolves itself ultimately into one of the relative economic status of the workers of the state, this

[1] National Industrial Conference Board, "The Workmen's Compensation Problem in New York State," New York, 1927.

aspect also is being made the subject of separate investigations by the Conference Board.

The present study is intended primarily to consider the broader aspects of the regulatory legislation of the state in the light of its industrial position. It has been necessary to know where the industries of the state stand relatively today. What has been their relative progress economically? Is the state behind its proper position in respect of its legislative standards in industry, and what, in the concrete experience of New York business men, is the relation of those standards to its industrial position at present and in the future? These questions are examined in the following chapters. The first chapter outlines the industrial characteristics of New York State and provides a background against which the problem of regulatory legislation may be better understood. The second chapter describes the legislative regulations affecting New York State industry and compares them with those of competing states. The third chapter summarizes the views of New York State industrialists regarding the industrial position and prospects of the state and the relation of its legislative structure to them. Finally, the fourth chapter analyzes the official data regarding the development and changes in features of operation of New York State industries to ascertain whether they reveal any sign of retarding or adverse influences to the industrial progress of the state.

CHAPTER I

THE INDUSTRIAL SITUATION IN NEW YORK STATE

New York as an Industrial State

NEW YORK is essentially an industrial state. Despite the large rôle of New York City as a commercial and financial center for the whole country, the manufacturing industries of the state are the mainstay of its economic life. Its population of over ten million in 1920 included four and one-half million persons who were gainfully employed. Of this number 39% were engaged in manufacturing and mechanical industries. No other state in the Union comes within a million of having as many gainfully employed persons as has New York, nor within three hundred thousand of equaling the number of persons engaged in manufacturing and mechanical pursuits in New York. Excepting Pennsylvania, the next ranking state in number of persons industrially employed is Massachusetts, and the latter has only about half as many such workers as has New York.

The relative importance of the chief occupations in New York is indicated in Table 1, showing the distribution of the working population both for the state and for the remainder of the country in 1919.

A comparison of the figures for New York State with those for the United States in Table 1 reveals the special importance not only of manufacturing and mechanical pursuits, but of trade, and clerical occupations which are closely dependent upon the former. These three groups combined constituted nearly 65% of the working population in New York, while for the remainder of the United States less than 47% of the working population was employed in these occupations.

TABLE 1: DISTRIBUTION OF WORKING POPULATION, BY MAJOR GROUPS, 1919

(Source: Fourteenth Census of the United States)

Occupational Groups	New York State		United States, Excluding New York
	Number	Per Cent	Per Cent
Agriculture	314,774	7.0	28.7
Mining	7,549	.2	2.9
Manufacturing and mechanical	1,757,108	39.0	29.8
Transportation	403,574	9.0	7.2
Trade	591,334	13.1	9.8
Public service	100,374	2.2	1.8
Professional service	288,764	6.4	5.0
Domestic and personal service	472,961	10.5	7.9
Clerical	566,766	12.6	6.9
Total	4,503,204	100.0	100.0

The importance of manufacturing in the economic life of the state may be further indicated by a few significant comparisons with the extractive industries, agriculture and mining. The figures in Table 2, taken from the latest general census, show the relative number of establishments and persons employed in New York in each of the three major occupations, together with the value of their products. Although the agricultural industry in New York is of no slight importance, and indeed in some products takes leading rank among the states, it is obvious that in the range of their effects upon the economic welfare of the population of the state, the manufacturing industries are dominant.

TABLE 2: RELATIVE POSITIONS OF AGRICULTURE, MINING AND MANUFACTURING IN NEW YORK STATE, 1919

(Source: Fourteenth Census of the United States)

Occupation	Number of Farms or Establishments	Persons Gainfully Employed	Wage Earners (Average Number)	Value of Products
Agriculture	193,195	314,774	73,365	$743,823,000
Mining	700	7,549	6,202	56,780,000
Manufacturing	49,330	1,757,108	1,228,130	8,867,005,000

In the case of manufacturing, more recent statistical information is provided in the United States Census of Manufactures of 1923. Although no comparable figures for other

occupations are available, it is possible to compare the various features of productive enterprise for New York and for the United States as a whole. These data are given in Table 3.

TABLE 3: COMPARISON OF MANUFACTURING INDUSTRY IN THE UNITED STATES AND IN NEW YORK STATE, 1923

(Source: U. S. Census of Manufactures)

	Number of Establishments	Wage Earners (Average Number)	Wages	Cost of Materials	Value of Products	Primary Horsepower
			Thousands of Dollars			
United States...	196,309	8,778,156	11,009,298	34,705,698	60,555,998	33,094,228
New York State.	38,186	1,150,901	1,581,349	4,764,627	8,960,638	3,263,325
Percentage, New York State....	19.45	13.11	14.36	13.73	14.80	9.86

Two significant facts revealed in Table 3 are the relatively large proportion of establishments and the relatively small percentage of primary horsepower in New York. New York has nearly 20% of all the manufacturing establishments in the United States, but only about 10% of the rated horsepower capacity of engines, motors and other prime movers. These facts are of great importance in securing a clear picture of the industrial character of New York State and will be discussed more fully later. Here it need only be noted that they suggest a relatively smaller average size of establishment and a smaller use of power per establishment in New York State than in other states.

NEW YORK AS THE LEADING INDUSTRIAL STATE

Not only is manufacturing the pivotal industry in New York State, but New York leads all other states of the Union in this field. Table 4, giving the latest available census data for each of the states which in 1923 produced manufactured products valued at more than one billion dollars, shows clearly the relative importance of the foremost states.

These figures reveal that in 1923 New York State exceeded the next most important industrial state, Pennsylvania, by a billion and a half dollars in the value of its manufactured

products. The number of establishments in New York was double that of Pennsylvania, while the number of wage earners employed in manufacturing in the two states was approximately the same, but with New York slightly in the lead. Here, again, it may be noted in passing, the figures suggest that industry in New York is organized on a smaller scale of operations than in Pennsylvania and some other states, a question discussed more fully in the next section.

TABLE 4: RELATIVE IMPORTANCE OF LEADING INDUSTRIAL STATES, 1923

(Source: U. S. Census of Manufactures)

State	Number of Establishments	Wage Earners (Average Number)	Value of Products (Thousands)
New York	38,186	1,150,901	$8,960,638
Pennsylvania	19,054	1,095,057	7,381,687
Ohio	11,195	699,132	5,146,515
Illinois	14,345	645,627	5,041,114
Michigan	5,697	503,308	3,882,192
Massachusetts	10,519	667,172	3,570,543
New Jersey	8,767	448,069	3,396,628
California	9,220	246,154	2,215,282
Indiana	4,909	291,131	2,031,675
Wisconsin	7,832	247,851	1,720,198
Missouri	5,291	196,694	1,547,189
Connecticut	3,130	263,232	1,288,281

With the exception of Pennsylvania, no other state sufficiently approaches the record of New York to furnish a striking comparison. Ohio and Illinois each produces slightly more than half as much value in manufactured products as does New York, and each employs a proportionate number of wage earners. New York has more than three times as many establishments as Ohio, however, and almost three times as many as Illinois. Michigan, with its large automobile factories, and Massachusetts, with its extensive textile mills, each employs approximately half as many wage earners as are occupied in manufacturing in New York, but the value of the output in each of these two states is considerably below one-half of the New York values.

To illustrate in a different way the leadership of New York, an examination has been made of the large industries in all of the states appearing in Table 4. The following list shows

for each of these states the number of industries producing commodities valued at more than $75,000,000 in 1923:

State	Number of Industries
New York	26
Pennsylvania	23
Illinois	12
Ohio	10
Massachusetts	9
New Jersey	8
Michigan	6
California	6
Indiana	6
Wisconsin	4
Missouri	3
Connecticut	3

As regards the total manufacturing industry in the United States as well as in individual states, there was little change between 1923 and 1925 except for a slight reduction in most states of the number of establishments, and the number of wage earners employed, together with a general increase in the total value of manufactured products. Detailed figures for individual industries by states are not yet available for 1925.

In 1923 New York led all other states in number of large industries, number of manufacturing establishments, value of factory output and number of wage earners engaged in manufacturing. The importance of the manufacturing industries of New York State not only in its own economic life but in that of the nation may be further emphasized by referring again to Table 3, in which certain features of New York State industries are compared with the corresponding features for the United States. Considering manufactures as a whole, the product of the factories of New York State in 1923 constituted nearly 15% of the total values produced in the United States, while the average number of wage earners engaged in the production of these commodities amounted to over 13% of the total in the factories of the nation.

Characteristics of New York State Industry

In studying the industrial situation in a state in the light of legislative regulation, it is of prime importance to understand not only the place which the manufacturing industries occupy

in the economic life of the state but the make-up, characteristics and peculiarities of the industrial picture. For if the industries of the state or its working population are in some way peculiar or highly specialized or differ widely from those of other states, comparisons are made difficult or meaningless, and the problem of legislative regulation must be regarded in a special light on that account. The first test of industrial peculiarity is of course the relative importance of the various industries in the state's total industrial make-up, and a comparison with the industrial make-up of other states.

In measuring the relative importance of the manufacturing industries of a state, a number of criteria based upon the census figures might be used, each resulting in a somewhat different arrangement or classification. If the amount of money expended in the form of wages by the various industries were taken as a means of comparison, those industries which employ a large number of highly skilled artisans would rank high.[1] If the selection were based upon the value which the respective manufacturing processes add to their raw materials, greater importance would be given to the highly integrated industries and to those whose finished commodities, produced from relatively inexpensive raw materials, have, for one reason or another, a particularly high value.[2]

Industries might also be ranked according to the respective number of establishments or the amount of coal or power utilized. All of these methods, however, serve to emphasize some aspect of industrial organization which is not of great importance in connection with the present study. In general the most satisfactory standards for measuring the relative importance of individual industries are those provided in the census figures showing the value of the products of the several industries and the number of wage earners employed by each. Both of these standards furnish bases for determining the relative size and the influence upon industrial and business conditions of individual industries in a state.

Table 5 shows the relative importance of the twenty-five leading industries of New York State as determined by the

[1] The fur industry, for example, ranks fifteenth in importance on this basis, while on the basis of number of wage earners employed it ranks twenty-sixth.

[2] This classification brings photographic apparatus and supplies and patent medicine industries into a position of increased importance.

value of their products according to the latest available census figures. These industries combined produced in 1923 products having a value of over $5,500 millions, or a little more than 60% of the value of all the products manufactured within the state. Since the remaining 40% is distributed among approximately 250 other industries, the importance of this group as a whole is greater than the percentage figures would appear to indicate.

TABLE 5: LEADING INDUSTRIES IN NEW YORK STATE ON THE BASIS OF VALUE OF PRODUCTS, 1923

(Source: U. S. Census of Manufactures)

Rank	Industry	Value of Products
1.	Clothing, women's	$1,123,349,691
2.	Clothing, men's	519,179,934
3.	Printing and publishing	511,172,634
4.	Foundry and machine shop products	273,933,262
5.	Bread and bakery products	236,546,477
6.	Knit goods	230,525,505
7.	Millinery and lace goods	197,627,982
8.	Slaughtering and meat packing	196,355,801
9.	Sugar refining, cane	196,163,387
10.	Boots and shoes, other than rubber	195,082,384
11.	Electrical machinery, apparatus and supplies	192,224,937
12.	Motor vehicles (not including motorcycles)	167,315,911
13.	Fur goods	157,768,262
14.	Paper and wood pulp	140,468,586
15.	Furniture	137,328,234
16.	Tobacco—cigars and cigarettes	129,659,423
17.	Chemicals, not elsewhere classified	128,376,073
18.	Iron and steel, steel works and rolling mills	122,964,813
19.	Gas, manufactured, illuminating and heating	107,969,436
20.	Silk manufactures	105,018,097
21.	Confectionery and ice cream	103,215,338
22.	Shirts	101,029,797
23.	Car and general construction and repairs, steam railroad repair shops	92,263,272
24.	Flour-mill and grain-mill products	89,848,140
25.	Food preparations, not elsewhere classified	86,890,730
	Total	$5,536,278,106

One of the most significant facts indicated in this table is the relative importance of the clothing industry in New York State. The two branches of that industry combined produced nearly 30% of the total value of the products of the twenty-five leading industries and approximately 18% of the total value of all manufacturing products of the state. The third ranking industry, printing and publishing, did not produce values equal to one-third of those of the clothing

industry, while foundry and machine shop products, ranking fourth, were valued at little over half of those of printing and publishing. Industries ranking from fifth place down to twenty-fifth did not differ much in value of products, but the values were all small compared with those of the four leading industries in the state.

TABLE 6: LEADING INDUSTRIES IN NEW YORK STATE ON THE BASIS OF THE NUMBER OF WAGE EARNERS EMPLOYED, 1923

(Source: U. S. Census of Manufactures)

Rank	Industry	Wage Earners Employed
1.	Clothing, women's	81,437
2.	Clothing, men's	58,620
3.	Foundry and machine shop products	52,098
4.	Printing and publishing	49,624
5.	Knit goods	45,419
6.	Boots and shoes, other than rubber	41,277
7.	Electrical machinery, apparatus and supplies	36,054
8.	Bread and other bakery products	32,126
9.	Millinery and lace goods	30,869
10.	Car and general construction and repairs, steam railroad repair shops	30,085
11.	Furniture	25,674
12.	Paper and wood pulp	17,773
13.	Iron and steel, steel works and rolling mills	16,978
14.	Tobacco—cigars and cigarettes	16,030
15.	Motor-vehicle bodies and parts	15,266
16.	Chemicals, not elsewhere classified	15,061
17.	Confectionery and ice cream	14,986
18.	Carpets and rugs, wool, other than rag	14,352
19.	Silk manufactures	14,272
20.	Shirts	13,326
21.	Boxes, paper and other, except wooden	13,200
22.	Motor vehicles (not including motorcycles)	11,160
23.	Collars, men's	10,164
24.	Gas, manufactured, illuminating and heating	10,164
25.	Brass, bronze and other non-ferrous alloys and manufactures of these alloys and of copper	10,109
	Total	676,124

In Table 6 the industries of New York State are arranged in the order of their importance on the basis of the number of wage earners employed in each. These twenty-five industries combined employed 676,124 workers, or approximately 58% of all the wage earners engaged in the manufacturing industries of the state in 1923. Slaughtering and meat packing, cane sugar refining, fur goods, flour-mill products and food preparations, industries which were included in Table 5,

are less important from the point of view of the number of wage earners employed and therefore do not gain recognition in Table 6. Their places are taken by industries producing motor-vehicle bodies and parts, carpets and rugs, paper boxes, men's collars, and brass and bronze products, which ranked among the twenty-five leading industries of New York State in 1923 on the basis of wage earners employed.

In spite of some shifts in relative position, it is noteworthy that the leading industries are in approximately the same position when measured by the value of products and by the number of wage earners employed. The clothing industry, measured by the number employed, again stands in first place, although its pre-eminence is not so great. The printing and publishing industry exchanges places with foundry and machine shop products, which it outranked in Table 5. The knit goods industry, which ranked sixth on the basis of the value of its product, ranks fifth with respect to the number of workers employed. Other industries, which rank in approximately the same position in both tables, include millinery and lace goods, paper and wood pulp, tobacco, chemicals, silk manufactures and shirts.

In view of its high ranking among the industries in New York State, both as regards the value of its products and the number of wage earners employed, the clothing industry may be expected to exert a decided effect on the industrial make-up of the state. It is important, therefore, to analyze the character of the clothing industry in New York State, the number of establishments and the number of wage earners per establishment, and to compare the situation in New York with that in the country as a whole and particularly in some of the leading industrial states.

Clothing Industry and Its Effect on Industrial Make-Up

Clothing manufacturing establishments, as a rule, are organized on a small-scale basis, yet the clothing industry, in New York State was larger in 1923 than the leading industry in any other state. In New York there were 7,288 clothing establishments, and they produced goods valued at $1,636,529,625, as shown in Table 5. This is an average value of product per establishment of approximately $225,000.

These 7,288 establishments employed 140,057 wage earners, or nineteen wage earners per establishment. This is an amazingly small number of wage earners per establishment for the leading industry of a state, but the product per wage earner was unusually large. Only two states, other than New York, had an industry producing goods valued at one billion dollars in 1923; in Michigan it was the motor vehicle group, and in Pennsylvania the iron and steel mill group. In these two industries the average number of wage earners per establishment was over 2,700 in the former and 900 in the latter, but the value of the product per wage earner was less than in the New York clothing industry. It is obvious that the effect of the clothing industry on the industrial make-up of the state is to reduce the average size of establishments.

It is significant, furthermore, that in the entire United States there were only 11,653 clothing establishments, as compared with 7,288 in New York. The 4,365 establishments outside of New York State were distributed among about thirty states, with less than one thousand in any state. Pennsylvania, Illinois, Massachusetts, New Jersey, Ohio and Maryland had only 3,232 establishments in 1923.

Several other industries contribute in marked degree to the tendency toward small scale organization in New York. In millinery and lace goods production, for instance, New York had 1,702 establishments employing 30,869 wage earners in 1923. This reveals an average of eighteen wage earners per establishment. There were only about 990 other millinery and lace goods establishments in the United States, and New Jersey had 393 of them. Illinois ranked third with 162 and Pennsylvania fourth with ninety, the remainder being scattered among about twenty states.

Another illustration of similar character is the fur goods industry. There were 1,301 establishments in New York State in 1923, with an average of eight wage earners per establishment. In the remainder of the United States there were only 457 establishments, and no other state had as many as one hundred.

The average number of wage earners per establishment for all industries in New York State in 1923 was only thirty,

whereas in Pennsylvania it was fifty-seven. This no doubt is due partly to the difference in the types of the dominating industries in the two states, the New York list being headed by such groups as the clothing industries, whereas the most prominent industries in Pennsylvania are the iron and steel mills. The one operates many small establishments, while the other operates a few very large ones. Yet it is not altogether because of the clothing and similar industries that the average size of establishment in New York is so small, comparatively. The tendency, though in less degree, is common to most of the larger industries of the state. In foundry and machine shops, for instance, the number of employees per establishment is smaller in New York than in Pennsylvania, Ohio, Illinois, New Jersey, Connecticut, or Michigan. In fact, if establishments employing less than fifty workers be excluded from the comparison so as to eliminate or at least minimize the effect of the clothing industries upon the average employment, the average number of workers per establishment is still considerably smaller in New York than in the chief competitive states.[1]

It is rather probable that the concentration of a large portion of the manufacturing establishments of the state in and about New York City has been a factor in restraining the tendency toward large scale enterprise, since conditions in the metropolitan district are not favorable to the latter. According to the United States Census[2] of 1919, New York County at that time contained 46.6% of all the manufacturing establishments in New York State. The average number of wage earners per establishment in New York County, which includes only Manhattan, was seventeen, and the value of the product per establishment was $153,000, whereas for the remainder of the state there were thirty-two wage earners per establishment, producing goods valued at $203,000. From this it is apparent that the product per wage earner in New York County was about $9,000, and in the remainder of the state it was only slightly above $6,300. In New York City as a whole the average number of wage

[1] This comparison is for 1919, because the later censuses of manufactures do not permit such a separation to be made.

[2] Fourteenth Census of the United States, 1920, Vol. 9, Manufactures, p. 971.

earners per establishment was 20, while for the state, exclusive of all five boroughs of New York City, the average number of wage earners per establishment was thirty-five.

It is well known that the expenses of manufacturing are much greater in New York County than in the remainder of the state. Real estate is too costly, rentals are too high, and congestion is too great a handicap to be attractive to large scale industry. The record proves, however, that small industries thrive within Manhattan. The demands and the opportunities in metropolitan New York make possible and profitable such industries as the clothing, millinery and lace, fur goods, and other small-scale manufacturing establishments which find it advantageous to keep their factories at the very heart of their markets.[1]

As will be seen later, these circumstances have probably been influential also in making the amount of power installed in the average establishment in New York State comparatively small.

A most striking feature of the industrial situation in New York State is the small rôle which corporate ownership plays in the control of its manufacturing establishments, in comparison with other industrial states. The percentage of the total number of establishments owned by corporations in New York in 1919[2] was 29.1, less than in any other competing industrial state except Pennsylvania, while the percentage of the total number of wage earners employed in establishments under corporate ownership was 76, or about 10% less than in any other competitive state. This fact lends added significance to the predominance of small scale establishments in New York industry.

Even from the general facts just presented it is clear that New York State industry has characteristics different from those of industry in any other important state. Specialized production, small scale organization, a relatively large number of establishments and an immense metropolitan market for its goods near at hand, distinguish the state as an unusual industrial area.

[1] See Reports of Regional Survey, Russell Sage Foundation.

[2] The separation by types of ownership for individual states is not available for later census periods.

The industrial peculiarities of the state, however, are not and can not be fully revealed in the census data which have just been discussed. The classification of industries is too broad and the statistics are too general to afford the clear, precise and concrete picture of the industrial character of the state which is to be desired. It is a fact well known to experienced persons from direct observation that many states, and perhaps all, have distinctive characteristics in their industrial life as well as in their general economic and social features. Such elements as the particular type of product, the size and ownership of establishments, the attitude and temper of the industrial management, the character of the typical industrial worker, and others, contribute to impress this distinctive character upon the industrial life of the state. One has only to mention Massachusetts to call to mind an example of this curious phenomenon of "personality" which a state may have, industrially, as in other respects. It is fair to say that the industrial character of each state is one of the most important factors which determine the effect that industrial or other legislation will have upon its economic life. At least, it is an element which should be but rarely is taken into account in formulating governmental policies.

A comprehensive and careful study of New York State has never been made from this point of view, but there are indications that industrially New York State still belongs today, as it does historically, among the New England group. Generally speaking, it is still a state of craft industries, and its products are specialties of relatively high labor content and value. In other words, the era of mass production, of large-scale mechanized industry, has not made itself felt in any dominant way in New York State, and the state remains still in strong contrast in its industrial character to those southern and middle western states in which some of the new gigantic machine industries have sprung up over night.

If this contrast is valid—and it is merely suggested and not insisted upon here—it is obvious that the legislative policy toward industry in New York State must needs be differently conceived than if the state were one like Michi-

gan, for instance. What has been termed "craft" industry involves a very different type of labor relationship, a different type of labor, different influences upon wage costs and different requirements for the protection of health and safety of workers, as well as different degrees of ability to bear the cost of such regulation, than do the new large scale mass production industries. There is need for closer study of legislative policy in all the larger industrial states from this point of view.

Composition of the Working Force

The composition and characteristics of the industrial population of a state are important factors in considering the appropriateness of its industrial legislation. Should it be found, for example, that the industries of New York employ a much larger proportion of women wage earners than is the case in other industrial states or that the number of minors employed in manufacturing establishments is unusually large, the demand for more stringent regulatory legislation in New York than in other states might be justified. Urban congestion is perhaps one of the strongest incentives to regulatory legislation, and this may be the result of a large influx of foreign born or of the general drift from farm to city.

Industrial workers have been recruited during the last few decades from two main sources: from rural districts and from immigration. Throughout the United States the movement from country to city has been noticeable, and while the concentration of population in urban centers has gone forward to a greater extent in New York than in those states whose industries are of more recent origin, the rapidity of urban growth in New York has been approximately the same as for the country as a whole, as may be seen from Table 7, which shows the percentage distribution of urban and rural population in the United States, New York and selected states for the two decades 1900 to 1920.

The movement from country to city has been much more rapid in Illinois, Ohio, and Michigan than in New York. The contrary has been the case in Massachusetts, while in Pennsylvania and New Jersey the rate has been about the same as in New York. A relatively high degree of urban

development has already been reached in Massachusetts and New York, which enables other states now undergoing a rapid industrial development to record a greater percentage movement of population from rural to urban communities.

TABLE 7: PERCENTAGE DISTRIBUTION, URBAN AND RURAL POPULATION, 1900 TO 1920

(Source: Population Census of the United States, 1920)

State	1920		1910		1900	
	Urban	Rural	Urban	Rural	Urban	Rural
United States	51.4%	48.6%	45.8%	54.2%	40.0%	60.0%
New York	82.7	17.3	78.8	21.2	72.9	27.1
Illinois	67.9	32.1	61.7	38.2	54.3	45.7
Ohio	63.8	36.2	55.9	44.1	48.1	51.9
Michigan	61.1	38.9	47.2	52.8	39.3	60.7
Massachusetts	94.8	5.2	92.8	7.2	91.5	8.5
Pennsylvania	64.3	35.7	60.4	39.6	54.7	45.3
New Jersey	78.4	21.6	75.2	24.8	70.6	29.4

Racial Character of Working Population

New York City has been the port of entry for a very high percentage of the immigrant population which has tended to congregate in the cities and formerly represented a considerable proportion of the country's industrial working force. The percentage of foreign-born white inhabitants in New York State was 26.8% in 1920, as compared with 13% for the country as a whole. On the other hand, the non-white population, made up chiefly of negroes, represented only 2% of the population of New York in 1920, whereas the figure for the United States was 10.3%. The general distribution of the various elements in the population of the state is shown in Table 8.

The table shows that the percentage of foreign-born whites is higher in New York City than in any other industrial center in the state. Albany, Syracuse and Troy have a comparatively small proportion of foreign-born inhabitants. In the case of Troy there has been a considerable decline in the percentage of foreign-born during the past two decades, while in only two of these eight industrial centers has the number of foreign-born whites increased during the same period.

TABLE 8: RACIAL CHARACTER OF THE POPULATION IN NEW YORK STATE, BY INDUSTRIAL CENTERS, 1900 TO 1920

(Source: Population Census of the United States, 1920)

Race	Year	New York State	Albany	Buffalo	New York City	Rochester	Schenectady	Syracuse	Troy	Utica
		%	%	%	%	%	%	%	%	%
Native white.....	1920	71.1	83.3	75.1	61.7	75.3	76.4	80.4	83.2	74.9
	1910	68.4	80.8	71.6	57.5	72.5	74.0	76.7	79.0	70.9
	1900	72.5	79.9	70.0	61.4	74.6	77.0	77.1	75.6	75.7
Foreign-born white	1920	26.8	15.6	24.0	35.4	24.1	23.1	18.8	15.9	24.7
	1910	29.9	18.1	28.0	40.4	27.0	25.6	22.4	20.1	28.6
	1900	26.0	18.8	29.5	36.7	25.0	22.5	21.9	23.7	23.9
All other*.....	1920	2.1	1.1	0.9	2.9	0.6	0.5	0.8	0.9	0.4
	1910	1.7	1.1	0.4	2.1	0.5	0.4	0.9	0.9	0.5
	1900	1.5	1.3	0.5	1.9	0.4	0.5	1.0	0.7	0.4

With the exception of Massachusetts, Connecticut and Rhode Island, New York State has the highest percentage of foreign-born white population of any of the industrial states. The number of such persons in New York was 2,786,112 in 1920. This was approximately twice the number of such inhabitants in Pennsylvania, and more than twice as many as in Massachusetts or Illinois. In regard to the percentage of the foreign-born white population who have become naturalized citizens, obtained first papers, or remained aliens, there appears to be no special difference between New York and the competing industrial states.

Sex Composition of Working Population

In determining the character of the population in its relation to economic and industrial development, the question of sex composition is important. New York State shows a somewhat lower ratio of males to females than is true of the entire United States. More significant, however, is the relatively high ratio of males in those cities of the state in which the leading industries are of such a character that men are predominantly employed. In Buffalo, Syracuse and Schenectady the ratio of males to females is higher than in other cities. In Troy, Albany and Utica, on the other hand, women are conspicuously more numerous than men.

TABLE 9: SEX COMPOSITION OF POPULATION OF NEW YORK STATE, BY INDUSTRIAL CENTERS, 1900 TO 1920

(Males to 100 Females)

(Source: Population Census of the United States, 1920)

	New York State	Albany	Buffalo	New York City	Rochester	Schenectady	Syracuse	Troy	Utica
1920	99.8	93.2	100.2	99.5	96.8	102.3	100.2	84.7	94.7
1910	101.2	92.9	100.6	99.9	98.7	114.2	100.5	85.4	95.6
1900	98.9	91.7	98.6	98.5	91.1	116.6	94.1	85.8	91.1

Since regulatory legislation deals chiefly with the employment of women, the analysis of the working force may properly be narrowed to women wage earners. The wage earners engaged in manufacturing in New York State at the close of the year 1919 numbered 1,228,130, of whom 876,680, or 71.4% were men, and 351,450, or 28.6% were women.[1] In similar occupations the proportion of women wage earners for the country as a whole was 20.1%. In New Jersey, Pennsylvania, Illinois, Wisconsin and Ohio the percentages of women wage earners in manufacturing ranged from 23.6% to 14.4%. Michigan had the lowest percentage, 11.4. In certain eastern states, however, the proportion of women workers in industry was greater than in New York. In Massachusetts 31.4% of the industrial wage earners were women, while in Rhode Island women constituted 35.8% of the state's industrial workers. While it is true, therefore, that New York has more women wage earners in industry than has any other state of the Union, and while the proportion of women so engaged in New York is higher than it is in the United States as a whole, nevertheless the percentage in New York is not much above the average for such states as Connecticut, Pennsylvania, Ohio, Illinois and New Jersey, while it is actually below the average for Massachusetts Rhode Island, New Hampshire and North Carolina.

In Table 10 are shown the principal industries in New York State employing large numbers and percentages of women workers. The women's clothing industry, it should be noted, again leads the list. Industries producing various articles of wearing apparel for both men and women constitute a large

[1] Fourteenth Census of the United States.

proportion of the twenty-five industries included in the table.

TABLE 10: NUMBER OF WAGE EARNERS AND PERCENTAGE OF WOMEN IN VARIOUS INDUSTRIES, NEW YORK STATE, 1919
(Source: U. S. Census of Manufactures)

Industry	Average Number (Men and Women)	Percentage of Women
Clothing, women's	102,652	61.2
Clothing, men's	62,008	35.3
Printing and publishing	49,260	18.8
Knit goods	41,372	64.3
Electrical machinery, apparatus and supplies	37,598	18.6
Boots and shoes, other than rubber	34,710	30.5
Bread and bakery products	28,541	25.2
Millinery and lace goods	28,096	71.7
Tobacco—cigars and cigarettes	21,095	55.6
Confectionery and ice cream	16,622	52.5
Boxes, paper and other (except wooden)	14,509	55.9
Silk goods	13,342	58.7
Shirts	12,136	74.7
Collars and cuffs, men's	10,920	77.7
Cotton goods	9,222	39.1
Carpets and rugs, other than rag	9,073	36.8
Bookbinding and blank-book making	8,513	49.6
Woolen and worsted goods	7,812	50.6
Buttons	6,568	46.7
Dyeing and finishing textiles (not in textile mills)	6,076	31.3
Furnishing goods, men's	5,961	69.4
Fancy articles, not elsewhere specified	5,943	51.6
Gloves and mittens, leather	5,510	50.0
Canning and preserving, fruits and vegetables	4,835	47.2
Patent medicines and compounds	4,546	52.9

In many other respects, the composition of the working force in New York's industries resembles closely the conditions prevailing in other industrial states. Among children under 16 years of age who are employed as wage earners in manufacturing industries, the percentage of girls in New York is practically the same as in the United States as a whole. Massachusetts, which imposes greater legal restrictions upon the employment of children under 16 years of age than New York, and Pennsylvania, New Jersey and Rhode Island with less in the nature of regulatory restrictions, all have higher proportions of girls among this group of employed young persons than has New York.

Examination of other groupings of the working force, such

as the persons gainfully employed (both as a whole and in manufacturing and mechanical industries), and the total population classified in various ways, fails to reveal any outstanding peculiarities of the New York wage earners. Although industry in New York State has developed along certain lines which have no parallel in any other state, the individuals who work in its factories represent a fair cross-section of the industrial population in the United States. It is true that more women are employed in manufacturing in New York than in any other state, but the percentage of women workers in the manufacturing and mechanical industries in 1920 was lower in New York than in four other states,[1] and not much higher than in such industrially developed states as Pennsylvania, New Jersey and Illinois. The characteristics of New York's industrial population, therefore, can not be regarded as a decisive consideration in relation to legislative policy toward industry in New York State.

Representative Character of Industry in New York State

So far emphasis has been placed on the peculiarities of New York's industrial life. The effect of the wearing apparel industries on the industrial make-up of the state was pointed out and compared with the situation in other states. It remains to be seen whether the prominent position which these industries occupy in New York is sufficient to mark the state as so peculiar an industrial unit that comparison of its industrial situation and development with those of other states would not be a valid test of the suitability of the legislative environment of industry in the state.

Of the twenty-five leading industries of New York State, as determined by the value of their products in 1923, only seven industries were not included among the twenty-five most prominent industries of the United States. In this respect, the situation in New York resembles more closely the situation in the United States as a whole than is true of any industrial state with the exception of Ohio, Pennsylvania and Illinois. Ohio, with only six of her twenty-five leading

[1] New Hampshire, Massachusetts, Rhode Island and North Carolina. (Population Census of 1920, Vol. IV, p. 51.)

industries out of line with the twenty-five most important industries of the United States, is the only state which seems to be more representative than New York. Among the other states, however, New York's position is unexcelled, being on a parity with that of Pennsylvania and Illinois and on a much more representative plane than is the case with New Jersey, Massachusetts, Connecticut, Rhode Island, Missouri, Michigan or Wisconsin.

The following list shows the number of leading industries in eleven industrially prominent states which are not found among the twenty-five leading industries of the United States.

Ohio	6
New York	7
Pennsylvania	7
Illinois	7
Massachusetts	9
Wisconsin	9
New Jersey	10
Michigan	11
Missouri	11
Connecticut	17
Rhode Island	17

A further test of the representative character of industry in New York State may be made by means of a percentage distribution of production and labor in this state and in the United States. The thirty leading manufacturing industries of New York, selected on the basis of the value of their products and the number of wage earners employed, account for 65.5% of the value of the state's manufactured products, and for 61.2% of its wage earners engaged in manufacturing. In the country as a whole the products of these thirty industries comprise 51.7% of the total value of manufactures, and the wage earners employed by these industries constitute 49.5% of the total.

Table 11 presents the comparative data for the thirty industries. It shows that in many cases the percentage of total production in New York represented by a specific industry is very close to the percentage which that industry bears to the total product of the United States. The table reveals that in twenty out of these thirty industries New York is relatively ahead of the United States as regards the percentage of value of product in each specific industry to the

TABLE 11: RELATIVE INDUSTRIAL STANDING OF NEW YORK STATE AND THE UNITED STATES, 1923

(Source: U. S. Census of Manufactures)

Industry	Value of Products				Number of Wage Earners			
	Percentage Distribution			Ratio (%) of New York to United States	Percentage Distribution			Ratio (%) of New York to United States
	United States	New York	U. S. with N. Y. Excluded		United States	New York	U. S. with N. Y. Excluded	
Clothing, women's	2.3	12.5	.5	79.9	1.5	7.1	.7	61.1
Clothing, men's	1.9	5.7	1.3	43.5	2.2	5.1	1.8	30.1
Printing and publishing	3.3	5.7	2.9	25.3	2.8	4.3	2.6	20.1
Foundry and machine shop products	3.9	3.1	4.0	11.7	5.1	4.5	5.2	11.6
Bread and bakery products	1.9	2.6	1.7	21.1	1.9	2.8	1.7	19.8
Knit goods	1.4	2.6	1.2	27.2	2.2	3.9	2.0	23.4
Millinery and lace goods	.5	2.2	.2	66.4	.6	2.7	.3	56.9
Slaughtering and meat packing	4.3	2.2	4.6	7.6	1.5	.6	1.7	5.1
Sugar refining, cane	1.2	2.2	1.0	27.0	.2	.4	.1	28.7
Boots and shoes, other than rubber	1.7	2.2	1.6	19.5	2.6	3.6	2.4	18.3
Electrical machinery, apparatus and supplies	2.1	2.1	2.1	14.9	2.7	3.1	2.6	15.3
Motor vehicles (not including motorcycles)	5.2	1.9	5.8	5.3	2.7	1.0	3.0	4.6
Fur goods	.3	1.8	.1	79.7	.2	.8	.1	67.6
Paper and wood pulp	1.5	1.6	1.5	15.5	1.4	1.5	1.3	14.7
Furniture	1.3	1.5	1.2	17.7	1.9	2.2	1.9	15.3
Tobacco—cigars and cigarettes	1.4	1.4	1.3	15.8	1.5	1.4	1.5	12.3
Chemicals	1.0	1.4	1.0	20.3	.9	1.3	.8	20.1
Iron and steel, steel works and rolling mills	5.2	1.4	5.9	3.9	4.4	1.5	4.9	4.4
Gas, manufactured, illuminating and heating	.7	1.2	.7	24.0	.5	.9	.4	24.0
Silk manufactures	1.3	1.2	1.3	13.8	1.4	1.2	1.5	11.4
Confectionery and ice cream	1.0	1.2	1.0	16.5	1.0	1.3	.9	17.3
Shirts	.4	1.1	.3	41.9	.6	1.2	.5	25.8
Car and gen'l const. and repairs, steam R.R. repair shops	2.4	1.0	2.6	6.4	5.6	2.6	6.0	6.2
Flour mill and grain-mill products	1.7	1.0	1.9	8.6	.4	.2	.4	7.2
Food preparations	.8	1.0	.7	18.4	.3	.5	.3	20.0
Motor vehicle bodies and parts	1.7	.9	1.8	7.9	1.9	1.3	1.9	9.3
Carpets and rugs, wool, other than rag	.3	.8	.3	35.2	.4	1.2	.3	40.8
Boxes, paper and other (except wooden)	.4	.7	.4	23.0	.6	1.1	.6	23.2
Collars, men's	.1	.5	.0	96.5	.1	.9	.0	97.3
Brass, bronze and other non-ferrous alloys, etc.	.8	.9	.8	15.5	.7	.9	.7	15.6
Other industries	48.0	34.4	50.3	10.7	50.2	38.9	51.9	10.1
All industries	100.0	100.0	100.0	14.8	100.0	100.0	100.0	13.1

total product. Women's clothing and knit goods industries fall among the twenty-five leading industries of the United States as a result of the extremely heavy production in New York State. A few other manufactured lines, such as fur goods, millinery and lace goods, and men's collars, which are confined chiefly to New York, as well as men's clothing, shirts, and carpets and rugs, are important in New York, but not sufficiently prominent in the country as a whole to be ranked as leaders.

This analysis of the industrial structure in New York State shows that in spite of its peculiarities, the state as a whole is a well-balanced industrial unit. The leading industries of the state, with the exception of the wearing apparel establishments which are concentrated in New York City, are fairly representative of those of the country as a whole. If the clothing industries, which are centered in a few cities of the state, be left out of account, New York is fairly typical in the composition of its industries. This means, for one thing, that there is no prima facie reason for exceptional legislative regulation of New York State industries, and also that a comparison of the industrial development of New York State with that of other industrial states and with the United States as a whole should afford a good test of the relative progress of New York State industrially, and a suggestion whether there appear to be any hampering influences at work in it. To make such comparisons it is first necessary to ascertain what are the chief states having industries with which those of New York come into important competition.

States Competing with New York

To determine with a fair degree of accuracy which states may be classed as competitors of New York, Table 12 has been compiled from census data.[1] Taking as a basis for the computation the twenty-five most important industries of New York State as determined by the values of their products, the table shows the states, excluding New York, which rank highest in these same industries, together with the percentage ratio of the product of each state to that of New

[1] United States Census of Manufactures, 1923.

TABLE 12: LEADING INDUSTRIES OF NEW YORK COMPARED IN VALUE OF PRODUCT WITH THE PRINCIPAL PRODUCING STATES IN 1923

New York = 100

(Source: U. S. Census of Manufactures)

Rank in New York State	Industry	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product	State	Per Cent of New York Product
18	Iron and steel, steel works and rolling mills	Pa.	1,051	Ohio	658	Ind.	200	Ill.	174	W. Va.	81	Ala.	61	N. J.	47
12	Motor vehicles (not including motorcycles)	Mich.	928	Ohio	212	Ind.	89	Mo.	82	N. J.	77	Wis.	71	Pa.	58
8	Slaughtering and meat packing	Ill.	309	Kans.	114	Neb.	87	Mo.	78	Iowa	78	Minn.	63	Pa.	61
20	Silk manufactures	Pa.	272	N. J.	175	Conn.	71	Mass.	32	R. I.	30	Va.	4	Md.	1
23	Car and general construction and repairs, steam railroad repair shops	Pa.	266	Ill.	129	Ohio	117	Ind.	74	Texas	51	Calif.	46	Minn.	44
16	Tobacco—cigars and cigarettes	N. C.	204	Pa.	92	N. J.	52	Va.	48	Fla.	28	Ohio	22	Mich.	16
24	Flour-mill and grain-mill products	Minn.	197	Kans.	117	Ill.	80	Mo.	69	Ohio	48	Texas	45	Calif.	44
10	Boots and shoes, other than rubber	Mass.	149	Mo.	62	Ohio	31	Ill.	31	Wis.	29	N. H.	28	Pa.	26
4	Foundry and machine shop products	Pa.	126	Ohio	123	Ill.	101	Mich.	61	Wis.	42	Mass.	42	N. J.	41
11	Electrical machinery, appliances and supplies	Ill.	110	Pa.	105	Ohio	91	Mass.	61	N. J.	54	Ind.	40	Conn.	37
6	Knit goods	Pa.	96	Wis.	28	Mass.	20	Tenn.	17	N. C.	16	N. J.	13	Ohio	9
17	Chemicals, not elsewhere classified	N. J.	94	Pa.	67	Ill.	39	Ohio	35	Mich.	34	Va.	21	Mass.	18
21	Confectionery and ice cream	Pa.	78	Ill.	71	Mass.	60	Ohio	36	Calif.	31	Mo.	20	Wis.	20
14	Paper and wood pulp	Me.	72	Mass.	67	Wis.	65	Mich.	61	Pa.	52	Ohio	48	N. H.	25
15	Furniture	Ill.	68	Mich.	68	Ind.	53	Pa.	39	Wis.	36	Ohio	32	N. C.	29
9	Sugar refining, cane	Pa.	65	La.	45										
5	Bread and bakery products	Pa.	56	Ill.	45	Ohio	32	Mass.	27	Calif.	26	N. J.	20	Mich.	18
3	Printing and publishing	Ill.	53	Pa.	39	Ohio	27	Mass.	23	Calif.	21	Mo.	13	Mich.	12
25	Food preparations, not elsewhere classified	Mich.	46	Iowa	43	Ohio	43	Ill.	37	Tenn.	31	La.	30	Calif.	28
19	Gas, manufactured, illuminating and heating	Ill.	45	Pa.	41	Mass.	34	N. J.	28	Mich.	17	Calif.	16	Ind.	14
22	Shirts	Pa.	39	N. J.	19	Md.	14	Ind.	12	Mo.	10	Ohio	7	Conn.	6
2	Clothing, men's	Ill.	36	Pa.	20	Ohio	13	Md.	10	Mass.	8	Mo.	7	N. J.	5
7	Millinery and lace goods	N. J.	12	Ill.	12	Mo.	6	Calif.	4	Pa.	4	Mass.	2	Ohio	2
13	Fur goods	Minn.	7	Ill.	4	Pa.	3	Calif.	2	Mass.	2	Mich.	2	Wis.	1
1	Clothing, women's	Pa.	5	Ill.	5	Ohio	3	Mass.	3	N. J.	2	Calif.	2	Mo.	1

In order not to disclose operations of individual establishments the Census omits value of product for the states where blanks appear in this table.

York. It reveals that in five of the most important industries New York State has no real competition, because a very large part of the national production is in this state. The women's and men's clothing groups afford striking illustrations of this condition. Other examples are the millinery and lace goods, fur goods, and shirt industries.

Industries which by their nature serve primarily a local demand are for this reason not subject to state competition. In this class belong printing and publishing, bread and bakery, confectionery and ice cream, and artificial gas products.

Analysis of Table 12, excluding the nine industries which have been ruled out of the competitive class, makes possible the selection of the states from which New York industries meet the most pronounced competition. In the total of sixteen industries wherein are arranged in order of rank the seven states leading in the industry after New York has been excluded, Pennsylvania appears fourteen times, Ohio thirteen times, Illinois ten times, New Jersey eight times, Massachusetts, Michigan and Wisconsin each seven times, and Missouri four times.

TABLE 13: RANK OF THE STATES IN SIXTEEN COMPETITIVE INDUSTRIES (NEW YORK EXCLUDED)
(Computed from Table 12)

States	Number of Appearances in Various Ranks							
	1st	2nd	3rd	4th	5th	6th	7th	Total
Pennsylvania	6	3	0	1	1	0	3	14
Ohio	0	3	4	1	1	3	1	13
Illinois	3	1	3	3	0	0	0	10
New Jersey	1	1	1	0	2	1	2	8
Massachusetts	1	1	1	2	0	1	1	7
Michigan	2	1	0	2	1	0	1	7
Wisconsin	0	1	1	0	3	1	1	7
Missouri	0	1	0	3	0	0	0	4

From Table 13 it is clear that Pennsylvania leads the list of competitive states. In the sixteen industries under consideration, Pennsylvania takes first rank on six occasions. Ohio, Illinois, New Jersey, Massachusetts, and Michigan appear frequently enough in first, second or third rank to class them as industrial competitors of New York. Wisconsin and Missouri, although important industrial states in many

respects, do not seem to rank high enough as competitors of New York to require further attention in this report.

Considering the six competitive states on the basis of their standing in the sixteen most important competitive industries in New York, it is significant that Pennsylvania is ahead of New York in only four industries; Illinois in two; Massachusetts and Michigan each in one. On the other hand, New York is ahead of all others on six occasions. In the nine industries which were excluded, furthermore, because in them appeared to be no active competition among states, New York was far in the lead in every instance. Thus in the twenty-five most important industries in New York, there are fifteen in which this state produces more of the product than does any other state, while in only ten cases does New York yield first place to a competing state.

In the industries in which New York does not excel, the state is still an important factor. It ranks second in the production of boots and shoes, being surpassed by Massachusetts and followed by Missouri, Ohio and Illinois, respectively. In the case of silk manufactures, New York stands third, both Pennsylvania and New Jersey producing silk products of greater value. In the production of foundry and machine shop products, New York ranks fourth. Pennsylvania, Ohio and Illinois are the three leading states in this industry, although Illinois is only 1% ahead of New York. In slaughtering and meat packing Kansas and Illinois are the only states which rank higher than New York. In the manufacture of electrical machinery, apparatus and supplies, Illinois and Pennsylvania are ahead of New York, although their leadership is very slight. In motor vehicle production, only Michigan and Ohio excel New York, but the lead of Michigan is very great. Indiana, Missouri, New Jersey and Wisconsin, which often are thought of as automobile producing states, do not equal the record of New York. Only North Carolina exceeds New York in the manufacture of cigars and cigarettes. Pennsylvania and Ohio are far in the lead in the value of iron and steel production, while in this respect Indiana and Illinois also rank ahead of New York. In car construction and repairs, for

steam railroads, New York ranks fourth, being exceeded by Pennsylvania, Illinois and Ohio, while in flour-mill and grain-mill products the leading states are Minnesota and Kansas, with New York holding third rank.

Cotton manufacturing is a prominent industry in the United States as a whole, but it does not assume great importance in New York. Nine other states are ahead of New York in this activity. The five leading states in the production of cotton goods in 1923 were Massachusetts, North Carolina, South Carolina, Georgia and Rhode Island.

Although in individual industries other states assume peculiar importance, Pennsylvania, Ohio, Illinois, New Jersey, Massachusetts and Michigan, together with New York, are the outstanding competitive states in the field of manufacturing. In subsequent sections of this volume, therefore, the discussion of the relative industrial development of New York State will be limited to New York, these six other states and the United States as a whole.

Summary

The data presented in this chapter afford a necessary background for a clearer understanding of the problem of regulatory legislation in its relation to industry in New York State. It is seen that the manufacturing industry is, to an exceptional degree, the basis of the economic life of the state, and that therefore every influence which affects the strength and progress of manufacturing in the state touches vitally the welfare of its people. But so large is the manufacturing activity carried on in New York State that it occupies an important rôle in the national welfare as well. Yet neither in the character of its industries nor of its working population does the state appear to offer conditions so peculiar as to call for special legislative consideration. Except for the magnitude of its industrial activity, New York is in all essential respects a representative or typical industrial state which might be expected to grow industrially at least as rapidly as the average and to keep pace in its legislative standards with its competitors. The essential questions that may be asked, therefore, are whether in these two respects it has done so.

CHAPTER II

REGULATORY LEGISLATION IN NEW YORK STATE

As used throughout this study, the term regulatory legislation refers to those laws and administrative rules of the State of New York which bear more or less directly upon industrial operation by stipulating conditions of employment, qualifications of employees, obligations of employers, character and equipment of work places, and the like. It is obvious that the legal environment of industry is exceedingly complex, since legislation of every kind has its indirect effects on industry and trade. Attention is confined in the following descriptions and comparisons, however, largely to the legislation of the kind just mentioned, which is most immediate and concrete in its effects and is the chief object of interest on the part of the industrial community. Laws of this kind are of the greatest variety and are found throughout the entire range of legislative enactments. Although in many cases the sections relating to industry may be included only as a part of the subject covered by a general law, there are statutes devoted in their entirety to the regulation of industry. These are the Labor Law, together with its supplementary Industrial Code Rules, as developed by the Industrial Board through the power conferred upon it by the Labor Law; the Workmen's Compensation Law; and the Employer's Liability Law.

In addition to these specific laws, which are devoted exclusively to the regulation of labor and industry, further restrictions are imposed by sections of the Domestic Relations Law, regulating payment of wages to minors[1] and wives;[2] the Education Law, dealing with the employment of minors;[3] and the Public Health Law with the Sanitary Code

[1] Domestic Relations Law, Sec. 72.
[2] Domestic Relations Law, Sec. 59.
[3] Education Law, Sec. 626.

developed from it, regulating hours and conditions of work for apprentices and employees in pharmacies[1] and grocery stores.[2] To a lesser degree the General Construction Law, the General Business Law, the Election Law, the Personal Property Law, the Railroad Law, the Public Service Commission Law, the Insurance Law and the Penal Law in various ways, directly and indirectly, affect industry and labor and add to the mass of regulatory legislation. Within the limits of this study, however, it is not possible to deal with these parts of the legislative picture, nor for the present purpose is it necessary.

The Workmen's Compensation Law

The Workmen's Compensation Law, relating to the payment of benefits to employees or their dependents for injuries arising out of or in the course of employment and for certain occupational diseases, constitutes Chapter 67 of the Consolidated Laws. This law has been the subject of a separate study by the National Industrial Conference Board.[3]

The Employers' Liability Law

The Employers' Liability Law, while almost entirely supplanted by the Workmen's Compensation Law in connection with injuries arising out of or in the course of employment, remains in effect for the protection of those employees who are not covered by the Workmen's Compensation Law. This is regulatory only in so far as the defenses of employers are limited.

The Labor Law

The Labor Law proper embodies the most important features of legislation affecting industrial operation. It is published as a separate volume, under the direction of the Industrial Commissioner. In general, it deals mainly with the duties of employers and the rights of employees with respect to health, safety and working conditions. Certain sections relate to the protection of the public in matters

[1] Public Health Law, Sec. 236. [2] Public Health Law, Sec. 236a.
[3] "The Workmen's Compensation Problem in New York State," New York, 1927.

growing out of industrial operation. The places regulated include manufacturing plants, buildings under construction or repair, mines, quarries, tunnels, mercantile establishments, laundries, canneries, bakeries and confectioneries, while the subjects covered embrace factory inspection, employment, hours of labor, payment of wages, public work, building construction and repair, accident prevention, fire hazards, sanitation, manufacturing in tenement houses, public safety and the penalties for violation of the law or of the Industrial Code.

In so far as specific provisions of general statutes have a bearing on the subject of labor, they are considered to constitute a portion of the body of Labor Law. Such sections have been brought together by the State Department of Labor under the heading of Miscellaneous Labor Laws, and have been published as a separate bulletin.

Administration

While numerous bureaus, boards, councils, commissions and departments are concerned with the administration of regulatory legislation, the agency having most to do with it is the State Department of Labor. At the head of this Department is the Industrial Commissioner, appointed by the Governor. Within the Department is an advisory body known as the Industrial Council. It consists of ten members appointed by the Governor, five of these serving as representatives of employers and five representing employees.

The body within the Department of Labor which has direct supervision of industrial affairs is the Industrial Board. This Board is made up of five members appointed by the Governor for terms of six years. It is a quasi-judicial and quasi-legislative body for determining workmen's compensation claims, settling industrial disputes, and formulating rules supplementary to the Labor Law.[1] The Industrial Board is authorized to "make, amend, and repeal rules for carrying into effect the provisions of . . . (the Labor Law), applying such provisions to specific conditions and prescribing means, methods and practices to

[1] Explanatory note, New York State Labor Law, June 1, 1926, p. 3.

effectuate such provisions[1] . . . ." Its power includes the making of rules regarding sanitation and health measures, safety and fire protection. The rules of the Industrial Board, having the force and effect of law, make up what is known as the Industrial Code. This code contains general as well as special rules relating to many different subjects which affect particular industries, processes, buildings and equipment, materials and conditions of operation.[2]

Under the authority granted to it by law, the Industrial Board has power to limit the application of rules to certain classes of establishments, places of employment, machines, apparatus, articles, processes, industries, trades or occupations.[3] The Industrial Commissioner may appoint committees of employers, employees and experts to suggest new rules, or changes in existing rules, but before any rule is adopted, amended or repealed, it is required that a public hearing be held.

Variations in the application of the law or in the rules of the Board are permitted under special conditions. The law states that "if there shall be practical difficulties or unnecessary hardship in carrying out a provision of . . . (the law) or a rule of the board thereunder affecting the construction or alteration of buildings, exits therefrom, the installation of fixtures and apparatus or the safeguarding of machinery and prevention of accidents, the board may make a variation from such requirements if the spirit of the provision or rule shall be observed and public safety secured. Any person affected by such provision or rule, or his agent, may petition the board for such variation stating the grounds therefor."[4]

Factory Inspection

The Industrial Commissioner or the officers and employees of the Department of Labor are directed to enter and inspect every place which is, or which they have reasonable cause to believe is, affected by the provisions of the Labor

[1] Labor Law, Sec. 27.

[2] The Industrial Code is issued in small bulletins, each relating to a distinct subject. A list of these bulletins is published in the volume of Labor Law of June 1, 1928.

[3] Labor Law, Sec. 28.

[4] Labor Law, Sec. 30.

Law.[1] The owners, operators or managers of factories are required to furnish information and to render such assistance as is necessary for a proper inspection.[2] All papers, books, records or other documents provided for by the law or the Industrial Code shall be available at all times to the factory inspectors, and the persons in charge thereof shall afford every reasonable facility for their examination and permit copies to be made when required by the Industrial Commissioner.[3]

Hearings, Subpœnas and Reviews of Orders

The Industrial Commissioner, the members of the Industrial Board, the Deputy Commissioner or the referees have power to issue subpœnas for and compel the attendance of witnesses and the production of books, contracts, papers, documents, and other evidence. They may hear testimony and take or cause to be taken depositions of witnesses,[4] and are not bound by technical rules of evidence.[5]

Any person in interest or his duly authorized agent may petition the Industrial Board for a review of the validity or reasonableness of any rule or order made under the provisions of the law. The filing of the petition operates to stay all proceedings under the rule or order until the determination of the review.[6] After the case has been reviewed and a decision rendered by the Industrial Board, any person in interest may within thirty days appeal to the Supreme Court.[7]

General Provisions of the Labor Law

All factories and establishments to which the Labor Law "applies shall be so constructed, equipped, arranged, operated and conducted as to provide reasonable and adequate protection to the lives, health and safety of all persons employed therein."[8] The Industrial Board is charged with the duty of making rules to carry this provision of the law into effect.

Employers are required to post copies of the rules in conspicuous places on each floor of the premises.

[1] Labor Law, Sec. 25. [2] Labor Law, Sec. 31. [3] Labor Law, Sec. 26.
[4] Labor Law, Sec. 39. [5] Labor Law, Sec. 41. [6] Labor Law, Sec. 110.
[7] Labor Law, Sec. 111. [8] Labor Law, Sec. 200.

Provisions for Sanitation

Every part of a factory building and of the premises thereof shall be kept in a safe and sanitary condition and in proper repair.[1] Suitable receptacles shall be provided and used for the storage of waste and refuse.[2] Pure drinking water is required.[3] Separate wash rooms and toilets for each sex are designated,[4] and dressing rooms separated from waterclosets must be provided for women.[5] Living quarters furnished by employers, either directly or by contract with a third person, must be maintained in a sanitary condition, in accordance with rules adopted by the Industrial Board.[6]

Adequate ventilation and proper degrees of temperature and humidity are required at all times in the workrooms of factories.[7] Exhaust fans must be provided to carry away dust, fumes and vapors arising out of any process or manufacturing operation.

The number of persons permitted to work in any room is governed by the air space as well as by the restrictions regarding exits. Between six o'clock in the morning and six o'clock in the evening, two hundred and fifty cubic feet of air space are required for each employee. This limit is increased to four hundred cubic feet during other hours, unless a permit to the contrary is obtained from the Industrial Commissioner.[8]

The restrictions for factories also apply to foundries, but here additional requirements exist for the removal of gases and for the protection of employees against dust. Where ten or more persons are employed, lockers and wash rooms, with hot and cold water, must be supplied.[9] Other requirements relate to the protection of employees against exposure to the outside weather.

Laundries and Bakeries

Aside from the requirements which relate to factories and mercantile and other establishments in general, particular

[1] Labor Law, Sec. 291. [2] Labor Law, Sec. 290. [3] Labor Law, Sec. 292.
[4] Labor Law, Sec. 293. [5] Labor Law, Sec. 294. [6] Labor Law, Sec. 298.
[7] Labor Law, Sec. 299 (the general requirements relating to ventilation, heating and humidity are covered in detail by the Industrial Code).
[8] Labor Law, Sec. 300. [9] Labor Law, Sec. 310.

reference is made to laundries, as well as to bakeries and other places where food products are manufactured. Laundries must be kept separate and distinct from sleeping and living quarters.[1] The Labor Law stipulates that no person having a communicable disease may be employed in bakeries, and all employees must submit to physical examination whenever required by a medical inspector.[2] Special clothing must be worn during work hours. No person may operate a bakery without a sanitary certificate obtained from the Industrial Commissioner.[3]

Tenement House Work

Manufacturing in tenement houses is covered partly by the Labor Law and partly by the Public Health Law. Licenses are required, and managers before employing or contracting with any person for manufacturing in tenements must secure a permit from the Industrial Commissioner.[4] The provisions under which work may be performed require that rooms shall be clean and sanitary and free from disease. No articles of food, dolls or dolls' clothing or children's or infants' wear may be manufactured for a factory where part of the tenement is used for living purposes. The workrooms must be adequately lighted and ventilated. At least five hundred cubic feet of air are required for each worker.[5] No article may be manufactured in a basement, except when one-half of the height of the basement is above the adjoining ground.

Provisions Regarding Employment of Women

The Labor Law provides for the operation of a Bureau for Women in Industry to investigate and report on the conditions of employment of women and minors.[6] Through the power conferred on the Industrial Commissioner, rules may be made in regard to minors in matters which are not specifically covered by the law.[7] Women generally may be employed under proper conditions, except in certain prohibited capacities or occupations.

[1] Labor Law, Sec. 296. [2] Labor Law, Sec. 333. [3] Labor Law, Sec. 337
[4] Labor Law, Sec. 353. Public Health Law, Sec. 33. [5] Labor Law, Sec. 355.
[6] Labor Law, Sec. 20a. [7] Labor Law, Sec. 146, Subd. 11.

In factories, mercantile establishments, elevators, hotels and restaurants, seats must be furnished, and women employees permitted to use them to a reasonable extent. In factories seats are required for women when engaged in work which may be performed in a sitting position.[1] Separate toilets and wash rooms, as well as dressing rooms, must be provided for women.

Females are prohibited from working on grinding and polishing wheels, except that women over the age of twenty-one may engage in wet grinding under conditions prescribed by the Industrial Code.[2] Females employed as conductors or guards on transportation systems must be at least twenty-one years of age. This age limit also applies to females working as messengers for a telegraph or messenger company.

Other specific regulations for female workers prohibit their employment at core making, unless the work is done in a room separate from that in which the cores are baked.[3] Employment of females in mines and quarries is forbidden. Employment of women in basements of mercantile establishments and restaurants is not allowed unless permission is obtained from the Industrial Commissioner.[4] Employers are also prohibited from knowingly employing a woman within four weeks after childbirth[5] or from employing women for night work.[6] The prohibition of night work does not apply to female writers or reporters employed in newspaper offices.[7]

Provisions Regarding Minors

The sections of the Labor Law relating to minors apply to factories throughout the state; but for employments in business offices, mercantile establishments and nine other specified occupations,[8] the law is limited to villages of three thousand population or more.

[1] Labor Law, Sec. 150. [2] Labor Law, Sec. 146, Subd. 8.
[3] Labor Law, Sec. 147. [4] Labor Law, Sec. 383.
[5] Labor Law, Sec. 148. [6] Labor Law, Sec. 172. [7] Labor Law, Sec. 181.
[8] Employment in or in connection with any telegraph office, restaurant, hotel or apartment house, theatre or other place of amusement, bowling alley, barber shop, shoe-polishing establishment, or in the distribution or transmission of merchandise, articles, or messages or in the sale of articles. Labor Law, Sec. 130.

The Education Law is state-wide in application, and covers the employment of minors of certain ages in all businesses or services. The provisions of this law are concerned principally with the attendance of children at school, but also specify the conditions under which school children may be employed during vacation periods and at other times. No child under the age of fourteen may be employed anywhere during the time that schools are in session.[1] Between the ages of fourteen and sixteen an employment certificate is necessary, and in cities of five thousand population or more the upper limit is seventeen years.[2] Even when attendance at classes in not required, the lower limit of fourteen years still applies, except that boys twelve years of age and over may be employed in the sale or distribution of newspapers, periodicals or magazines, and in farm or outdoor work not connected with factories or other forbidden employments. For minors between fourteen and sixteen years of age an employment certificate is required even during the time when school is not in session.[3]

Continuation Schools

Minors between the ages of fourteen and seventeen years who have not completed a four-year high school course, and who do not regularly attend full-time day school are required to attend part-time or continuation school. The Education Law provides that by the opening of the school term in September, 1928, the age limit shall be increased to eighteen years. The required hours of such schooling per week may vary from four to eight, although the hours of attendance per week may be increased to reduce the number of weeks of instruction. Classes are held between eight o'clock in the morning and five o'clock in the afternoon, with a shorter period on Saturday.[4]

Prohibited Employment of Children

The employment of persons under sixteen years of age is prohibited in connection with the operation of numerous kinds of machinery, various specific processes, and a number

[1] Labor Law, Sec. 626.
[2] Education Law, Sec. 626.
[3] Education Law, Sec. 626.
[4] Education Law, Sec. 601.

of other manufacturing operations.[1] Age requirements for elevator operators are sixteen years for males, if the speed does not exceed 200 feet per minute, and eighteen years if the speed exceeds that limit; for all female operators, eighteen years; for persons engaged in the cleaning of machinery in motion, eighteen years for boys and twenty-one years for women, while boys working in mines and quarries must be at least sixteen years of age. Girls under sixteen may not work at occupations which necessitate constant standing,[2] and children may not work at night.[3]

Hours of Work

No aspect of regulatory legislation in New York has been the cause of so much controversy as that relating to the restriction of hours of work. For years, bills dealing with this subject have been introduced at each legislative session, and the question has precipitated some bitter controversies. Attempts to restrict the working day for men generally have failed, and only blanket requirements exist for women and minors.

The Labor Law defines the legal work day as of eight hours' duration, except for farm laborers and domestic servants and for certain transportation employees, unless otherwise provided.[4] This reference merely defines the legal work day in its contractual aspects, and does not prevent an agreement for overtime at an increased compensation, except upon work by or for the state or for a municipal corporation.

Hours of Work for Men

Legislation actually limiting the hours of work for men applies only to certain well-defined employments. These include occupations in connection with land transportation systems in which the permissible length of work day ranges from ten consecutive hours, including one-half hour for dinner in the case of street surface or elevated railroad employees in cities,[5] to sixteen consecutive hours for em-

[1] Labor Law, Sec. 146. [2] Labor Law, Sec. 146, subdivisions 3–7.
[3] Labor Law, Sec. 170. [4] Labor Law, Sec. 220. [5] Labor Law, Sec. 160.

ployees of steam or other railroads of thirty or more miles in length except where the mileage system is in use.[1] An exception is made in the case of signalmen, whose work day is limited to eight hours. Provision in all cases is made for extensions of hours of work in times of emergency. Employees engaged in interstate commerce are not subject to these provisions. The hours of labor in brick yards are limited to ten each day and may not commence before seven o'clock in the morning, except by agreement for extra compensation. Work in excess of ten hours may also be performed under similar agreements.[2] The time that an employee is permitted to work under compressed air is definitely stated, the alternating intervals of work and rest varying with the conditions.[3]

Hours of Work for Females and Minors

In restricting the hours of employment of young persons the Labor Law makes a distinction between factories and mercantile and other establishments. In factories, it provides that persons under the age of sixteen shall not be employed more than six days or forty-four hours in any one week. Work in any one day is limited to eight hours and is prohibited between the hours of five o'clock in the evening and eight o'clock in the morning.[4]

For male employees between the ages of sixteen and eighteen years, factory work is limited to six days in any one week and to a total of fifty-four hours. Work on any one day must not exceed nine hours, except that in order to provide a shorter day or a holiday on any one day of the week the daily hours may be extended to ten. No work may be performed between the hours of twelve midnight and six o'clock in the morning. These provisions do not apply to the canning and preserving of perishable products between the fifteenth day of June and the fifteenth day of October.[5]

The law limiting the work day for females was amended during 1927, but the provisions do not become effective

[1] Labor Law, Sec. 165. [2] Labor Law, Sec. 163. [3] Labor Law, Sec. 430.
[4] Labor Law, Sec. 170. [5] Labor Law, Sec. 171.

until January 1, 1928.[1] The present law restricts the hours for females over sixteen years of age in factory work to nine hours a day and fifty-four hours a week. A 10-hour day, however, is permitted to give a shorter work day on one day during the week. It is further provided that no female under twenty-one years of age may be employed in a factory between nine o'clock at night and six o'clock in the morning. For women over twenty-one years of age the prohibited period begins at ten o'clock at night.[2] Special provisions are made for the employment of women in canneries during the canning season. The work is limited to ten hours a day for six days, or a total of sixty hours in any one week, although at the discretion of the Industrial Board these hours may be increased during a specified period to twelve hours a day, with a total of sixty-six hours spread over six days in any one week.[3]

In mercantile establishments, business houses and in nine other occupations in villages of over 3,000 population,[4] the hours of work for minors under sixteen years are the same as for factories, except that the prohibited period of work begins at six o'clock in the evening. The Education Law specifies that boys may not sell or distribute any periodicals between eight o'clock in the evening and six o'clock in the morning.[5] The requirement for males between sixteen and eighteen and for females over sixteen years of age, doing work in connection with mercantile establishments, are the same as for factories, except that at Christmas time the limitations on hours do not apply and are also removed during two additional days when longer hours of work are required for stock taking.

The restrictions in the hours of female employment in restaurants are practically the same as for factory employees, except that no increase is permitted in the nine-hour day.[6] These restrictions apply likewise to females operating eleva-

[1] The law as amended provides an 8-hour day and 48-hour week except that to give one shorter day on any one day of the week nine hours may be worked five days and four and one-half hours on the shorter day. Seventy-eight hours of overtime are allowed in any calendar year but in no case shall the work day be longer than ten hours.

[2] Labor Law, Sec. 172. [3] Labor Law, Sec. 173. [4] See p. 40 of this volume.

[5] Education Law, Sec. 626. [6] Labor Law, Sec. 182.

tors and to those employed on street railroads as conductors or guards, or in telegraph or messenger service, except that in some cases work may not start before seven o'clock in the morning.[1]

Male employees under twenty-one years of age are prohibited from performing telegraph or messenger service between ten o'clock at night and five o'clock in the morning.

The hours of labor of apprentices and employees in drug stores and grocery stores are limited to seventy per week, with provision for overtime and for time off.[2]

Periods of Rest

The Labor Law provides that every employer operating a factory, mercantile establishment, or freight or passenger elevator shall allow every employee at least twenty-four consecutive hours of rest in any calendar week. Exceptions to the requirements for twenty-four consecutive hours of rest are made in the case of certain groups of workers, such as hotel employees, janitors, watchmen, dairy workers and a few others performing similar labor.[3] It is within the power of the Industrial Board to make such variations in these provisions as seem reasonable.

Sunday Work

The Penal Law prohibits all labor on Sunday, excepting work of necessity and charity. Specific reference is made to trades, manufacturing, agricultural or mechanical employments, and all work in connection with these is prohibited, except as required by necessity.[4]

Time Allowed for Meals

All factory employees and females employed as conductors or guards on transportation systems are granted one hour for the noon-day meal. Employees working at night on shifts which cover at least three hours before and three hours after midnight are allowed a minimum of twenty minutes for a meal. In mercantile or other establishments, exclusive of factories covered by the Labor Law, it is specified that the

[1] Labor Law, Secs. 183–185.
[2] Public Health Law, Secs. 236, 236a.
[3] Labor Law, Sec. 161.
[4] Penal Law, Sec. 2143.

period for the noon-day meal shall not be less than forty-five minutes. Every person employed after seven o'clock in the evening must be given at least twenty minutes for a meal between five and seven o'clock. Shorter periods than those specified for the noon-day meal may be permitted, however, at the discretion of the Industrial Board.[1]

Payment of Wages

The amount of wages to be paid for a legal day's work is subject to regulation only in connection with contract for public work, where it is specified that the wage paid shall not be less than the prevailing rate for a day's work in the same trade or occupation in the same locality; and shall be paid in cash.[2]

Employers engaged in certain other specified industries are required to pay wages in cash, although it is provided that payment may be made by check if satisfactory proof is furnished to the Industrial Commissioner of the employer's financial responsibility, and reasonable assurance is given that checks may be cashed by employees without difficulty and for the full amount for which they are drawn. The law prohibits the use of store money-orders and other methods of bartering wages for materials,[3] and forbids deductions for rent or other charges.[4] Certain classes of employees, such as civil engineers, book-keepers, etc., are not considered as coming within the requirements for payment in cash.[5] The industries covered include manufacturing, mercantile establishments, transportation, certain public utilities and mining and quarrying.

The time when wages are to be paid and the period covered by the payment are definitely stated in the Labor Law. Employees of steam railroads must be paid on or before the first and fifteenth day of each month for half-month calendar periods for service rendered up to and including the

[1] Labor Law, Sec. 162.

[2] Labor Law, Sec. 220.

[3] *New York Central & H. R. R. R. Co. v. Williams*, 199 N. Y. 108; *Knoxville Iron Co. v. Harbison*, 183 U. S. 13; Labor Law, Sec. 195.

[4] Note to Sec. 195 of the Labor Law.

[5] *People v. Interborough Rapid Transit Co.*, 169 App. Div. 32. Note to Sec. 195, of the Labor Law.

fifteenth day of the current month or the last day of the preceding month. All other employees of corporations or stock associations are required to be paid weekly for the wages earned to a time not more than six days prior to the date of such payment.[1] The payment of wages in full, every two weeks, is held to be in compliance with the law, the six days being construed to mean working days.[2] Assignments of future wages are invalid when made to employers in certain industries specified in the Labor Law. Charges for groceries, provisions or clothing may not be deducted from wages.[3]

In addition to the provisions of the Labor Law, numerous other laws relate to the protection of wages. These are compiled in the Miscellaneous Labor Laws and deal with assignments, garnishments, payment of wages to minors, rights of married women, and the preferred status of wages over other debts of employers.

Building Construction and Repair Work

The Labor Law is specific in its requirements for adequate scaffolds, hoists, stays, ladders, slings, hangers, blocks, pulleys, braces, irons, ropes and other mechanical contrivances for the protection of employees engaged in building construction and repair work. Immediate inspection of a scaffold or mechanical device connected therewith will be made by the Industrial Commissioner in case a complaint is filed. Rigid methods of procedure in building construction are incorporated in the law.[4]

Accident Prevention

"In all factory buildings, every elevator and elevator opening and the machinery connected therewith and every hoistway, hatchway and well-hole shall be so constructed, guarded, equipped, maintained and operated as to be safe for all persons." The Industrial Board adopts rules to carry this provision of the law into effect.[5]

Standard legislation has been adopted and rules formulated for the guarding of machinery and the installation of

[1] Labor Law, Sec. 196. [2] Note to Subd. 2, Sec. 196, of the Labor Law.
[3] Labor Law, Sec. 197. [4] Labor Law, Secs. 240–241. [5] Labor Law, Sec. 255.

safety devices. Proper lighting is required during working hours not only in work places but also at designated points, such as halls, stairways and elevators.[1]

Fire Hazards

To safeguard against fire, the law has required all factory buildings over four stories in height, erected after October 1, 1913, to be of fireproof construction. Definite specifications are made as to building materials, doors, corridors, stairways, fire escapes, and fire alarms.[2] At least two exits from each floor are required, with no point in the floor area more than 100 to 150 feet distant from an exit. The stairways must be not less than forty-four inches wide and must be equipped with treads which will prevent persons from slipping thereon.[3]

Buildings erected before October 1, 1913, and still used for factory purposes, if over two stories high, must have at least two exits, and as many additional exits as are necessary to bring every point on the floor within 100 feet of an exit, or within 150 feet of an exit if the building is provided with an approved automatic sprinkler system. One of the required exits on every floor above the ground floor shall be either an interior stairway enclosed with fire-resisting material extending continuously from the basement to the roof, or an exterior fireproof enclosed stairway. The other exit shall be a stairway, a horizontal exit, an exterior screened stairway, or an outside fire escape, approved by the Industrial Board.[4]

It was in connection with safety measures as applied to non-fireproof buildings erected before October 1, 1913, that the Industrial Board issued "Rule Two," dealing with the necessity of exits and enclosed stairways.

In addition to separate requirements for fireproof buildings erected since October 1, 1913, and for non-fireproof buildings which were in existence before October 1, 1913, there are general requirements for all buildings.

A limitation is put on the number of occupants in any factory building above the ground floor, and is based on the number which it is estimated can safely escape from the

[1] Labor Law, Secs. 256–257.
[2] Labor Law, Secs. 270, 272–274, 279.
[3] Labor Law, Secs. 270, 272, 274, 279.
[4] Labor Law, Sec. 271.

building in case of emergency.[1] Every factory must be provided with properly covered fireproof receptacles for waste materials of an inflammable nature, and no waste materials, cuttings and rubbish shall be permitted to accumulate on the floors.[2]

In every factory building over two stories in height in which more than twenty-five persons are employed above the ground floor, unless exception is made because of the existence of an approved automatic sprinkler system, an adequate fire alarm signal system shall be installed and a fire drill shall be conducted at least once a month.[3]

Automatic sprinklers are designated for all factory buildings over seven stories or over ninety feet in height in which wooden trim is used and more than 200 people are regularly employed above the seventh floor or more than ninety feet above the ground level.[4]

Requirements for Mines, Quarries and Tunnels

The operation of mines and quarries and work in connection with tunnels are specially regulated in matters affecting the health and safety of employees. Blasting methods and the storage of inflammable supplies are subject to restrictions, and the use of steam boilers and hoists must be in accordance with definite regulations. Timbering, means of ingress and egress, shaft equipment and ventilation are all covered by the provisions of the law. Special rules regarding safety have been developed. Wash rooms, properly heated, are required where more than twenty-five persons are employed.[5]

Where employees work in compressed air, the shifts and intervals in the open air are specified according to the conditions. The equipment and methods used in this work are also subject to strict regulation. Provisions are made for physical examinations, medical and nursing attention, dressing rooms, bathing and toilet facilities.[6]

A division of the law applicable to industry generally, governs the use, storage and transportation of explosives.[7]

[1] Labor Law, Sec. 278. [2] Labor Law, Sec. 281. [3] Labor Law, Sec. 279.
[4] Labor Law, Sec. 280. [5] Labor Law, Secs. 400–417.
[6] Labor Law, Secs. 425–431. [7] Labor Law, Secs. 450–456.

Miscellaneous Laws

Five hundred or more employees of a manufacturing or industrial corporation, having at least three thousand employees, may form a voluntary mutual benefit association provided the employer has agreed to pay 20% of the total benefits. Such an organization is closely regulated by law, and before any plan becomes operative the approval of the Superintendent of Insurance must be obtained.[1] Retirement pensions and sick benefits are subject to provisions of the Insurance Law.[2]

A final instance of regulatory legislation and one which only indirectly affects industry and the employment of labor, is that providing for the licensing of such workmen as chauffeurs, master engineers, pilots and, in some localities, steam engineers. The license, of course, is a testimonial to the qualifications of the workman; but it creates greater wage requirements which must be met by the employer.

Penalties

Any person who violates or does not comply with any provision of the Labor Law or of the Industrial Code is guilty of a misdemeanor, and upon conviction shall be punished by fine or imprisonment, or both.[3]

Comparison of Regulatory Provisions in New York with Those in Other States

The effect of regulatory legislation on industry is particularly important from the point of view of interstate competition. Uniform restrictions upon industry in all competing states would put no state in a disadvantageous position, but at this period of narrow profit margins the competitive ability of a state's industry might be seriously hampered by more stringent regulation of its industry than is found in states with which it must compete in the market for its goods or services. A detailed comparison of regulatory provisions in various states, however, is beyond the scope of this study; only a general comparison can be given

[1] Insurance Law, Sec. 221.
[2] Insurance Law, Sec. 229.
[3] Labor Law, Sec. 1275.

here, with special emphasis on the situation in the six states which have been designated as competitors of New York. There is, of course, no precise way of measuring the relative severity or stringency of the legislative standards affecting industry in the various states. The terms of the law, where there is wide divergence as between two states, are obvious enough, yet they do not tell the whole story. For one thing account should be taken of the whole body of industrial legislation, not merely of particular provisions. It is often the mass effect of a multiplicity of regulations trifling in themselves that is more oppressive than one or two legal provisions of apparent severity. Secondly, of course, it is ultimately not the law but the manner of its administration that determines its effectiveness, and that in turn depends not only on the formal machinery provided but upon the spirit of its operation. It is practically impossible, however, to compare the regulatory legislation of two states from these points of view, and it must suffice here to set forth in contrast the major features of the law, so that the more obvious differences may be seen.

Regulation of Hours of Work

The statutory work periods for women in the various states range from forty-eight to sixty hours per week, with daily limits from eight to eleven hours in manufacturing and from six to twelve hours in mercantile establishments, as may be seen from Table 14. Only nine states permit a work week of sixty hours. All of these are southern states, with the exception of Illinois. South Carolina is included in the group, as employees in mercantile establishments in that state may be employed twelve hours a day and sixty hours per week, although the hours of work in cotton and woolen mills have been set at ten a day and fifty-five a week. North Carolina, with an eleven-hour provision, has the longest legal work day for women in factories of any state which has enacted laws on the subject. Each of these states, with the exception of the Carolinas, has a ten-hour legal day, and in most cases the work week is set at sixty hours. Virginia limits the weekly hours by prohibiting Sunday work, while Illinois has no weekly limit. Alabama, Florida,

TABLE 14: LEGAL LIMITATIONS ON HOURS OF WORK FOR WOMEN IN VARIOUS STATES[1]

(Source: State Statutes)

State	60 Hours per Week		State	55–58 Hours per Week	
	Hours per Day	Hours per Week		Hours per Day	Hours per Week
Georgia	10 (cotton and textile mills)	60	Minnesota	10 (mercantile)	58
Kentucky	10	60	Tennessee	10¼	57
Louisiana	10	60	Vermont	10½ (manufacturing)	56
Maryland	10	60	Wyoming	8½	56
Mississippi	10	60	New Mexico	9 (mercantile)	56
North Carolina	11	60			
South Carolina	12 (mercantile)	60	New Mexico	8 (factories)	56
Illinois	10	..	Nevada	8	56
Virginia[2]	10	..	Connecticut	10 (manufacturing)	55
			Connecticut	.. (mercantile)	58
			Delaware	10	55
			South Carolina	10 (cotton and woolen mills)	55

State	54–49¼ Hours per Week		State	48 Hours per Week	
	Hours per Day	Hours per Week		Hours per Day	Hours per Week
New Hampshire	10¼	54	North Dakota	8½	48
New Jersey	10	54	Arizona	8	48
Pennsylvania	10	54	California	8	48
Rhode Island	10	54	District of Columbia	8	48
South Dakota	10	54	Utah	8	48
Arkansas	9	54	Colorado[4]	8	..
Idaho	9	..	Montana	8	..
Kansas	9 (mercantile)	54	Washington[5]	8	..
Maine	9	54	Massachusetts	9	48
Michigan	9	54	Oregon	9	48
Minnesota	9 (manufacturing)	54			
Missouri	9	54			
Nebraska	9	54			
New York[3]	9	54			
Oklahoma	9	54			
Texas	9	54			
Ohio	9	50			
Wisconsin	9	50			
Kansas	9 (manufacturing)	49½			

[1] Hours of work given in the table refer to both manufacturing and mercantile establishments unless otherwise indicated. The laws of Illinois, Virginia, Idaho, Colorado, Montana and Washington do not specify a weekly limit.

[2] Sunday work in Virginia prohibited, with certain exceptions.

[3] See footnote, p. 44 of this volume, for 48-hour law, recently enacted in New York.

[4] Sunday work prohibited, all occupations except works of necessity and charity.

[5] Six-day week specified for manufacturing. Sunday work prohibited for all employments, with certain exceptions.

Indiana, Iowa and West Virginia have no laws regulating the daily and weekly hours of work for women.

In marked contrast are the laws of the eleven states which either have an eight-hour day, or a forty-eight hour week, or both. Eight states and the District of Columbia specify eight hours of work per day as the legal limit, and five of these stipulate a forty-eight-hour week. Two others prohibit more than six days of work a week. Two states which have the eight-hour day permit a 56-hour week, and another permitting eight hours of work per day does not limit the length of the work week. Three states having 48-hour laws permit eight and one-half hours per day in one instance and nine in the others. It is noteworthy that all these states, with the exception of Massachusetts, are western states and, but for California, unimportant from a manufacturing standpoint.

Twenty-five states have enacted legislation establishing the length of the day or week at points between the limits of these two extreme groups. In these states the hours range from forty-nine and one-half to fifty-seven per week in manufacturing and to fifty-eight hours in mercantile establishments, with a 54-hour week predominating. The daily hours range from nine to ten and one-half, the former applying in half of the states, while only four states permit the upper limit.

It is seen that, as regards the general limitation of hours of work, New York State occupies an advanced position among all the states and an average position among the industrial states. The new legislation recently enacted places New York, as the foremost industrial state, in the leading position in respect of its legal standards in this matter.

Weekly hours of work for women are limited to fifty-four in New York, Pennsylvania, New Jersey and Michigan. Illinois has a statutory 10-hour day, but it does not prohibit night work or limit the length of the week. As soon as New York's 48-hour law becomes effective on January 1, 1928, this state will have much more stringent legislation in this respect than any one of these four competing states. Restrictions in New York and Ohio then will be about equal, and Massachusetts, with a straight 48-hour law, will be the

only competitor with more stringent laws on the subject of hours.

Furthermore, certain individual industries are more closely regulated in New York than in a number of competing states. For example, the canning industry has been definitely exempted from all regulations as to hours of work in Pennsylvania, Michigan and New Jersey, while in Ohio the restrictions are suspended during the canning season. Massachusetts is the only competing state where this industry is subject to more stringent regulation than in New York.

Continuation schools for minors afford another example of the comparative stringency of New York laws. Pennsylvania, New Jersey and Massachusetts require attendance at continuation schools until the age of sixteen, Michigan and New York make the limit seventeen, while Illinois and Ohio require such schooling to the age of eighteen. New York will increase the limit to eighteen years in September, 1928, unless the law is modified in the meantime.

New York and four of the competing states are on a parity in the matter of prohibiting night work for women. Ohio and Illinois, however, have no restrictions in this field of labor.

Among the competing states, New Jersey is the only one having New York's requirement that wages generally must be paid in cash. Pennsylvania, Ohio, Illinois, Massachusetts and Michigan leave the matter to the discretion of the employer.

As regards workmen's compensation laws, the study made by the Conference Board and published in a separate volume[1] shows that the New York legislation has gone farther than that of any other state in providing adequate compensation for accidents arising out of or in the course of employment.

Summary

Even this general comparison of legislative provisions for the regulation of industrial operations in New York and the competing states is sufficient to warrant a number of con-

[1] The National Industrial Conference Board, "The Workmen's Compensation Problem in New York State," New York, 1927.

clusions. Massachusetts is the only competing state which subjects its industries to more strict regulation in the matter of hours of work for women than does New York. Ohio, and New York with its 48-hour law effective January 1, 1928, are equal in this respect, while Pennsylvania, New Jersey, Michigan and Illinois permit the industries to employ women workers for a longer number of hours. Furthermore, the Workmen's Compensation Law of New York State is distinctly more liberal in its benefit provisions and its administration than the compensation law of any other industrially developed state. In other fields of regulatory legislation New York has either kept pace with its competitors or has been moving more rapidly in the direction of closer legislative control of industrial activities. This development could be easily understood if the composition of the state's industry or the character of its industrial population called for special legislative consideration. New York, however, is in its industrial make-up a representative state. Its industries are faced with problems similar to those of its competitors, and therefore an additional element in the cost of operation in the form of relatively high legislative standards may naturally be expected to place the industrialists of New York in a less favorable competitive position. If it is found that New York is not growing industrially at least as rapidly as some of its competitors it may appear that more stringent regulation of industry in New York State is one of the retarding, although intangible, causes. This question remains to be examined in the light of the testimony of experience of New York industrialists and of an analysis of the official data bearing on the relative industrial progress of the state.

CHAPTER III

EXPERIENCE OF EMPLOYERS WITH REGULATORY LEGISLATION IN NEW YORK

FROM the foregoing discussion it is clear that legislative regulation of industry has developed more rapidly in New York than in any other state which may be classed as its industrial competitor, with the exception of Massachusetts, in which the industrial picture is far more specialized and peculiar than in New York. It was also pointed out that this development is not warranted by any peculiarity in the state's industrial make-up or in the character of its working population.

These considerations raise what is naturally the central question of the inquiry, namely: Is there any indication that the relative rapidity of growth, the extent or character of regulatory legislation in the state have tended to hamper the comparative development of its industries? It will first be asked whether such a tendency is shown concretely in the experience of manufacturers in the state in respect to such matters as the force of interstate competition, tendency to relocate establishments, difficulties in observing the law and particularly the cost of compliance with law.

As regards the last point, which should throw light on the direct burdens of the legislative regulation of New York State industries, the Workmen's Compensation Law is the only regulatory measure whose cost can be determined on the basis of official or semi-official figures. Such data are not available for any other aspect of regulatory legislation. Information on this subject could be obtained only from employers who had experienced legislative restrictions. More than three hundred representative industrial concerns in New York State cooperated with the Conference Board and submitted their experience in this respect, and this chapter is devoted largely to a summary of this testimony. The recorded experience covers reported costs of compliance with laws and orders relative to the building code,

the health laws, guarding machinery, fire prevention, fire hazards, elevator rules, double water supply requirements, and a few miscellaneous items; alleged inconveniences of the complex system of factory inspection; the seeming misunderstanding among inspectors as to the interpretation of laws and of the Industrial Code; satisfaction with the examination and license system; criticisms of the continuation schools; the supposed retardation of industrial growth by regulatory legislation; the competitive position of New York industry; the decrease in production which would result from limiting hours for women to forty-eight per week; and suggestions for legislative relief.

Monetary Costs of Observing Legal Requirements

The Labor Law of New York State has been described in a general way in Chapter II. Most of the sections of the law which involve direct expense to the employer occur in Article XI, dealing chiefly with accident prevention, fire hazard and sanitation. Throughout the Industrial Code, moreover, there are supplementary provisions having the force of law.

Expenditures in connection with accident prevention, fire hazards and sanitation were made by a large proportion of the manufacturing plants which reported to the Conference Board. As may be seen from Table 15, 27% of the

Table 15: Replies of 307 Factories to Questionnaire Regarding Costs of Regulatory Legislation in New York State

(Source: National Industrial Conference Board)

Reply	Plants Affected or Unaffected by							
	Building Code		Health Laws		Guarding Machinery		Miscellaneous Requirements	
	No. of Plants	Per Cent of Total	No. of Plants	Per Cent of Total	No. of Plants	Per Cent of Total	No. of Plants	Per Cent of Total
No cost reported	119	39	127	41	42	14	171	56
Cost reported	84	27	81	27	164	53	37	12
Question not answered	46	15	46	15	46	15	46	15
Not affected by the law[1]	16	5	16	5	16	5	16	5
Reported to have no record	42	14	37	12	39	13	37	12
Total	307	100	307	100	307	100	307	100

[1] Occupying new building, rented building or one-story building.

reporting plants made expenditures in observing the health laws; 27% found it unduly burdensome to comply with the building code; 53% incurred costs in guarding machinery, while 12% made outlays in compliance with miscellaneous requirements. Altogether 199 of these 307 plants reported that one or more of these regulatory measures had increased their costs of operation.

The monetary costs to 199 plants over a period of five years, as shown in Table 16, amounted to nearly $900,000. Of this expenditure, 49% was for guarding machinery, 27% for compliance with the building code, 19% for sanitation and 5% for miscellaneous requirements.

TABLE 16: COSTS OF COMPLIANCE WITH REGULATORY LEGISLATION TO 199 NEW YORK STATE MANUFACTURING ESTABLISHMENTS

(Source: National Industrial Conference Board)

Class of Legislation	Cost over 5-Year Period		Number of Plants Affected	Average Cost per Plant for 5 Years	Average Annual Cost
	Amount	Percentage			
Building laws	$236,697	27	84	$2,817	$563
Health laws	168,462	19	81	2,079	416
Guarding machinery	430,899	49	164	2,627	525
Miscellaneous	43,206	5	37	1,167	233
Total	$879,264	100	199[1]	$4,418[2]	

[1] The number of plants reporting costs.
[2] The average total cost per plant for 5 years.

The figure representing average costs per plant for five years does not convey an adequate idea of the range of expenditures of individual plants. Only forty-eight plants of the 199 reported costs in all three of the major fields of outlay under regulatory laws. For these forty-eight plants the average cost was $7,315 per plant. Individual plant requirements frequently ran high in this group; amounts ranging from $11,000 to $20,000 were not at all uncommon, and the maximum recorded was $47,150. Over 80% of the 199 plants incurred costs in complying with the provisions for guarding machinery, and over 30% of the reporting establishments found this the only item of expense under the regulatory laws.

The costs of regulatory legislation as applied to industry have been found to vary in a general way with the size of the plant, as measured by number of employees. This is illustrated in Table 17. There is in these figures a direct though not conclusive suggestion that the relatively small size of establishments in New York State, noted in Chapter I as one of its distinctive characteristics, may be a form of adjustment in industry to the factor of industrial regulation in the state. This point will be referred to later, in Chapter IV.

TABLE 17: COSTS OF COMPLIANCE WITH REGULATORY LEGISLATION FOR 199 MANUFACTURING ESTABLISHMENTS IN NEW YORK STATE DURING A PERIOD OF FIVE YEARS

(Source: National Industrial Conference Board)

Size of Plant by Number of Employees	Under 50	50–99	100–199	200–399	400–799	800–1499	1500 and Over
Total costs to industries reporting	$48,662	$50,193	$60,471	$128,495	$104,391	$46,049	$40,144
Number of plants	23	24	23	16	17	11	5
Average cost per plant for 5 years	$2,115	$2,091	$2,629	$8,030	$6,140	$4,186	$8,028
Average annual cost	423	418	526	1,606	1,228	837	1,606

Examination of thirty questionnaires reporting in detail annual costs over a five-year period reveals, however, that there is no *uniform* relation between annual payroll, average number of persons employed in a plant, and the costs attributable to the meeting of legal requirements. Neither is there any uniform standard level of costs in relation to the size of a plant. Thus it is difficult to discover a basis for an accurate estimate of costs for the entire state.[1] As a rule, the largest expenditures are made by plants which have dangerous machinery or processes to safeguard.

Table 18 gives in detail for thirty plants the annual expenditures made in compliance with the various aspects of regulatory legislation. These are not selected plants, but constitute the entire number reporting annual expenditures in detail. The compilation shows the distribution of expenditures, the extent to which they were constant or variable, and the range of annual outlays, as well as percentage distribution of the expenditures for various purposes.

[1] See, however, p. 65 of this volume.

TABLE 18: COSTS OF COMPLIANCE WITH SPECIFIED TYPES OF REGULATORY

(Source: National Indus

Plants Reporting Annual Costs	1921					1922				
	Cost of Compliance Building Code	Cost of Compliance Health Laws	Cost of Guarding Machinery	Cost of Misc. Changes	Total Annual Cost	Cost of Compliance Building Code	Cost of Compliance Health Laws	Cost of Guarding Machinery	Cost of Misc. Changes	Total Annual Cost
1	$50	$50	$50	..	$150	$50	$50	$50	..	$150
2	..	..	2,113	..	2,113	..	..	3,379	..	3,379
3	..	361	269	..	630	..	1,014	557	..	1,571
4	..	..	..	..	..	300	..	250	..	550
5	..	..	..	..	..	..	..	..	..	..
6	..	..	993	..	993	..	..	672	..	672
7	..	..	..	..	..	..	..	427	..	427
8	..	..	345	..	345	..	75	..	..	75
9	..	150	350	..	500	..	150	..	..	150
10	..	..	458	..	458	..	..	104	..	104
11	..	..	724	..	724	150	..	1,738	..	1,888
12	..	..	..	..	..	..	600	..	..	600
13	..	..	50	..	50	20	..	50	..	70
14	1,000	..	1,000	..	2,000	1,000	..	1,000	..	2,000
15	200	300	200	..	700	650	300	650	..	1,600
16	50	200	100	$200	550	50	650	100	$650	1,450
17	250	100	..	..	350	300	100	100	..	500
18	..	..	..	..	..	..	..	..	..	..
19	..	..	..	..	..	..	..	325	..	325
20	..	..	2,984	..	2,984	..	..	2,495	..	2,495
21	..	..	300	..	300	..	..	300	..	300
22	..	..	..	..	..	..	..	..	..	..
23	..	..	..	..	..	..	..	1,000	..	1,000
24	..	..	1,732	..	1,732	..	..	3,826	..	3,826
25	..	..	..	..	..	..	..	200	..	200
26	91	..	150	..	241	5	16,400	80	..	16,485
27	2,000	..	2,000	..	4,000	2,000	..	2,000	..	4,000
28	..	..	..	..	..	..	..	..	..	..
29	..	..	..	..	..	..	..	..	..	..
30	..	..	2,373	..	2,373	..	..	968	..	968
Total Cost, 30 Plants..	$3,641	$1,161	$16,191	$200	$21,193	$4,525	$19,339	$20,271	$650	$44,785
Percentage Distribution of Cost	17	5	76	2	100	10	43	45	2	100
Corrected Distribution (plant 26 eliminated)	..	..	..	..	..	16	10	71	3	100

Plant number 26 shows such abnormally high costs in one field that it throws out of balance the percentages for the entire table. A corrected distribution is therefore shown with number 26 eliminated, and this gives a more representative picture of the general situation. The table reveals that during each of the five years under review, the guarding of machinery was responsible for from 50% to 76% of the expenditures. Next in rank come the building code, and the health laws and orders. Thirteen of the thirty plants did not report any costs under the health laws.

The trend of expenditures of thirty plants incurred over

LEGISLATION, THIRTY MANUFACTURING ESTABLISHMENTS, NEW YORK STATE
trial Conference Board)

1923					1924					1925					
Cost of Compliance Building Code	Cost of Compliance Health Laws	Cost of Guarding Machinery	Cost of Misc. Changes	Total Annual Cost	Cost of Compliance Building Code	Cost of Compliance Health Laws	Cost of Guarding Machinery	Cost of Misc. Changes	Total Annual Cost	Cost of Compliance Building Code	Cost of Compliance Health Laws	Cost of Guarding Machinery	Cost of Misc. Changes	Total Annual Cost	Grand Total for 5-Year Period
$50	$50	$50	..	$150	$50	$50	$50	..	$150	$50	$50	$50	..	$150	$750
..	..	2,438	..	2,438	..	..	2,363	..	2,363	..	..	3,814	..	3,814	14,107
286	631	375	..	1,292	973	515	597	..	2,085	765	392	427	..	1,584	7,162
..	..	250	..	250	300	..	..	..	300	60	..	..	..	60	1,160
..	..	..	..	..	750	..	500	..	1,250	5,000	75	500	..	5,575	6,825
..	..	838	..	838	..	..	2,216	..	2,216	..	..	820	..	820	5,539
..	..	284	..	284	..	..	68	..	68	..	..	127	..	127	906
..	56	63	..	119	750	..	..	..	750	..	..	..	..	..	1,289
..	150	585	..	735	..	150	1,250	..	1,400	..	150	500	..	650	3,435
..	..	..	..	..	..	..	71	..	71	..	..	..	..	..	436
..	..	3,569	..	3,569	..	..	936	..	936	..	..	790	..	790	7,907
..	..	..	..	..	300	840	300	..	1,440	1,200	..	1,200	..	2,400	4,440
500	..	50	..	550	25	300	50	..	375	35	1,200	50	..	1,285	2,330
1,000	..	1,000	..	2,000	1,000	..	1,000	..	2,000	1,000	..	1,000	$17	2,017	10,017
..	300	..	..	300	800	300	800	..	1,900	300	300	300	..	900	5,400
50	..	100	..	150	50	800	100	$800	1,750	300	300	100	300	1,000	4,900
350	100	..	..	450	300	100	..	..	400	650	200	..	..	850	2,550
..	100	75	..	175	..	5	35	..	35	..	..	25	..	25	235
..	..	..	..	..	457	5	35	..	497	709	..	60	50	819	1,641
..	..	2,136	..	2,136	..	..	1,107	..	1,107	..	107	2,186	..	2,293	11,015
..	..	300	..	300	..	..	150	..	150	..	250	100	..	350	1,400
..	..	..	..	..	..	123	752	..	875	..	452	170	..	622	1,497
..	..	291	..	291	..	..	494	..	494	..	..	443	..	443	2,228
..	..	3,508	..	3,508	..	..	2,708	..	2,708	530	..	3,249	..	3,779	15,553
365	..	125	..	490	402	..	..	..	402	350	..	..	360	710	1,802
..	..	..	..	..	625	5,841	222	..	6,688	20	..	120	..	140	23,554
2,000	..	2,000	..	4,000	2,000	122	2,000	..	4,122	2,000	60	2,000	..	4,060	20,182
2,800	..	..	..	2,800	..	..	..	..	..	10,000	..	..	..	10,000	12,800
..	..	..	..	..	..	..	8,995	..	8,995	..	..	9,838	..	9,838	18,833
..	..	1,581	..	1,581	4,004	..	357	..	4,361	827	..	570	..	1,397	10,680
$7,401	$1,387	$19,618	..	$28,406	$12,786	$9,146	$27,156	$800	$49,888	$23,796	$3,536	$28,439	$727	$56,498	$200,770
26	5	69	..	100	26	18	54	2	100	42	6	50	2	100	..
..	..	..	..	..	29	7	61	3	100	..	..	..	..	..	..

a five-year period is shown in Table 19. The annual cost of complying with the requirements of the building code rose from $3,641 in 1921 to $23,796 in 1925; of health laws from $1,161 to $3,536; the cost of guarding machinery increased from $16,191 to $28,439; and of miscellaneous requirements from $200 to $2,377.

In very few cases did the firms replying to the questionnaires give in detail the purposes of expenditures and the amounts expended for each purpose. As a rule the data were not classified beyond the grouping of expenditures under the four categories, namely, the building code, the health

Table 19: Annual Costs of Compliance with Regulatory Legislation, Thirty Manufacturing Establishments, New York State

(Source: National Industrial Conference Board)

Plants Reporting Annual Costs	Annual Cost of Compliance Building Code						Annual Cost of Compliance Health Laws						Annual Cost of Compliance Guarding Machinery						Miscellaneous				Grand Total 5-year Period
	1921	1922	1923	1924	1925	Total 5 Yrs.	1921	1922	1923	1924	1925	Total 5 Yrs.	1921	1922	1923	1924	1925	Total 5 Yrs.	1921	1922	1925	Total 5 Yrs.	
1	$50	$50	$50	$50	$50	$250	$50	$50	$50	$50	$50	$250	$50	$50	$50	$50	$50	$250	..	..	..	..	$750
2	..	..	..	..	..	..	..	..	..	..	..	..	2,113	3,379	2,438	2,363	3,814	14,107	..	..	..	..	14,107
3	..	..	286	973	765	2,024	361	1,014	631	515	392	2,913	269	557	375	597	427	2,225	..	..	..	..	7,162
4	..	300	..	300	60	660	..	..	..	..	..	..	..	250	250	..	..	500	..	..	..	..	1,160
5	..	..	..	750	5,000	5,750	..	..	..	..	75	75	..	..	..	500	500	1,000	..	..	..	..	6,825
6	..	..	..	..	..	..	..	..	..	..	..	..	993	672	838	2,216	820	5,539	..	..	..	..	5,539
7	..	..	..	..	..	..	..	..	..	..	..	..	..	427	284	68	127	906	..	..	..	..	906
8	..	..	..	750	..	750	..	75	56	..	..	131	345	..	63	..	..	408	..	..	..	..	1,289
9	..	..	..	..	..	..	150	150	150	150	150	750	350	..	585	1,250	500	2,685	..	..	..	..	3,435
10	..	..	..	..	..	..	..	..	..	..	..	..	458	104	..	71	..	633	..	..	..	..	633
11	..	150	..	..	..	150	..	..	..	..	..	..	724	1,738	3,569	936	790	7,757	..	..	..	..	7,907
12	..	..	..	300	1,200	1,500	..	600	..	840	..	1,440	..	..	..	300	1,200	1,500	..	..	..	..	4,440
13	..	20	500	25	35	580	..	..	..	300	1,200	1,500	50	50	50	50	50	250	..	..	..	..	2,330
14	1,000	1,000	1,000	1,000	1,000	5,000	..	..	..	..	..	..	1,000	1,000	1,000	1,000	1,000	5,000	..	..	$17	$17	10,017
15	200	650	..	800	300	1,950	300	300	300	300	300	1,500	200	650	..	800	300	1,950	..	..	..	..	5,400
16	50	50	50	50	300	500	200	650	..	800	300	1,950	100	100	100	100	100	500	$200	$650	300	1,950	4,900
17	250	300	350	300	650	1,850	100	100	100	100	200	600	..	100	..	..	..	100	..	..	..	..	2 550
18	..	..	..	..	..	..	..	..	100	..	..	100	..	..	75	35	25	135	..	..	..	..	235
19	..	..	..	457	709	1,166	..	..	..	5	..	5	..	325	..	35	60	420	..	..	50	50	1,641
20	..	..	..	..	..	..	..	..	..	..	107	107	2,984	2,495	2,136	1,107	2,186	10,908	..	..	..	..	11,015
21	..	..	..	..	..	..	..	..	..	..	250	250	300	300	300	150	100	1,150	..	..	..	..	1,400
22	..	..	..	..	..	..	..	..	..	123	452	575	..	..	..	752	170	922	..	..	..	..	1,497
23	..	..	..	..	..	..	..	..	..	..	..	..	..	1,000	291	494	443	2,228	..	..	..	..	2,228
24	..	..	..	..	530	530	..	..	..	..	..	..	1,732	3,826	3,508	2,708	3,249	15,023	..	..	..	..	15,553
25	..	..	365	402	350	1,117	..	..	..	..	..	..	..	200	125	..	..	325	..	..	360	360	1,802
26	91	5	..	625	20	741	..	16,400	..	5,841	..	22,241	150	80	..	222	120	572	..	..	..	..	23,554
27	2,000	2,000	2,000	2,000	2,000	10,000	..	..	..	122	60	182	2,000	2,000	2,000	2,000	2,000	10,000	..	..	..	..	20,182
28	..	..	2,800	..	10,000	12,800	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12,800
29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8,995	9,838	18,833	..	..	..	..	18,833
30	..	..	..	4,004	827	4,831	..	..	..	..	..	..	2,373	968	1,581	357	570	5,849	..	..	..	..	10,680
Total.	$3,641	$4,525	$7,401	$12,786	$23,796	$52,149	$1,161	$19,339	$1,387	$9,146	$3,536	$34,569	$16,191	$20,271	$19,618	$27,156	$28,439	$111,675	$200	$650	$727	$2,377	$200,770

[1] No cost reported for 1923; plant 16 reported $800 for 1924.

laws, the guarding of machinery, and other requirements. One employer, however, reported an expenditure of $4,500 for the installation of a sprinkler system; another referred to the purchase of a dust collector at a cost of $3,000; a third mentioned that fire drills cost the organization $850 a year; while a fourth, connected with a cement company, stated that the firm had spent $10,788 in five years for safety work.

Cost of Observing Special Regulations for Buildings Erected before October, 1913

Section 271 of the Labor Law specifies that buildings erected before October 1, 1913, must be made to conform to specific requirements to insure the safety of the employees in case of fire.[1]

In connection with this section of the law, the Industrial Board adopted an administrative rule, known as "Rule Two," relating to the required exits and the enclosure of interior stairways. This rule became effective January 1, 1924, and under it the factory inspectors of the State Department of Labor have ordered numerous plants to install equipment to meet the requirements of one or both of the Rule's provisions.

Fifty-two of the 307 plants which replied to the Conference Board's questionnaire received orders to enclose interior stairways. Twenty-eight of these plants complied with the order at a total cost of $47,176. The average expenditure per plant was $1,648, but costs to individual plants were reported as high as $5,800. Twenty-four plants petitioned for and were granted relief, thereby saving a sum which they estimate at $47,450.

Eighty-one of these 307 plants received orders to install new exits. Of this number, nineteen plants appealed to the Industrial Board and obtained modifications or waivers which saved them approximately $37,110. On the other hand, sixty-four plants complied with the orders, at a total cost of $46,277. In these establishments the average cost of providing a second exit was about $725.

The question of the cost and the status of "Rule Two"

[1] See p. 48 of this volume.

may be discussed to advantage in the light of data from another source. The Conference Board has had access to the correspondence between the Department of Labor and the owners or the legal representatives of 201 plants which received orders under "Rule Two," and opposed the orders at formal hearings. The disposition of these 201 cases seems to indicate that the Rule or its method of administration was ill-advised. Inspectors visiting these 201 plants gave 231 orders for enclosing stairways or providing additional exits. Numerous appeals were taken to the Industrial Board. As a result of the hearings, 131 orders were waived, thirty-two were modified, and the operation of three orders was postponed indefinitely. Only five appeals were denied outright, and sixty appeals are held in abeyance pending the decision of a legal action to test the validity of the Rule. In one case the order was complied with by the company after the appeal had been filed.

One hundred and three plants which appealed successfully against the orders of factory inspectors reported that the saving to them in cash was approximately $323,000. This means an average saving per plant of about $3,135. Since it is likely that the cost of complying with the requirements of "Rule Two" would have been unusually high in these establishments, it would not be correct to assume that the average cost per plant was as high as this for all plants.

In connection with these 201 cases, where industry was harassed by a rule which employers considered to be arbitrary, a point almost equal in significance to the cost of compliance is the high percentage of the orders which was waived or modified after having been threshed out in open hearing. It indicates that the enforcement of the provisions of "Rule Two" by factory inspectors is too rigid, and whether this condition results from the policy of the State Department of Labor or from the law, it is said to work a hardship upon industry.

By June, 1927, the Department of Labor had issued 1650 orders under "Rule Two." Of this number, 1121 orders were for additional means of exit from buildings, and the remainder, or 529 orders, were for the enclosure of interior stairways with fire-resisting material.

Since the building code rules are directed largely at preventing fires, material was collected on the prevalence of fires in factories. Replies to this question by 186 plants show that only twenty-seven of the plants had fires on their premises during the past five years, and in only one case was a plant totally destroyed by fire.

Estimated Costs for the State as a Whole

A general idea of the annual costs to the industries of New York of the regulatory laws and rules covering the building code, the health laws, the guarding of machinery, exits from buildings erected before October, 1913 (Rule Two), and miscellaneous items may be gained from the experience of the 199 representative companies which submitted the necessary data to the Conference Board. The average cost for each of these 199 plants was approximately $900. On the basis of the number of wage earners employed in these plants and in the state, as well as on that of the number of establishments employing over twenty wage earners, it is conservatively estimated that the industries of New York State pay $2,000,000 to $4,000,000 annually in compliance with the regulatory legislation of the types mentioned above.

Estimates of this kind, however, are not only very rough approximations, but in themselves they may easily be misleading. Aside from the fact that they do not cover the whole field of legislation, but omit such subjects as the relative restriction of hours of work, workmen's compensation and taxation, it must be remembered that the effects of regulatory legislation are shown not so much in what its observance costs the manufacturers who *continue* to operate in the state as in what the people of the state *potentially lose* through the deterrent effect of such legislation upon industrial development. The estimate of cost here given is relatively slight in comparison with the total production of the state (though it may and doubtless does bear heavily in individual cases), but its real importance lies in the fact that it weighs heavily in the balance for the business man considering expanding an enterprise or starting a new one in the state.

Employers' Comments on Industrial Regulations

The Labor Law and the Industrial Code, as shown by the replies to the Conference Board's questionnaires, are on the whole favorably accepted by industry. A number of employers indicated that adjustments in the plant, required by the law, have been made voluntarily. Nevertheless, the inevitable individual cases of maladjustment are reported, as is to be expected when a code of general provisions is too rigidly and uniformly interpreted. It is objected that insufficient credit is given to the lower fire hazards of newer, fireproof structures, as compared with the old, poorly constructed buildings. Some plant managers consider it objectionable that the requirements in the sparsely settled sections of the state are as numerous and detailed as in the congested city areas. These complaints are probably the result of too rigid exactions by inspectors, where the exercise of reasonable discretion might relieve the plants of unnecessarily heavy burdens and at the same time maintain, in principle, the policy looking to public and employee welfare.

The fire prevention requirements in many cases seem especially unreasonable to small factories. Section 270 of the Labor Law presents an illustration of objectionable features. It specifies that

> "*from every floor area* there shall be not less than two exits remote from each other, one of which *on every floor above the ground floor* shall be an interior enclosed fireproof stairway or an exterior enclosed fireproof stairway, and the other either such a stairway or a horizontal exit. No point in any floor area shall be more than one hundred feet distant from the entrance to one such exit. * * *"

The following quotations from questionnaire replies reveal the nature of the objections to Section 270 of the law:

> "Our only serious objection to the Industrial Code is to the fire exit requirements when applied to two-story buildings. We believe local conditions should be taken into consideration in each case. For instance: in all cases but one where we have had to build additional exits, no persons have been regularly at work on the second floor, or their work took them there only for a few minutes at a time at infrequent intervals. In one case, the building was of brick, slow burning construction, sprinklered and of high order of fire risk. It already had two exits and the actual hazard was practically nil. Complying

with the order cost us $2,500, and was a waste of money. We believe the rule should be modified to cover only real hazards."

* * * * *

"The Company has just erected a three-story brick building with concrete floors and steel window sash. The building is approximately sixty feet long by thirty feet wide. On the middle floor, constructed of brick and concrete, and containing iron and nothing combustible, at the most only two people will be employed. At one end is a fireproof stairway. The state demanded an additional exit at far end and rejected an application for variation."

Other sections of the law also have aroused criticism. Specific objections are made to the elevator rules, and to the double water supply requirements, as may be seen from the following replies to the Conference Board's questionnaire:

"One rule that has given us considerable trouble due to misrepresentation refers to elevators. In the Code any hoist operated by power with platform exceeding nine feet in area is considered an elevator even though it may be used solely for elevating packages from the floor to the mezzanine or other non-inclosed elevated platforms. According to the rules we would be obliged to inclose such hoists with fire proof materials extending to a point 3 feet above the roof and access to such inclosures would have to be covered by fireproof, automatically operated doors. Other safety devices would also be required. It seems to me that this rule should be broadened."

* * * * *

"In connection with our double water supply for fire protection our fire pump supplies water from a creek which is classed as non-potable. This water is pumped into our sprinkler system, and the city mains are protected by a double check valve system of the factory mutual type. We have been ordered to discontinue this entire system by July 1, 1928. If we are compelled to do this we will be compelled to expend three to five thousand dollars with no benefit to the public as there is no non-potable water in our mains except when our fire pump is operating which is only in case of fire or testing."

One company summarized its experience in the following way:

"For new construction, we feel that we can avoid most of the excessive costs for exits, stairways, etc., by preparing plans well in advance of requirements and submitting them to the Supervising Factory Inspector with a request for such variations from the Code Standards as are justified, in our opinion, by the particular job. These requests have had a fair hearing so far, and we do not feel that we have been

penalized to any serious degree, in being forced to comply with provisions which we would voluntarily follow regardless of the code.

"For existing construction we feel that in two instances the cost to comply with the Code has been excessive.

"1. During 1923–1924, we changed the location of a freight elevator from the center to the north side of Building No. 4. For terra cotta enclosure, fire doors, door interlocks, etc., we spent nearly $1,000 (out of a total cost approximating $2,800) to supply refinements that did not exist before the elevator was moved. Formerly intermittent service could be obtained without the use of an operator; now, one operator is required.

"2. During 1926, we have been ordered to reduce the Boiler Pressure from 90 pounds to 65 pounds on our Boiler No. 4 in Building No. 11. To replace this boiler, will cost us approximately $10,000. The cause of this order is not any failure in the boiler itself. The new Boiler Code is entirely responsible for it,—and, we believe, without just cause. Our study of statistics covering this type of boiler fails to show where sufficient hazard exists to justify such a drastic change in the factor of safety required.

"For water supply system, plumbing system, dust collecting systems, we do not feel that we have been forced to spend any excessive sums, so far. In fact, we would have made these improvements voluntarily."

Another rule objected to is that requiring a guard on belts of cone pulleys which have to be changed frequently. This rule is said to be highly inconvenient and costly because all guards are now required to be made of angle iron and expanded metal, whereas they formerly were made of wood and light wire.

Criticism of Enforcement Methods

The chief and most constructive criticism of regulatory legislation is directed against its method of enforcement rather than against its provisions. The employers object principally to unnecessarily frequent inspections, to divergent views of factory inspectors and to multiplicity of inspections by various agencies. Apparently the increase of local and state regulations, together with the growth of workmen's compensation insurance, has resulted in a complex system of factory inspection. No less than eleven agencies, state and private, inspect New York industries. State agents operate from the Departments of Labor, Health and Farms. Table 20 shows the activity of the Bureau of Inspection during 1925 and 1926.

TABLE 20: ACTIVITY OF THE BUREAU OF INSPECTION OF LABOR DEPARTMENT, NEW YORK STATE, 1925 AND 1926

(Source: *The Industrial Bulletin*, July, 1926)

Inspection	Inspection Work			
	Factories		Mercantile Establishments	
	1925	1926	1925	1926
Regular inspections	63,145	64,838	90,109	91,970
Building surveys	45,778	46,684	176	511
Special inspections	25,398	42,158	6,210	7,146
Complaints investigated	670	649	872	835
Special investigations	3,816	5,062	..	..
Compliance visits	95,763	90,718	33,276	32,779
Total	234,570	250,109	130,643	133,241
Orders				
Administration	51,531	70,086	108,256	105,155
Sanitation	45,852	42,886	22,112	23,925
Accident prevention	97,606	64,236	6,813	6,565
Fire protection	6,177	7,677	..	933
Women and minors	309	242	94	73
Day of rest	1,674	1,210	3,349	2,712
Payment of wages	47	54	1	2
Total	203,196	186,391	140,625	139,365

The Department of Labor is the most active of the state agencies. Its staff of inspectors consisted, at the time of this inquiry, of 168 individuals, 41 investigating mercantile establishments, 98 for factories, 13 for boilers, 13 for building construction and public assembly, and 3 for mines and tunnels.

Table 21 shows that of 277 plants which reported to the Conference Board the number of agencies from which they received visits at periodic intervals, 270 plants had been visited by inspectors of the State Department of Labor; 252 plants, by fire insurance companies; 236 plants, by workmen's compensation insurance companies; 210, by liability insurance companies, and 177 plants were visited by inspectors from local fire departments. That is, on the average, these plants were inspected by five different agencies in the course of a year's time. Three plants, as shown in Table 22, were visited by ten different agencies; five plants were inspected by only one agency; 231 establishments were

visited by inspectors from at least four different agencies. It is inevitable under those circumstances that the activity of these various agencies should result in an unnecessary duplication of effort and, as will be shown later, should make a uniform policy in regard to standards to be followed exceedingly difficult.

TABLE 21: EXTENT OF INSPECTION OF NEW YORK INDUSTRIES

(Source: National Industrial Conference Board)

Inspection Agencies	Number of Establishments Reporting Inspections
State Department of Health	85
State Department of Labor	270
State Department of Farms	16
Local Health Department	66
Local Building Department	89
Local Fire Department	177
Local Fire Prevention Bureau	74
Fire Insurance Companies	252
Liability Insurance Companies	210
Workmen's Compensation Insurance Companies	236
Rating Board	36

TABLE 22: NUMBER OF INSPECTIONS PER PLANT DURING ONE YEAR

(Source: National Industrial Conference Board)

5	plants were visited by inspectors from	1 agency
13	" " " " " "	2 agencies
28	" " " " " "	3 "
52	" " " " " "	4 "
70	" " " " " "	5 "
38	" " " " " "	6 "
28	" " " " " "	7 "
23	" " " " " "	8 "
17	" " " " " "	9 "
3	" " " " " "	10 "
277		

Many plants complain that their greatest trouble comes from the failure of inspectors to agree on what constitutes adequate compliance with the code provisions. This lack of standardized policy, it is charged, leads to the countermanding of the orders given by previous inspectors. It is true that some time may elapse between the first order and the subsequent countermand, but the objection persists that a change of inspector often means a series of changes of

equipment which previously had been inspected, modified to meet requirements, and approved. Many instances of this kind are mentioned, and it is said that an inspector rarely if ever remains on the same work for more than a year.

One plant reports that after a certain machine had been guarded at considerable expense by order of one inspector, another inspector called at a later date and ordered changes made regarding the same machine. In another case where there had been compliance with instructions from one inspector for the guarding of a shaft and belting, a later inspector found the improvement to be unacceptable. Frequently it is charged that the equipment for guarding machinery and exhaust systems, installed under orders of inspectors, has interfered with the operation of machines. The expense involved in revision of previously executed orders is often great. The following quotations from the replies received by the Conference Board illustrate some of the difficulties which the employers have to face as a result of too frequent changes in inspection.

> "We have very recently, according to one inspector's order under Rule Two, constructed a second stairway as an exit from the second floor of our planing mill. This same inspector comes back and approves the stairway making favorable comment on the way it was constructed. The last inspector says that the stairway never should have been accepted without being covered."
>
> * * * * *
>
> "We believe the law should protect the employer against repeated changes being ordered in equipment after it has once been approved by the Department of Labor. As an instance we refer to our experience with dust removers. The system installed in our plant at the time we started was condemned by the inspector a few years ago, and we were ordered to put in still another one which, after vainly objecting, we did at a cost of several thousand dollars. We believe that the law should protect the employer from being subjected to these arbitrary and costly changes after the first installation has been approved by the Department of Labor."

Many other similar complaints seem to indicate that there is a lack of agreement among the inspectors as to the interpretation of the laws and regulations. This absence of standardization results in the giving of trivial but expensive orders. A status of complete compliance and security is

never reached in the factory. Such a condition leaves the impression among employers that each inspector's job is to find some laxity in the work of his predecessor, rather than to safeguard the employee, the employer and the industry at large.

As has already been pointed out, the existence of various inspection agencies, state, local, municipal and private, leads to great duplication of effort. The fire hazard, for example, is a field for the State Department of Labor, the local fire department, the local fire prevention bureau and the fire insurance companies. Inspections of machinery, elevators, power transmission and general factory conditions from the point of view of accident prevention are made by three agencies, namely, the State Department of Labor, the compensation insurance carriers and the Compensation Inspection Rating Board.

Thirty-two per cent of the establishments studied experienced this repetition of inspection activity. The extreme difficulty of this situation is the impossibility of satisfying all agencies, because their standards are at great variance. For instance, machines may be guarded to the satisfaction of the Labor Department, but not to that of the Compensation Inspection Rating Board, with the result that no credits are given in the compensation insurance rates for work approved by the state.

The Compensation Inspection Rating Board is an organization sponsored by the state, and its membership is composed of the workmen's compensation insurance carriers. The inspection work conducted by the Rating Board is done in accordance with definite standards. Such inspections as are made by the compensation insurance companies are intended to duplicate the work of the Rating Board, and are meant merely as a check for their own protection.

Since the inspection activities of the Department of Labor and of the Rating Board duplicate each other, it would seem that a plan of cooperation could be agreed upon, and it should be said that efforts are being made to this end. Certainly, an economy of effort would be achieved by uniformity of standards and practices, and more evidence of cooperation among all concerned would lead to greater

confidence on the part of industry. As it is, the obligation placed upon manufacturers to be familiar with the requirements of state, local, municipal and private organizations, to conform to them and to adjust differences in standards, results in confusion, dissatisfaction and unnecessary costs.

Attitude of Employers Toward Laws Regulating Employment

Examinations and Licenses

Certain regulations of industry have been freely accepted by and even receive the general approval of management. This was the tenor of comment on the present rules for the examination and licensing of certain workmen. These regulations do not touch the major part of industry, for the replies to the 307 questionnaires indicate that only 44% of the plants which replied to the Conference Board were affected. The experience of the plants coming under these rules has been that such requirements are necessary. However, a proposal made recently to add to the present licensing requirements a measure providing for the licensing, by the Department of Labor, of operators of stationary engines and boilers is criticised as being unnecessary. State and private liability insurance companies make systematic inspections of all power plants and demand that they be kept in first class condition. The parties affected assert that a new rule to inject the Department of Labor into this situation would really accomplish nothing more than to complicate still further the supervisory function.

One Day of Rest

Manufacturers, as a rule, are in agreement with the provision of the law requiring that "every employer operating a factory, mercantile establishment or freight or passenger elevator shall allow every person employed at least twenty-four consecutive hours of rest in every calendar week." This provision has not generally resulted in the employment of additional labor, in curtailing production, or in augmenting the costs of production. One plant reported that forty additional men had been employed because of this law. Another called

attention to inconvenience which is felt where repair work must be done on Sunday.

> "In connection with maintenance and repair, however, the operation of the law has in many instances been unsatisfactory. Because of the nature of the work and the equipment involved in many of our processes it is often necessary to do considerable repair work on Sunday. Repairs have to be rushed on expensive equipment and in costly operations. It is impossible to carry an extra force to take care of these big repair jobs. They must be made by highly skilled mechanics who have had a long experience on this particular work. When a crew of regular men have to work on Sunday on such a job, it upsets the schedule of work in their regular department the following week while these men are taking their day off. In these cases the men object to taking this day off."

However, it is conceded that the principle of the "one-day-of-rest" law tends to increase the contentment of the worker and that it is entirely reasonable.

Employment of Young Persons

The employment of young persons in New York State is restricted by the limitation of working hours, prohibition of their employment in hazardous occupations, the requirement of employment certificates, and the attendance at continuation schools. These laws have been summarized previously.[1] Children may not leave school before the age of fourteen.[2] Employment certificates are required of young persons working between the ages of fourteen and sixteen, and in cities of 5000 or greater populations the upper limit is seventeen years. That this is a field requiring regulation is indicated by the following data showing the number of children[3] employed annually in the state:

[1] See pp. 40–45 of this volume.

[2] Labor Laws, New York State. Sections limiting the employment of children:
Sec. 130 prohibits employment of children under 14 years.
Sec. 131 regulates employment of children between ages of 14 and 16.
Sec. 145 provides for physical examination of child.
Sec. 146 names the prohibited employment of children and females.
Sec. 170 regulates hours of work for children under 16 in factories.
Sec. 171 regulates hours of work for males between 16 and 18.
Sec. 172 regulates hours of work for females over 16.
Sec. 180 regulates hours of work for children under 16 in places other than factories.
Sec. 181 regulates hours of work for females over 16 in mercantile establishments.

[3] Division of Vocational Education, Albany, N. Y.

Year	Number of Young Persons Employed
1918	60,706
1919	65,676
1920	74,686
1921	58,003
1922	37,984
1923	54,351
1924	48,831
1925	48,668

The close supervision of the employment of young persons in industry has in many cases eliminated them from consideration by personnel officials. Thirty-three per cent of the establishments replying to the Conference Board's questionnaire stated that because of the many regulations they had ceased to employ such workers. Specific reasons given were that the requirement of a shorter work day for young persons than for the rest of the force made them less useful, and that the inconvenience of the employment certificate was objectionable. Often the certificate requirements of the local authorities were found to differ from those of the state. However, the chief criticism in respect to the employment of young persons is directed against the continuation school system.

The Continuation School

The law requires that young persons between fourteen and seventeen years of age, who are regularly employed, must attend continuation or part-time school at least four hours per week, unless they have completed the four-year high school course. It is provided that after September, 1928, the upper limit shall be extended to 18 years.

Of the 50,000 children who left school to go to work in 1925, approximately two-thirds[1] had completed the elementary school course. Consequently, the continuation school was a substitute for high school for a large number of these children. In the school year 1925–26, as shown in Table 23, 128,920 boys and girls attended continuation schools in sixty-four cities of New York State. The continuation school, therefore, is an important element in the state's educational system. It will be examined here from

[1] Division of Vocational Education, Albany, New York.

the standpoint solely of industry as an employer of labor, and on the basis only of the views reported in the questionnaires received by the Conference Board.

TABLE 23: REGISTRATION IN CONTINUATION SCHOOLS, 1925–26

(Source: Division of Vocational Education, Albany, New York)

City	Boys	Girls	Total	City	Boys	Girls	Total
Albany	851	787	1,638	Newburgh	235	185	420
Amsterdam	454	500	954	New York City	54,300	38,140	92,440
Auburn	256	222	478	Niagara Falls	393	385	778
Batavia	91	118	209	North Tonawanda	224	233	457
Beacon	115	99	214	Norwich	20	36	56
Binghamton	414	389	803	Olean	149	136	285
Buffalo	3,384	3,653	7,037	Oneida	39	28	67
Canandaigua	23	25	48	Oneonta	16	22	38
Cohoes	127	158	285	Ossining	79	47	126
Corning No. 9	38	30	68	Oswego	185	144	329
Elmira	293	305	598	Peekskill No. 7	53	111	164
Endicott	65	62	127	Plattsburg	85	86	171
Fredonia	18	21	39	Port Chester	210	197	407
Fulton	96	78	174	Port Washington	36	21	57
Geneva	65	64	129	Poughkeepsie	181	261	442
Gloversville	174	135	309	Rensselaer	73	82	155
Herkimer	101	88	189	Rochester	2,976	2,886	5,862
Hornell	105	88	193	Rome	134	136	270
Hudson	81	101	182	Salamanca	79	51	130
Ithaca	53	58	111	Schenectady	959	929	1,888
Jamestown	291	207	498	Syracuse	934	876	1,810
Johnstown	82	80	162	Tonawanda	100	72	172
Kingston	184	198	382	Troy	256	277	533
Lackawanna	169	193	362	Utica	701	762	1,463
Lansingburg	49	62	111	Watervliet	82	91	173
Lawrence	96	58	154	Watertown	95	93	188
Little Falls	89	92	181	White Plains	103	128	231
Lockport	120	104	224	Yonkers	1,023	1,004	2,027
Mechanicville	84	78	162	Corning No. 13	20	21	41
Middletown	73	74	147	Dunkirk	164	266	430
Mount Vernon	329	288	617	Johnson City	66	56	122
New Rochelle	164	189	353	Waverly	27	23	50
							128,920

In this study ninety-six employers reported their experience with the continuation school. Of these, 82% stated that the school was of little value, that employees attended only because of the compulsory law, and that it was difficult to see beneficial results. The principle of the system was upheld by 18% of the employers who felt that it was always desirable to keep children at school as long as possible and that continuation school attendance helped the student in learning a new trade.

The criticisms of the continuation school made by manufacturers in the questionnaires received by the Conference Board are based not only upon the observations of the employers and their foremen, but also upon the testimony given to them by the students themselves. Minors have reported to their employers that their attendance is wholly a matter of compulsion, that the subjects taught are not of their own choosing and have little relation to their previous education, and that the half-day in school is not supplemented by any home study. Furthermore, the arrangement of a satisfactory curriculum is difficult. The student group, as a rule, is heterogeneous, made up of children whose previous education ranges from the grades to the third year of high school, and who are engaged in a variety of trades. Because of limited facilities, those who have attended high school sometimes must re-study subjects already completed. The following quotations from questionnaire replies illustrate the difficulty which the young workers report to their employers as having encountered in obtaining desired training in continuation schools:

> "Some of the girls who wanted to take courses in clerical work or stenography had to take sewing. One boy who wanted a machine or wood-shop course had to take tailoring. If the object of the continuation school is to teach the minor a useful occupation we consider it a failure."
>
> * * * * *
>
> "A boy is apt to go to the nearest school whether it gives him what he requires or not. We have boys trying to be iron workers who were taking electrical courses."

The difficulty, as understood by employers, is that the continuation school is not furnishing training to supplement the work of the student, and that it cannot be classed as an institution offering vocational courses. This leads some of the employers to state that the system stands in the way of systematic training for their trades. In the machine-manufacturing industries, skilled machinists and toolmakers must be developed. But when four hours a week are spent at part-time school in the study of unrelated subjects, it is felt that instruction in the shop is interfered with to such an extent as to be discouraged.

The experience of employers submitted in this study shows the system to be costly to both the children and to the employers. Many employers report that they do not hire young workers who must report to part-time schools. Some of the reasons for this attitude are stated in the following replies to the Conference Board's questionnaire:

> "If they are needed at all they are needed all the time. As a result we can use them only in departments where several are employed on the same kind of work and where their half-day off can be staggered."
>
> * * * * *
>
> "We have scores of minors who apply to these mills for work. Our work is of such a character that we must have operators who perform continually. Therefore we have to refuse work to these minors who have to attend continuation school. Case after case has been brought to our attention where these boys are deprived of a chance to work when they want to work."

Only twelve of the ninety-six employers who reported their experience with continuation schools paid wages to the students for the time spent in school. These twelve included the four factories which maintained their own schools. Some of the companies had abandoned factory schools after experimenting with them. Many establishments reported difficulties in enforcing the attendance at continuation school, stating that employees would take time off and then play truant, bringing upon their employers visits from the attendance officer.

It would appear that the difficulties reported and dissatisfaction expressed by manufacturers with the continuation school system are part of the larger question of the proper relation of the educational system as a whole to the industrial life of the state. This broad problem is to be the subject of a separate inquiry by the Conference Board.

Fifty-Four-Hour Week

The State Department of Labor has made a study of the practices of industry within New York State as regards the hours worked per day and per week by both men and women.[1]

[1] New York State Department of Labor, *The Industrial Bulletin*, Albany, New York, February, 1924, pp. 106–109.

This survey, based upon reports from 1,300 factories employing 284,121 men and 84,407 women, reveals that only a very small proportion of the women were engaged for the maximum legal period of fifty-four hours a week. As a matter of fact, over 56% of the women worked forty-eight hours per week or less, and about 87% worked fifty-one hours per week or less. The standard work week adopted by industry is shown to range from forty-four to fifty-four hours.

Tables 24 and 25 set forth the practices of industry in New York State as regards the length of the work week.

TABLE 24: PREDOMINANT WORK WEEK IN LEADING INDUSTRIES OF NEW YORK STATE

(Source: Compiled from data published by the New York State Department of Labor)

Per Cent of Men and Women Working 49 to 54 Hours		Per Cent of Men and Women Working 48 Hours or Less	
Industry	%	Industry	%
Miscellaneous stone-mineral	73.4	Gold, silver and precious stones	80.8
Lime, cement and plaster	57.7	Cooking, heating and ventilating apparatus	67.4
Brick, tile and pottery	68.7	Machinery, including electrical apparatus	70.9
Sheet metal work and hardware	48.9	Instruments and appliances	62.7
Mill products	51.1	Pianos, organs, etc.	64.5
Furniture and cabinet work	50.0	Furs and fur goods (44 hours)	100.0
Leather	89.0	Boots and shoes	93.1
Pearl, horn, bone, celluloid, hair, etc.	66.1	Rubber and gutta-percha	65.4
Drugs and chemicals	67.0	Oil products	77.4
Paints, dyes and colors	90.9	Miscellaneous chemical products	83.2
Paper boxes and tubes	55.0	Paper	75.1
Miscellaneous paper goods	63.2	Printing and book making	97.3
Cotton and woolen hosiery, and knit goods	53.5	Silk and silk goods	76.5
Wool manufactures	82.6	Cotton goods	80.8
Men's shirts and furnishings	69.3	Women's underwear and furnishings	90.3
Miscellaneous sewing	73.4	Women's headwear	97.4
Laundering, cleaning, dyeing, etc.	63.3	Men's clothing	93.6
Fruit and vegetable canning	87.9	Women's clothing	93.2
Automobiles, carriages and aeroplanes	53.1	Flour, feed and other cereal products	75.5
Cigars and other tobacco products	58.0	Bread and bakery products	81.8
		Beverages	95.7

The replies to the questionnaires of the National Industrial Conference Board show an even greater proportion of industrial concerns observing the shorter day than that shown in

TABLE 25: PREVAILING HOURS OF WORK OF WOMEN IN NEW YORK STATE INDUSTRIES

(Source: Compiled from data published by the New York State Department of Labor)

Industry	Per Cent of Women Workers Whose Standard Work Week Was			
	44 Hours or Less %	45 to 48 Hours %	49 to 51 Hours %	52 to 54 Hours %
Miscellaneous stone and mineral products	..	..	100.0	..
Brick, tile and pottery	..	..	95.0	..
Glass	..	..	72.5	..
Gold, silver and precious stones	..	80.2	..	..
Brass, copper, aluminum, etc.	..	91.5	..	..
Sheet metal work and hardware	..	50.6	36.1	..
Firearms, tools and cutlery	..	55.5	27.8	16.2
Cooking, heating and ventilating appliances	..	..	75.0	..
Machinery (including electrical appliances)	..	68.9	25.7	..
Automobiles, carriages, etc.	..	63.9	..	29.7
Cars, locomotives, repair shops	..	91.2	..	..
Instruments and appliances	..	52.5	47.2	..
Saw mill and planing mill products	..	59.2	40.8	..
Furniture and cabinet work	..	24.5	48.2	..
Pianos, organs, etc.	..	77.3	..	..
Miscellaneous wood products	16.5	70.0	..	..
Leather	..	..	75.7	23.3
Furs and fur goods	100.0	..	..	..
Boots and shoes	25.9	44.5	27.7	..
Miscellaneous leather and canvas goods	24.4	..	33.2	22.9
Rubber and gutta-percha goods	..	69.8	19.8	..
Pearl, horn, celluloid, etc.	..	29.4	41.2	17.6
Drugs and chemicals	..	37.2	57.2	..
Paints, dyes and colors	..	..	54.4	43.2
Animal and mineral oil products	..	71.2	20.8	..
Miscellaneous chemical products	..	85.8	..	9.0
Paper	..	30.4	31.7	37.9
Paper boxes and tubes	..	29.3	66.8	..
Miscellaneous paper goods	..	39.9	60.1	..
Printing and book making	46.3	48.0	..	..
Silk and silk goods	..	74.5	21.2	3.9
Wool manufactures	..	..	34.6	49.6
Cotton goods	..	77.4	..	22.6
Cotton and woolen hosiery, knit goods	..	34.7	25.1	40.2
Other textiles	..	52.7	42.0	3.7
Men's clothing	73.1	24.0	..	..
Men's shirts and furnishings	..	15.0	61.1	16.2
Women's clothing	62.5	27.8	..	..
Women's underwear, etc.	25.7	67.6	..	..
Women's headwear	..	65.8	..	..
Miscellaneous sewing	..	29.5	66.2	..
Laundering, cleaning, dyeing	24.0	16.1	49.5	10.5
Flour, feed and other cereal products	..	46.1	4.3	47.8
Fruit and vegetable canning	..	..	71.3	28.5
Groceries	..	..	56.4	37.4
Meat and dairy products	..	17.1	15.8	62.3
Bread and bakery products	..	52.3	35.8	9.6
Confectionery and ice cream	..	21.2	15.2	55.3
Beverages	46.7	..	..	49.3
Cigars and tobacco products	..	41.4	33.2	25.0
Total	14.3	41.9	30.7	13.1

Tables 24 and 25. Separate questionnaires were used for this phase of the study, and data were supplied by 398 companies. For purposes of analysis, all establishments not employing both men and women were eliminated. Table 26 shows the conditions in 255 plants employing 78,900 men and 34,855 women. As far as women are concerned, the table reveals that 81% of the plants, containing 85% of the women, are working fifty-one hours or less per week. In the category of forty-eight or less hours per week, one finds 47% of the plants and 55% of the women employees. This bears out the conclusion of the New York State Department of Labor that women workers in about half of the state's industry were employed on a schedule of forty-eight hours or less per week at the time of the investigation.

The situation is somewhat different in regard to male employees, their work week generally being longer than is true for women. About 80% of the male workers, or those in 69% of the plants, are employed fifty-one hours or less per week, while 50% of the men who constituted the male workers in 37% of the establishments are now working forty-eight hours or less.

The number of hours worked weekly by wage earners of each sex in various types of plants in New York State is shown in detail in Table 26.

An analysis of the figures in Tables 24, 25 and 26 shows that conditions vary so greatly from industry to industry as to make it exceedingly difficult to establish a work week of definite duration which would be equally appropriate to all occupations. Many employers have voluntarily shortened the work week below the legal maximum because the conditions of their industry justified that procedure, while others doubtless find the maximum limitation at times burdensome. Since it is obviously impossible to establish a legal work week which would satisfy all employers equally, it would appear to be necessary in regulating hours of work to develop a series of flexible rules which would apply to special industries or to any industry in times of emergency or seasonal demand for goods, and which would take into consideration the effect of shorter hours of work on the competitive position of the state's industries.

TABLE 26: HOURS WORKED PER WEEK BY WAG

(Source: National Industr

Industry	Male Workers									
			44 Hours or Less		45–48 Hours		49–51 Hours		52–54 Hour	
	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Num ber of Work ers
Brick, tile and pottery	2	903	..	..	..	..	2	903	..	..
Gold, silver and precious stones	2	430	..	..	1	245	1	185	..	..
Pig iron and rolling mill products	2	743	..	..	..	..	1	76	1	66
Sheet metal work and hardware	15	5,114	..	..	2	240	4	3,009	7	1,78
Firearms, tools and cutlery	3	2,484	..	..	1	1,774	2	710	..	..
Cooking, heating and ventilating app.	4	1,703	..	..	2	1,398	2	305	..	..
Machinery (inc. electrical app.)	15	8,238	..	..	5	3,812	9	4,395	..	..
Autos, carriages and aeroplanes	7	4,770	..	..	4	1,663	1	140	2	2,96
Instruments and appliances	3	963	..	..	1	3	2	960	..	..
Saw mill and planing mill products	5	1,205	..	..	1	93	2	262	1	50
Furniture and cabinet work	6	830	..	..	2	313	1	35	2	19
Pianos, organs, etc.	1	27	..	..	..	..	1	27	..	..
Misc. wood and allied products	2	267	1	10	1	257	..	..	..	..
Leather	2	37	1	20	1	17	..	..	..	..
Furs and fur goods	2	32	2	32	..	..	..	..	..	..
Boots and shoes	14	3,532	4	598	3	999	5	1,482	1	12
Misc. leather and canvas goods	3	61	2	46	1	15	..	..	..	..
Rubber and gutta-percha goods	2	244	1	65	..	..	..	..	..	..
Pearl, horn, bone, celluloid, etc.	2	416	..	..	1	2	1	414	..	..
Drugs and chemicals	6	788	..	..	2	33	2	249	..	..
Misc. chemical products	7	11,460	1	60	2	8,400	3	2,500	..	..
Paper	8	1,362	..	..	4	311	..	..	4	1,05
Paper boxes and tubes	6	418	..	..	1	20	1	5	1	17
Misc. paper goods	13	1,912	..	..	4	347	2	425	4	66
Printing and book making	8	1,305	1	22	7	1,283	..	..	..	..
Silk and silk goods	8	3,227	2	2,302	..	..	2	776	2	7
Wool manufactures	6	652	..	..	1	157	3	339	2	15
Cotton goods	3	983	..	..	1	913	1	15	1	5
Cotton and wool hosiery, and knit goods	15	1,035	..	..	5	503	5	212	2	7
Other textiles and allied products	7	588	..	..	1	100	6	488	..	..
Men's clothing	4	752	2	722	..	..	1	28	1	
Men's shirts and furnishings	9	693	..	..	1	20	2	18	4	8
Women's clothing	12	265	6	175	2	26	2	9	2	5
Women's headwear	3	615	2	65	1	550	..	..	..	..
Laundering, cleaning, dyeing, etc.	4	72	..	..	..	..	2	51	1	1
Flour, feed and other cereals	3	188	..	..	2	98	..	..	..	..
Fruit and vegetable canning, etc.	6	1,068	..	..	1	89	..	..	1	20
Groceries, n. e. c.	4	1,435	..	..	1	10	..	..	1	57
Confectionery and ice cream	5	912	..	..	..	..	2	773	1	3
Cigars and other tobacco products	2	251	..	..	..	..	1	25	1	22
Light and power	7	12,281	..	..	2	9,204	4	2,573	1	50
Miscellaneous	17	4,639	..	..	6	2,655	8	1,848	2	9
Total	255	78,900	25	4,117	70	35,550	81	23,237	45	10,27

EARNERS OF EACH SEX IN NEW YORK STATE

Conference Board)

Male Workers		Female Workers											
Over 54 Hours				44 Hours or Less		45–48 Hours		49–51 Hours		52–54 Hours		Over 54 Hours	
Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers	Number of Plants	Number of Workers
..	..	2	435	..	..	1	3	1	432	..	..	..	..
..	..	2	158	..	..	..	..	2	158	..	..	..	..
..	..	2	76	..	..	..	..	2	76	..	..	..	..
2	80	15	1,951	1	8	4	112	5	1,569	4	208	1	54
..	..	3	368	..	..	1	292	2	76	..	..	..	..
..	..	4	543	1	2	2	497	1	44	..	..	..	..
1	31	15	1,397	1	21	5	565	7	789	2	22	..	..
..	..	7	612	2	32	4	376	..	..	1	204	..	..
..	..	3	200	..	..	2	10	1	190	..	..	..	..
1	350	5	241	..	..	2	71	1	10	2	160	..	..
1	287	6	97	..	..	4	80	..	..	2	17	..	..
..	..	1	21	..	..	..	..	1	21	..	..	..	..
..	..	2	527	1	7	1	520	..	..	..	..	..	..
..	..	2	17	1	8	1	9	..	..	..	..	..	..
..	..	2	51	2	51	..	..	..	..	..	..	..	..
1	328	14	2,164	4	151	3	507	6	1,286	1	220	..	..
..	..	3	42	2	9	..	..	1	33	..	..	..	..
1	179	2	40	1	10	1	30	..	..	..	..	..	..
..	..	2	94	..	..	1	6	..	..	1	88	..	..
2	506	6	288	1	25	3	78	2	185	..	..	..	..
1	500	7	4,039	2	262	2	3,220	3	557	..	..	..	..
..	..	8	599	..	..	3	302	3	285	2	12	..	..
3	222	6	313	..	..	3	140	..	..	3	173	..	..
3	475	13	575	2	95	2	129	5	229	4	122	..	..
..	..	8	434	1	7	7	427	..	..	..	..	..	..
2	76	8	1,554	2	1,166	..	..	3	257	3	131	..	..
..	..	6	702	..	..	1	35	3	429	2	238	..	..
..	..	3	845	..	..	1	770	1	55	1	20	..	..
3	245	15	1,447	1	16	5	463	7	758	2	210	..	..
..	..	7	1,362	..	..	2	768	5	594	..	..	..	..
..	..	4	1,842	3	1,816	..	..	1	26	..	..	..	..
2	570	9	2,300	3	252	..	..	2	35	4	2,013	..	..
..	..	12	789	4	278	4	258	2	103	2	150	..	..
..	..	3	420	2	70	1	350	..	..	..	..	..	..
1	5	4	177	..	..	1	25	3	152	..	..	..	..
1	90	3	65	..	..	2	49	..	..	1	16	..	..
4	779	6	652	..	..	2	364	..	..	3	258	1	30
2	850	4	327	1	2	..	..	1	125	2	200	..	..
2	109	5	744	..	..	..	..	3	640	2	104	..	..
..	..	2	86	..	..	..	..	2	86	..	..	..	..
..	..	7	2,288	3	192	2	1,699	2	397	..	..	..	..
1	38	17	3,973	..	..	6	2,558	8	931	3	484	..	..
34	5,720	255	34,855	41	4,480	79	14,713	86	10,528	47	5,050	2	84

Proposed 48-Hour Law

In the questionnaires sent out by the Conference Board, employers were asked to indicate what they believed would be the result in their plants if a 48-hour law for women were adopted. Replies were received from the whole range of representative establishments. Many of the companies concerned have been operating in New York State for a long period, some for seventy to eighty years, so that their judgments may be considered as based on considerable experience.

The plants from which replies were received to this specific question numbered 175. Approximately one-fourth of them stated that a further reduction of hours of work for women would prejudice them against the employment of female workers, while a slightly larger number of employers held that because of the correlation between the work of men and of women, it would be necessary to reduce the hours of work for men to conform to the hours of women. Likewise about one-fourth of the plants reported that such legislation would decrease their production and increase their working force. A few asserted, furthermore, that their only alternative would be to cease employing women, and substitute men, while others said that a 48-hour week would really mean a 44-hour week because of the general demand for a Saturday half-holiday. One prominent concern, engaged in packing fruit, asserted that a law of this kind would compel them to leave the state in order to be able to meet competition from other states, and another exceedingly strong plant, employing about 800 persons, said the law would make two-thirds of its machines idle.

On the other hand, forty-seven of the plants reported that they do not employ any women, and thirty-seven others, which do employ women, said that the legislation could not affect them much, chiefly because their present work schedule is already forty-eight hours or less per week. About twenty of the employers stated that in their plants the effect would not be to shorten men's hours, or to prejudice them against women. Seven plants said they must employ women, regardless of legislative restrictions in hours of work.

The preponderance of opinion, as gleaned from the ques-

tionnaires, is that a 48-hour law would reduce production, increase the working force, and shorten the hours of male workers because of the interdependence of men's and women's work. Rather than to reduce the hours of male workers, many plants would prefer to dispense with the services of women.

A more detailed analysis of the 175 replies, giving the attitude of employers toward a 48-hour law, indicates that the manufacturing industries which would be most affected in these various ways are pottery, paper box and paper goods, textiles, men's wear, certain chemical and food products, and certain of the metal-ware plants where the proportion of women employed is small. The following list shows reported estimates of probable decrease in production in individual plants, which would result from a reduction in the working schedule to forty-eight hours per week.

Industry	Decrease in Production
Men's shirts and collars	10%
Textiles	8 to 15
Worsted yarns	11
Knit goods	4 to 12
Paper	3 to 15
Cereals	12
Pottery	10

The interdependence of men's and women's work is cited as the reason for this estimated decrease in production. To substantiate the above estimates, the employers submitted descriptions of the industrial processes which would be particularly affected by a 48-hour law.

The textile industry processes, it is emphasized, are highly interdependent. In the preparation of work the dresser tenders cannot operate until the spoolers have performed their work. In the manufacture of yarn the heavy work must be done by men, the lighter and more skilled by women, and the processes are so coordinated that if the women cease to work so must the men. One knit goods manufacturer made the following statement:

> "* * * our production is so arranged that unless female operators can work ten hours per day to take care of production from knitting and dyeing machinery, which latter are operated by men, it simply means that men can only work same number of hours as women, as a

plant of our character cannot be operated economically with only a partial force of help.

"In our finishing department where about two hundred and fifty women are employed, possibly fifty men are engaged in interdependent positions, work which women cannot perform, when these women cease their work these men also must cease work, as there is no production passing along to them from the machines, etc., operated by women."

A worsted mill executive states that 75% of his company's employees are women. The spinning and twisting frames require such skill that they cannot be run except by women. The work of the men, who card and comb the wool, is limited by the ability of the women to use and finish their product. One employer describes the spinning process as "the neck of the bottle," and if the spinners go on shorter time the entire organization must do so, reducing output. Previous studies of the Conference Board have shown that textile manufacture is one in which reduction of hours results in reduction of output.

The pottery industry presents another case of intricate division of labor. It is estimated by one plant that 80% of the production would be affected by reducing hours of women because most of the work is done in gangs, and that output would be reduced 3½%. The following description of the pottery working process illustrates the correlation of the men's and women's work:

"In connection with the ware making in the clay shop, one woman works with several men on the cup crew making cups. The work of the girl consists of the finishing operation, that is, applying a wet sponge to the cup while it is still in the wet clay and before it has received the first fire. In addition to this the cup inspectors are girls. In making the plates and other flat ware a crew consists of juggerman, one or two apprentice laborers and a girl finisher, the operation being similar to that of cup making. After the ware has received its first fire, women work with men in the cleaning operation. In the next operation the ware is dipped in the glaze. A dipping crew consists of three men who do the heavy work and two to four girls who dip the light ware. In the second, or glost kiln firing, women work with the placing crews in making "stars," brushing the bottom of cups and other work. The glost, or second fire, drawing crew consists of seven men and five girls usually. Trimming crews consist usually of four to six men and two to three women. In our decorating shops a print crew on hand press work consists of one man and three girls,

> the man doing the actual press work and the girls transferring the decoration to the ware. In all of these operations girls are doing work for which they are particularly fitted and which, in many cases, could not be efficiently performed by men."

Judging from this and other similar expressions of opinion, a reduction of hours for women in the pottery industry will mean reduced output for the whole plant. When asked whether the loss could be made up by increasing equipment and number of workers, one establishment replied that competition would not allow this increased expenditure.

Very much the same interrelation of processes exists in the enamel industry, which is said to meet keen competition from Indiana and West Virginia, where hours of work are unregulated.

In machine manufacture, where the number of women engaged is comparatively small, the employers state that rather than reduce hours for the whole factory they will replace women by men. Thus one company writes, "in case the proposed 48-hour law for women should be passed, in all probability we would find it advisable to eliminate all women workers in these departments." This plant now employs 365 women. Another appliance manufacturer writes:

> "We employ women in our plant for light assembling operations, small machine operations, such as running light drill presses and tending automatic machines; and should this law be passed the employment of women in the manufacturing end of the business would automatically cease as we could not afford to operate a certain percentage of machines on one schedule of hours and the remaining machines on another basis. In the event the 48-hour law was enacted the women now employed would be replaced by men and the class of women who enjoy and can earn a good living would be denied this opportunity."

Another metal working plant reports:

> "Should the proposed 48-hour law for women be passed, we would be compelled to change our entire bolt and nut plant from a 53 to a 48-hour week because we are absolutely dependent on female help. Needless to say this would put us to a considerable disadvantage with our principal competitors who are located in Pennsylvania and Ohio."

One metal-furniture company estimated that a further reduction of hours for women would cut production down

$1,250 per week. Rather than do this, women would be replaced. A factory employing 190 women stated that it would be necessary to dismiss its women workers if the 48-hour law became effective.

From these replies it would appear that in plants with interdependent processes, where small numbers of women are now employed, the tendency would be to replace women workers with men. The larger industries, such as textiles, pottery, and some metal working plants, could not afford to do this, but would suffer reduced output.

Overtime Work

Some of the employers who might be willing to subscribe to the 48-hour week, and others who already have adopted that schedule, stress the need of liberal or flexible overtime provisions to meet the demands of peak seasons. Thus the paper-making industry requires overtime operation during the months of December and January to expedite delivery of papers used in sample books. During the rush season, it is necessary to work at least nine hours a day for six days, and overtime often increases the week to sixty-three hours. Paper industries reported that the overtime seasons may extend over twenty-four weeks.

The establishments in the industries covered by the survey were asked to state the number of weeks of overtime worked during the past year. They reported as follows:

Leather	13 to 16 weeks overtime per year
Machinery and metals	6 to 12 " " " "
Confectionery	4 to 20 " " " "
Paper	24 " " " "
Food and cereals	18 to 30 " " " "
Printing	6 " " " "
Women's neckwear	20 " " " "
Men's wear	10 " " " "
Hats, corsets	10 " " " "
Furniture	6 " " " "

The canners' problem in overtime is related to the great perishability of the materials which they handle. The present law exempts canners from the 54-hour regulation during the season from June 15 to October 15. The need for further preferential treatment is expressed by an executive of a canning company as follows:

"We feel that we should be placed under no greater restrictions than the farmer; at least during the period when we are handling his perishable crops. We consider that we are a part of agriculture, a step between the producer and the grower; the tail end of the harvest season. In fact our industry has been so recognized by the Federal Government. At the conference on Agricultural problems, during the Harding administration, the canning industry was placed in the agricultural class. The recent Federal Warehouse Act, under the administration of the United States Department of Agriculture, includes the canning industry in its provisions.

"If we are to be put on a par with many other states, it is our opinion that we should be excluded entirely from the provisions of the labor law applying to female adults, during such times as our handling of perishable products, such as peas, cherries, berries, tomatoes, and corn. However, if this procedure could not be brought about, it would work less hardship on us if, instead of setting specific dates during which time we are granted certain privileges under the law, we could have a period of time, say three or four weeks, permitting us to apply 'this time period' whenever the peak load came on. This then would take care of the seasonal variations, since one year the peak may occur at one time and the next year it will be ten days or two weeks later, depending on weather conditions."

Regulatory Legislation and Interstate Competition

It has been pointed out that the effect of regulatory legislation upon industrial development cannot be fully stated in terms of dollars and cents. It is more or less intangible in character, eludes even rough statistical measurement, and varies from industry to industry and from one section of the country to another. For example, a general 48-hour law for women will have no effect in industries which employ exclusively male workers; but it may prove unduly burdensome for an industry in which the labor force consists of a large proportion of women, or in which the processes carried on by even a relatively small proportion of women set the pace for the male workers. In industries where interstate competition is very keen, even the slightest advantage possessed by one state over another in such matters as hours of work, workmen's compensation, continuation school requirements, etc., may sometimes be the deciding influence in determining relative progress in the states in question.

It may be of interest to note in this connection that the states in which a high rate of industrial growth is most evi-

dent are, as a rule, singularly free from legislative restrictions upon industrial activity. A comparison of the provisions regulating hours of work for women in various states, contained in Table 14, shows clearly that the states which have been industrially undeveloped, but which are now attracting the newer, large scale industries, are more liberal in this field of regulatory legislation than such older industrial states as New York, Massachusetts and Ohio. In practically all southern states women are permitted to work sixty hours per week. Alabama and Indiana do not restrict hours of work, while of the industrially developed states Illinois is the only one which allows women to be employed for sixty hours per week.

This does not imply that exclusively long work periods are necessarily beneficial economically or socially, or that in some cases the circumstances of industrial development may not dictate restriction in the public interest. The point to which emphasis is here given is merely that general restrictions may often be ill-adapted to the needs of the situation, and that this, like all, regulatory legislation is most effective and salutary when it is intelligently proportioned, adjusted or conformed to the conditions to be met in respect both to social needs and the requirements of industrial growth.

Differences in legislative standards are particularly felt in certain branches of industrial activity which cannot be easily adjusted to new conditions of work. The canning industry for example, feels the limitation of hours of work for women acutely because of the seasonal nature and perishability of its products. The present laws of New York State allow women to work sixty-six hours per week in canning establishments from June 15 to October 15. Although this period of exemption from the 54-hour law seems fair, the employers find it less flexible than the season. Sometimes crops are late in ripening, making it impossible to use overtime advantageously during the period allowed, and when the rush comes the overtime period has expired.

The canners of New York complain that the competition of the middle western states has so reduced prices that no profits have been made for the past two years. They attribute this precarious position of the canning industry in

New York State to the unfavorable effect of regulatory legislation and point out that nearly every other state exempts canners of fruits and vegetables from the laws limiting the hours of work for women. Wisconsin, with a 9-hour day and 54-hour week, has a special law for canners which allows a 10-hour day and 60-hour week. Sixteen states[1] exempt canners entirely from the law, except that in some states extra payment is required for overtime hours of work.

The canners report keen competition from Michigan, Indiana, Illinois and Wisconsin. One New York canner has recently opened a branch in Indiana, which plant now produces 25% of the company's sweet corn pack, thus taking the business away from New York. Another illustration of conditions in New York is obtained from a plant which established a branch in Michigan:

> "So far as our own industry (canning) is concerned, it is our opinion that the present form of industrial legislation in New York State is causing the industry to move to other fields. In our own particular case, in 1923 we decided to build an additional plant. We did not consider a location in New York principally on account of the trend of industrial legislation affecting our industry. We went to Michigan and built a factory there. Our investigation disclosed the fact that our industry, so far as labor and compensation laws were concerned, was not hampered in that state as it is in New York State."

The cotton spinning industry of New York feels the competition of the South, which, in addition to its natural and geographic advantages, has the advantage of being free from many of New York's legislative restrictions upon industry. A cotton mill operator states the situation as follows:

> "If they care to examine our books they will find that the cost of producing is about half in Alabama as against Utica and that our Alabama mill has made fair profits under the same management on the same product during the same time that the Utica mill has continually lost money to the point where it has been forced to shut down."

Another says:

> "Mill after mill in the City of Cohoes and in the State of New York has been forced to go out of business. Some of these mills in the City

[1] Arkansas, California, Delaware, Idaho, Maryland, Michigan, Nevada, New Jersey, New Mexico, Ohio, Oregon, Pennsylvania, Utah, Virginia, Washington, and Wyoming.

> of Cohoes have been sold and mills that formerly manufactured underwear and wearing apparel are now operating as waste and shoddy mills. Employment has been reduced on a ratio of 10 to 5."

The machinery and appliance manufacturers feel their chief competition from Pennsylvania, Ohio, Michigan, Illinois and Wisconsin. A manufacturer of heavy cranes reports that no profits were made in New York during the past four years because of underbidding in the above named states.

The employers were requested by the Conference Board not only to state their objections to regulatory legislation but also to suggest a way of mitigating some of the most objectionable restrictions upon industrial operations. A number of employers suggested that equity could best be established and maintained among the various states by placing such subjects as workmen's compensation, health insurance, and child labor under the jurisdiction of the Federal Government. One employer says:

> "We believe the only way legislation might relieve any competitive conditions is to have workmen's compensation, health insurance, old age pensions, and similar welfare legislation under the jurisdiction of the Federal Government."

Among the more concrete suggestions for remedy is the recommendation made by a number of employers that the continuation school system be modified so that compulsory education may end at the age of sixteen. Other employers feel that the regulatory functions of the State Department of Labor and the insurance companies should be coordinated in a way to avoid irritation and uncertainty on the part of industry.

The weekly payroll law is criticised as being out of date. It is said that the law is not generally observed and that payment in cash is no longer necessary or advisable. Employers suggest that the law be changed to allow semi-monthly payment by check.

It is suggested that some means ought to be found to modify or relax, in cases involving severe hardship, the regulation enacted by the Public Health Council and having the force of law to the effect that cross connections between

water supplies in industrial plants must be removed prior to July 1, 1928. If this regulation is carried into effect it is alleged that it will cost thousands of dollars to individual plants to provide a second source of water for fire protection.

Summary

A considerable majority of the employers who replied to the Conference Board's questionnaire feel that the growth of New York industry is being retarded by regulatory legislation and that many industries are moving to other states. This is particularly true of those branches of industrial activity which have to meet keen competition from states where legislative standards are considerably lower than in New York.

Although the employers are practically united in the opinion that legislative restrictions upon industrial activities have been responsible for the failure of New York industry to keep pace with its competition, they do not advocate abolition of the existing measures; but they recommend strongly that the legislators examine each new measure more closely than heretofore in the light of its probable effect upon the industrial progress of the state and in relation to the level of legislative standards in other states. Should the state fail to adopt this policy many industrialists are convinced that the industrial leadership of New York will be seriously jeopardized.

CHAPTER IV

THE TREND OF INDUSTRIAL CONDITIONS IN NEW YORK STATE

THE purpose of this chapter is to ascertain whether the development of legislation in New York State is reflected in any clear way in the relative growth and economic position of the state's industries. It is obvious that accurate measurement of the effects of legislative influences upon industrial conditions is a difficult and complex task, and that in this field conclusive demonstration is less to be expected than suggestive indication. Legislative regulations relating to employment, hours of work, working conditions, safety, sanitation and workmen's compensation are only a few among the many influences that affect the relative development and position of industries in any state as compared with other states. Differences in the predominant type of industry, in technical advancement, in managerial and business methods, in the type of workers available; in the extent and effect of labor organization, in proximity to markets and to sources of material, and in taxation, are among the more important circumstantial influences upon industrial development in any state, and it is practically impossible to isolate or make allowance for the effects of such influences apart from those of legislation.

If, however, the burden of regulatory legislation, of compensation costs, and of taxation is at all decisive or influential in the industrial development of a state, it is probable that its effect will be apparent in the course of a long period of time when the trend of industrial development in any state, as measured by appropriate standards, is compared with the trend of industrial development generally, and particularly when it is compared with the trend of development of similar or identical industries in other states.

Such comparisons do not, of course, preclude the possibility that a relative decline in industrial development in a

state like New York may be merely the reflection of a more rapid growth of industry in other parts of the country or of a shifting of industry to other sections because of conditions which have no direct relation to legislative factors. As a matter of fact, the outstanding feature of industrial development in the United States during the past quarter century has been such a shifting of industries from the eastern to the middle western states and from the North to the South. But such migration of industry under the influence of purely economic factors does not lessen the force of the question whether it may not be worth while to preserve a more even balance between the economic advantages offered by other sections of the country and the local disadvantages under which industry in the state is sometimes put by reason of the social legislation which rapid industrial growth brings with it.

The study of industrial development in New York State from this point of view has been approached in two ways. First, specific evidence was gathered from the experience and attitude of industrial employers as to the specific effects of growing legislative regulation upon their own enterprises. Such evidence, which is necessarily suggestive and fragmentary rather than conclusive, has been presented in Chapter III. The second approach is through an analysis of authoritative and comprehensive statistical information regarding industrial changes in New York and other states. This is the task of the present chapter.

Method of Study

In making such an analysis it is necessary to select certain standards or tests by which to measure the trend of industrial conditions in New York both absolutely and in comparison with other states. The standards which have been chosen are such as the number of enterprises, size of establishments, value of products, value added by manufacture, number of wage earners, wages paid, installed power, management costs, corporate income and growth of population. The net result of applying these standards of measurement should be indicative of industrial trends. Each factor is explained briefly to facilitate a clear judgment as to the value and significance

of the comparisons made, and is analyzed at length to reveal the comparative industrial position of New York among its competitive states.

The period chosen for the comparisons is that between the Censuses of Manufactures of 1914 and 1923. The first and chief reason for this selection is that the most important regulatory legislation adopted in New York State coincides with this period. Secondly, 1923 is the latest year for which complete data are available, and 1914 appears to be as remote a date as should be used in comparing recent economic and industrial trends.

It is realized that the census data for 1914 and 1923 are not comparable in all respects, chiefly because in 1923 no manufacturing establishment producing commodities valued at less than $5,000 was included, whereas for 1914 the data include all establishments reporting products valued at or above $500. From the total figure representing "all industries" in a state or in the United States in 1914, the establishments producing commodities of less than $5,000 in value may be eliminated, so as to make the 1914 data in these groups comparable with the figures for 1923, but this can not be done for each specific industry. An unavoidable element of error exists, therefore, in any conclusion regarding individual industries when based upon comparisons of census data for those two years. Nevertheless, the error from this source is not believed to be large enough to invalidate the comparisons. The census officials have indicated that because of the relatively slight importance of the smaller establishments in most industries, the element of error in this respect in comparisons of figures for 1914 and 1923 probably does not exceed one per cent in such basic items as value of products and number of wage earners. As regards number of establishments, however, the margin of error may be large, because numerous small enterprises which were counted in 1914 were not included under the revised schedule for 1923.

The comparisons have been made, where data are available, between the trends in New York State and those in the six most important competing states[1] and in the United States as a whole, first, for all manufacturing industries com-

[1] As ascertained in Chapter I.

bined, and second, for twenty leading industries of New York State. These specific industries have been selected because in New York they represent the leaders in three different classes of achievement; first, in value of products; second, in number of wage earners employed; and third, in the proportion of women among all wage earners. One of them, the cotton goods industry, is not relatively prominent in New York, but it is included because of its importance in one competing state and in the United States as a whole, as well as because it presents questions of peculiar significance in relation to regulatory legislation.

Number of Enterprises

The change in the number of industrial enterprises in a state as compared with the change in the United States as a whole within a given period is perhaps the simplest and most general indication of comparative industrial development. Such a comparison would be more definite still if it could be carried into particular industries. This measure, however, loses a large part of its value because it takes no account of changes in the average size of manufacturing establishments. The last twenty-five years have witnessed in industry generally a definite trend towards large scale manufacturing enterprise, in part achieved through consolidations and in part the result of recognition of the increased efficiency of the larger organizations. In consequence, a relatively slower rate of increase in the number of enterprises in any industry or in industry as a whole, as compared with the country generally, may easily reflect merely a compensatory effort to offset legislative disadvantage by consolidation or by large scale production. In other words, the fact that the number of enterprises in an industry increased more rapidly for the United States as a whole than in New York State would not necessarily prove that a competitive disadvantage existed in the latter. Taken in connection with other considerations, however, such a comparison should indicate whether conditions in New York State were such as either to retard the increase in number of industrial enterprises or to promote large-sized establishments.

As indicated previously, comparative data on the number

of manufacturing establishments are subject to considerable error if carried to specific industries, and for this reason no attempt is made to employ them. The census officials state that the rejection in 1921 of all enterprises having products valued at between $500 and $5,000 resulted in a reduction of 21.6% in the number of establishments, as compared with the number in 1914. No doubt a similar inconsistency exists between the data for 1923 and for 1914. Correction of the 1914 figures for "all industries," however, to make them comparable with the data for 1923, shows the general situation in New York, the United States and the states competing with New York. On this basis of comparison, the changes in number of establishments from 1914 to 1923 were as follows:

United States	+ 9%
New York	+12%
Pennsylvania	+ 4%
Ohio	+ 6%
Illinois	+17%
New Jersey	+26%
Massachusetts	+15%
Michigan	− 1%

As the increase in New York was approximately the same as the average increase for the six competing states, and slightly higher than that in the entire United States, it seems evident that so far as the mere number of enterprises is concerned New York showed no sign of retardation in industrial growth during this period. The relative growth in number of enterprises, however, cannot be considered significant as a test of industrial progress without consideration of the average size and kind of establishments and their productive capacity. It has been mentioned previously, and will be shown more clearly in this chapter, that the average establishment in New York is much smaller than in other states. The addition of an equal percentage of factories, therefore, would not constitute equal growth according to other measures of accomplishment. Moreover, because of the peculiar composition of New York industry, the kind of industries in which the growth has taken place most markedly must be taken into account, and this unfortunately cannot be done for reasons already given.

Value of Products

A more significant measure of the industrial trend is the relative growth in value of manufactured products in the state. This measure, moreover, has a wider importance, in that the value of products for industry as a whole measures the economic turnover on the part of industry in the state, or its contribution to the current income of the state, in the form of wages, salaries, commissions, profits, taxes, transportation charges, retail and wholesale trade, etc.

The trend of value of products for all manufacturing industries in a state as compared with that for the United States as a whole or for competing states, however, can not alone be conclusive evidence of relative retardation or growth. Wide changes in price levels which have taken place during the period since 1914 have affected commodities differently, and since the make-up of industry in New York State is not quite the same as that for the United States as a whole, or for any other state, it is possible to draw conclusions from the trend in value of products only by comparing specific industries in New York State with the same industries for the United States as a whole and for competing states. Even here an uncertain element enters because of the specialization of production within any particular industry. The textile industry, for example, in a single state may specialize in a certain type of product, thus rendering invalid any comparison with a more diversified textile industry in another state. Barring this qualification, however, the comparison of the relative trend in value of products of identical industries should suggest the presence or absence of retarding influences.

Table 27 presents a picture of industrial trends on the basis of production values. The data are given in index numbers, and the range of each figure above or below 100 indicates the percentage of growth or decline since 1914.

It is clear from the table that, for all industries combined, the growth in New York State since 1914 has been somewhat less than in the United States as a whole. This is indicated by an index of 236 in the one case and of 250 in the other. Four of the six competing states made greater progress than

TABLE 27: INDEX NUMBERS OF VALUE OF MANUFACTURED PRODUCTS, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	250	236	261	289	225	242	218	358
Clothing, men's	257	260	360	286	213	411	253	177
Clothing, women's	297	325	163	170	286	255	213	126
Foundry and machine shop products	270	266	244	275	289	266	175	420
Printing and publishing	249	232	258	285	265	323	247	292
Knit goods	328	295	345	252	279	392	269	239
Boots and shoes, other than rubber	199	290	180	185	357	129	145	101
Millinery and lace goods	261	270	116	191	258	229	80	978
Electrical machinery, apparatus and supplies	386	260	453	483	463	255	268	814
Motor vehicles (not including motorcycles)	629	678	1,420	466	1,027	4,454	537	475
Furniture	287	281	220	260	287	211	247	298
Iron and steel (including rolling mills)	343	383	288	395	329	559	286	600
Tobacco—cigars and cigarettes	261	150	230	165	65	..	102	166
Confectionery and ice cream	299	272	335	256	271	313	271	360
Carpets and rugs, wool, other than rag	289	270	317	..	..	508	222	..
Silk manufactures	300	359	329	..	..	242	315	..
Shirts	252	245	320	196	240	340	153	393
Boxes, paper and other (except wooden)	354	280	297	615	374	471	281	130
Canning and preserving, fruits and vegetables	248	142	258	129	224	374	..	190
Cotton goods	281	287	409	..	..	213	213	..
Collars, men's	230	232	157	..	..	..	..	..

New York. Michigan leads with an index of 358, which reflects the rapidity of industrial development in that state.

Individual industries present numerous situations of interest. In the men's clothing industry, although New York made slightly greater progress than the United States as a whole, and exceeded the progress of Illinois, Massachusetts, and Michigan, three other states, namely Pennsylvania, Ohio and New Jersey, advanced more rapidly than did New

York. The prestige of New York in this field, however, has not yet been reduced. In 1914, the value of the men's clothing production in this state was 43.1% of the total for the United States, and in 1923 it was 43.5%. While other states made larger percentage gains than did New York, the actual amounts of their increase were comparatively small. The production in Illinois ranked next to New York in 1923, but it was only about one-third as great. Other states were much farther behind.

The women's clothing industry, measured by the comparative growth of production values, remains secure in New York. The index for this state is 325, whereas for the United States it is 297 and for the six competing states it ranges from 125 to 286. New York, furthermore, produced 79.9% of all the women's clothing of the entire country in 1923, so that the meager progress in other states does not inspire alarm.

In the foundry and machine shop products industry New York maintained practically a rate of progress comparable with other states. The index number for the United States is 270 and for New York 266. Pennsylvania and Massachusetts rank below New York; New Jersey is on an exact parity with New York, while Ohio, Illinois and Michigan take the lead. Except for the rapid growth in Michigan, which no doubt resulted from the great expansion of the automobile industry, New York made a good record of progress in comparison with competing states. In 1923, the value of the foundry and machine shop products of New York was 11.7% of the total value produced by that industry in the United States, as compared with 11.9% in 1914.

Printing and publishing made less progress in New York than in the United States or in any one of the competing states. In 1914, furthermore, the value of the New York product was 27.2% of the total for the United States, whereas in 1923 this state's proportion declined to 25.3%. When measured by value of products, therefore, this industry appears to be losing ground in New York.

In the knit goods industry the index for New York was 295, whereas for the United States it was 328. Pennsylvania and New Jersey also made greater relative progress than

New York. As the Pennsylvania product in this industry is 96% of that of New York, it is apparent that competition is keen between the two states. In 1914, New York produced 30.2% of the knit goods product in the United States, but by 1923 this state's share had declined to 27.2%. Apparently the relative trend in New York is downward.

In the boot and shoe industry New York made greater progress between 1914 and 1923 than the United States or five of the six competing states. Illinois alone exceeded New York in percentage of growth, but production in Illinois in 1923 was only about one-third as great as in New York. Massachusetts leads in production. In 1914, New York accounted for only 13.4% of the national product, whereas by 1923 its proportion was 19.5%. The trend, therefore, seems to be favorable in New York.

In the production of millinery and lace goods New York made greater relative advancement than the United States or any competing state except Michigan. The high index of 978 for the latter, compared with 270 for New York, however, is not especially significant when taken in connection with the fact that the 1923 value of the Michigan product was $2,432,911, as against a value of $297,505,409 in New York. The state ranking next to New York in value of product in this industry produced only about one-eighth as much as New York. Since New York in 1914 produced 63.4% of the total millinery and lace goods of the United States, and by 1923 had increased the percentage to 66.4, it seems clear that the trend in New York has been favorable.

In the manufacture of electrical machinery, apparatus and supplies New York failed to keep pace with the country as a whole or with its competitor states. The index for the United States is 386, compared with 260 in New York. In Massachusetts it is slightly above and in Pennsylvania, Ohio, Illinois and Michigan it is much above the New York level. The effect of the rapid growth in other states is reflected in the fact that New York's portion of the total national production declined from 22.1% in 1914 to 14.9% in 1923. These facts may reflect differences in product in this industry as among the various states, but to what degree this is true cannot be determined from the census data.

Measured by value of product, the motor vehicle industry appears to have made comparatively satisfactory progress in New York.

The production of furniture has made greater relative progress in New York than in four of the competing states. Michigan, Illinois and the United States, however, have made better percentage increases than New York. It seems apparent from the table that in this industry New York State is making about the average rate of growth.

In the iron and steel industry the New York index is higher than that of the United States, Pennsylvania, Illinois and Massachusetts. On the other hand, Ohio, New Jersey and Michigan advanced faster than New York. This is a relatively small industry in New York, Pennsylvania producing more than ten times as much as New York in value, nevertheless the trend of growth in the latter has been about up to the average.

Shirt manufacture constitutes an important industry in New York State. Measured by value of product, this state in 1914 produced 43.1% of the total shirt output of the country, and in 1923 the figure was 41.9. The index number representing growth from 1914 to 1923 is 252 for the United States and 245 for New York, suggesting a relative retardation of growth in New York. Pennsylvania, New Jersey and Michigan made greater progress in the industry, but the three of them combined produced only about three-fifths as much as New York.

In the manufacture of paper and other non-wooden boxes, New York seemed to lag behind. The index for the United States is 354, while for New York it is only 280. Pennsylvania, Ohio, Illinois, New Jersey and Massachusetts, each made greater relative advance than New York. The production in New York in 1923 was 23% of the total in the United States, but in 1914 it had been 29%. The trend in New York, therefore, appears to be unfavorable.

Another industry which has apparently undergone a relative decline in New York is that of canning and preserving fruits and vegetables. The index for the United States is 248; for New York it is only 142. Pennsylvania, Illinois, New Jersey and Michigan all exceeded New York in percent-

age of growth. In 1914, the New York product was 10% of the total in the United States, and by 1923 it was down to 5.7%. From this it is apparent that the trend of the industry in New York has been decidedly less favorable than in other states.

Value Added by Manufacture

Since the cost of materials and fuel forms a large part of the value of products generally, but differs in its importance as between different types of manufacture, a truer measure of the trend of industrial development is afforded by the net value or value added by manufacture. This standard is of special importance in measuring the trend of costs, since the value added by manufacture is what is paid for wages and managerial expenses and is increased by the use of power, machinery and capital investment. To secure an accurate idea of the effect of factors influencing wages, employment, supervision and capital investment it is necessary to relate these to the productive output as measured by the net product.

Table 28 presents the trends in the United States, New York and the six competing states on the basis of value added by manufacture. For all industries combined it is evident that the increase from 1914 to 1923 in value added to raw materials by means of the manufacturing process in New York was less than in the United States as a whole or in any competing state except Massachusetts. The differences in most cases were quite marked.

In the individual industries New York likewise lagged behind all except one or two states in such manufacturing groups as printing and publishing, electrical machinery and supplies, motor vehicles, carpets and rugs, shirts, canning and preserving fruits and vegetables, and paper boxes. The canning industry appears to be especially backward in New York, the index for this state being only 136, as compared with 331 for the country as a whole. Every competitive state showed greater progress than New York in this industry. Likewise the manufacture of electrical machinery and supplies has made much more progress elsewhere than in the State of New York, the index number for New York being 290 as compared with 413 for the United States.

TABLE 28: INDEX NUMBERS OF VALUE ADDED BY MANUFACTURE, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	262	247	268	294	248	260	245	327
Clothing, men's	260	260	356	279	223	447	269	198
Clothing, women's	270	293	163	155	253	228	203	90
Foundry and machine shop products	276	276	259	272	290	273	180	414
Printing and publishing	246	230	252	286	273	337	250	289
Knit goods	324	302	363	267	289	318	257	186
Boots and shoes, other than rubber	247	344	227	239	454	154	179	102
Millinery and lace goods	261	274	111	201	275	200	102	960
Electrical machinery, apparatus and supplies	413	290	445	521	475	283	282	935
Motor vehicles (not including motorcycles)	482	456	1,033	473	984	2,930	393	356
Furniture	295	292	230	268	299	233	242	302
Iron and steel (including rolling mills)	339	417	275	413	330	439	450	640
Tobacco—cigars and cigarettes	245	113	213	137	60	..	99	151
Confectionery and ice cream	334	325	371	258	251	392	309	360
Carpets and rugs, wool, other than rag	380	361	393	..	..	666	303	..
Silk manufactures	258	310	271	..	..	195	314	..
Shirts	226	220	268	186	238	285	126	331
Boxes, paper and other (except wooden)	312	262	277	377	342	442	298	107
Canning and preserving, fruits and vegetables	331	136	353	142	256	381	..	167
Cotton goods	308	344	394	..	..	233	251	..
Collars, men's	203	202	145	..	..	..	..	..

Approximately one-third of the industries listed in Table 28 appear to have made less progress in New York than in other states, while another third have made about equal progress and in the remaining third New York has been in the lead.

NUMBER OF WAGE EARNERS

The relative growth or decline in the number of persons employed in manufacturing industries in New York State,

as compared with the changes for the United States as a whole and for other states, is of significance for two reasons: first, because it shows how the changes in industrial development affect the working population who derive their livelihood from industry, and second, because it brings the inquiry nearer to the question of the specific effects of regulatory legislation upon industrial operation.

Table 29 is presented to show the trend in average number of wage earners employed in manufacturing industries in New York State. In all manufacturing industries combined the index representing the average number of wage earners for the United States is 125, and for New York it is only 109. All of the six competing states, furthermore, are ahead of New York, the indexes ranging from 110 in Massachusetts to 186 in Michigan. This indicates in a general way that New York lagged behind other states in the increase of employment. An examination of specific industries forces the acceptance of similar conclusions. The differences in growth of employment offered were in most cases quite considerable.

In about two-thirds of the individual industries listed in Table 29, New York showed less progress than the United States or a majority of the competing states. Such groups, for instance, as men's and women's clothing, cigars and cigarettes, shirts, paper boxes, and the canning and preserving of fruits and vegetables, experienced a considerable decline of wage earners in New York between 1914 and 1923, while most of the competing states increased the number of wage earners employed in the same industries. In a few other industries, namely, the manufacture of knit goods, electrical machinery and supplies, and confectionery and ice cream, New York shows an increase of wage earners employed in 1923 as compared with 1914, but the percentage of growth in this state is not nearly so great as in the United States or, with one exception, in a majority of the states competing with New York. Only in foundries and machine shops, boot and shoe factories, and silk plants did the increase in employment in New York exceed greatly that for the country as a whole or for other states between 1914 and 1923.

Another indication of the change in the relative position

TABLE 29: INDEX NUMBERS OF AVERAGE NUMBER OF WAGE EARNERS IN MANUFACTURING, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	125	109	119	137	128	120	110	186
Clothing, men's	112	90	180	159	99	149	131	82
Clothing, women's	79	75	64	51	99	104	85	49
Foundry and machine shop products	124	128	114	127	125	118	75	194
Printing and publishing	108	107	103	108	118	132	108	112
Knit goods	129	113	119	135	143	135	110	112
Boots and shoes, other than rubber	118	158	99	96	199	64	90	62
Millinery and lace goods	120	118	57	97	137	102	45	387
Electrical machinery, apparatus and supplies	199	152	238	207	224	149	154	354
Motor vehicles (not including motorcycles)	304	193	302	170	284	1,269	94	349
Furniture	129	118	103	126	126	106	117	137
Iron and steel (including rolling mills)	156	157	127	188	148	224	164	237
Tobacco—cigars and cigarettes	85	53	90	86	33	..	57	79
Confectionery and ice cream	140	128	128	130	147	117	139	180
Carpets and rugs, wool, other than rag	112	114	110	..	..	169	93	..
Silk manufactures	116	122	117	..	..	99	143	..
Shirts	99	81	116	78	104	118	71	142
Boxes, paper and other (except wooden)	126	93	111	156	134	152	121	58
Canning and preserving, fruits and vegetables	114	72	147	74	116	128	..	103
Cotton goods	124	119	139	..	..	125	101	..
Collars, men's	103	104	163	..	..	..	..	..

of New York industry, in respect of the number employed, is given in Table 30. Although the state still occupies a large place in the nation's activities in these industries, the decline in proportion of wage earners between 1914 and 1923 would seem to indicate that New York State has been losing ground relatively to other states. In certain of the industries mentioned, like canning, the result might be expected as the consequence of a shifting of sources of supply of raw

materials or other causes; but whatever the reason for it, the tendency is clearly evident.

TABLE 30: RATIO OF EMPLOYMENT IN NEW YORK TO THAT OF THE UNITED STATES, 1914 AND 1923

(Source: U. S. Census of Manufactures)

Selected Industries	Percentage of New York Wage Earners to Wage Earners of the United States	
	1914	1923
Clothing, men's	37.4%	30.1%
Clothing, women's	64.2%	61.1%
Tobacco—cigars and cigarettes	19.7%	12.3%
Shirts	31.6%	25.8%
Boxes, paper and other, except wooden	31.3%	23.2%
Canning and preserving, fruits and vegetables	12.8%	8.1%
Knit goods	26.6%	23.4%
Electrical machinery, apparatus and supplies	20.1%	15.3%
Confectionery and ice cream	18.2%	16.9%

The trend in number of wage earners of itself, however, does not conclusively indicate an unfavorable situation in New York. In this comparison as in others that follow, account must be taken of the relative extent and character of the industrialization of the state. New York is an older industrial state; its industries may be less new or modernized; it may be nearer the "saturation point" than the other states with which it is compared, and its growth may for these reasons be inevitably slower. As regards growth in employment, of course, this depends in part upon the growth of the available labor supply as well as upon the demand arising from industrial expansion. It is impossible to say definitely to what extent this factor operates in New York, but the figures given in Table 42 suggest that, as compared with certain of the competitive states, there is little sign that employment has reached a saturation point in New York State. Possibly also the relative decrease of employment in some cases reflects a growing efficiency of labor and management or an extension of the use of automatic machinery rather than a decline of the industry. This would seem to be probable in cases where there has been an almost corresponding decline in the country generally, as, for instance, in the manufacture of women's clothing and of cigars and

cigarettes, but it would not account for conditions in the paper box and the canning[1] industries, where there has been a marked increase of employment outside of New York and a decrease in that state. It is necessary, therefore, to examine other features of the industrial trend before general conclusions can be justified.

Size of Establishments

The relative extent of change in the average size of establishments in New York State industries, as compared with American manufacturing industry generally, and with manufacturing industry in other states, is of importance in a study of industrial trends for several reasons. For one thing, it must be taken into consideration in judging the significance of the trend of number of enterprises, discussed above; secondly, it has a more or less direct relation to the problem of regulatory legislation. The large scale establishment is in many cases the more efficient, and to that extent, other things being equal, will be better able to bear a given burden of legislative regulation. On the surface, therefore, a trend toward large scale establishments might appear to be a natural form of adjustment of industry to increased legislative burdens. This, however, is not necessarily true. Much depends upon the character of the industry whether a given legislative situation will favor the small or the large establishment. Although larger establishments may make for greater productive efficiency, they may involve more supervision and relatively higher management costs, especially where there is much regulatory legislation to be observed in matters of employment, safety, sanitation, etc. Also, where hours of work are restricted by legislation, the smaller establishment, other things being equal, may have the advantage over larger ones in so far as smaller overhead costs for idle capital are entailed.

Because the data for 1914 on number of manufacturing establishments cannot be compared with the 1923 data as regards individual industries, it is likewise impossible to pre-

[1] It has been suggested that the situation in the canning industry is a reflection chiefly of the decline of New York State as a source of agricultural products, but it appears unlikely that this can have been the major factor.

sent in complete detail a table showing the size or the changes in size of establishments. Data are available for the average size of establishments in each state and in the United States for "all industries," but it should be remembered that, because of the differences in character of the industries in the various states, such comparisons lose much of their significance, as has been emphasized earlier. The predominance of small scale establishments in the clothing industries of New York City, and the probability that such small units are specially suited to this industry, greatly affect the inferences one may legitimately draw from these figures.

Table 31 shows that the average number of wage earners per establishment in New York State was much less in 1914 and in 1923 than for the United States as a whole or for any one of the competing states. There was, moreover, a decline of 1% in New York, between 1914 and 1923, whereas for the entire country there was an increase of 16%. Four of the competing states record increases in size of establishments ranging from 10% to 90%. New Jersey and Massachusetts experienced declines of 4%, but in these two states the average size of establishment is nearly twice as great as in New York.

TABLE 31: SIZE OF ESTABLISHMENTS, 1914 AND 1923

(Source: U. S. Census of Manufactures)

State	Average Number of Wage Earners per Establishment[1]		Index Numbers for 1923 1914=100
	1914	1923	
United States	39	45	116
New York	31	30	99
Pennsylvania	50	57	115
Ohio	48	62	131
Illinois	41	45	110
New Jersey	53	51	96
Massachusetts	66	63	96
Michigan	47	88	190

[1] Data for 1914 have been made comparable with those for 1923 by eliminating all establishments reporting annual production of under $5,000.

The table indicates not only that the average manufacturing plant in New York, taking its industry as a whole, is much smaller than is the case elsewhere in competitive territory, but also that New York is making no progress

toward multiplying the wage-earning personnel per factory. New York has remained persistently a manufacturing state of relatively small establishments. This, as has been pointed out, is doubtless due in some measure to the large part which the clothing, millinery, lace goods, and similar industries play in the industrial make-up of the state. In view of these facts it would seem probable that the markedly less pronounced trend toward large scale establishments in New York State, as compared with the country as a whole and with other states, reflects a form of adjustment to interstate competitive conditions peculiarly adapted to industries such as those which bulk large in New York.

Wages Paid

Though the total of wages paid in manufacturing industries is of significance as a measure of the growth in the economic importance of industry in the life of the state, from the point of view of a study of regulatory legislation the significant factor is the relation of wages to industrial operation as affected by restrictions on employment and hours of work. The latter question may be approached by comparing the trend of wages paid per wage earner, that is, wage costs per wage earner in New York State with those in other states, and by studying the relation of wage costs to production as measured by the value added by manufacture. For the reasons discussed above in connection with value of products, these comparisons can safely be made only as between states by specific, identical industries. If by such comparisons the trend of wage costs per wage earner and per thousand dollars of value added by manufacture in any state shows markedly different movements from those for the same industry in another state or in the country as a whole, it is justifiable to look either for some pronounced difference in external factors affecting industrial operation or for some special difference in improvement of industrial technique. Which of the two is present would then have to be decided by some test of the increased use of machinery and power, or increased effort of management.

Table 32 sets forth the relative position of New York as regards the increase in the aggregate amount of wages paid

TABLE 32: INDEX NUMBERS OF WAGES PAID IN MANUFACTURING, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	271	252	272	308	268	275	234	422
Clothing, men's	271	247	383	361	258	447	300	171
Clothing, women's	191	197	123	116	217	239	194	88
Foundry and machine shop products	263	265	255	279	272	268	162	401
Printing and publishing	238	241	240	238	272	295	227	248
Knit goods	282	254	299	263	275	297	224	234
Boots and shoes, other than rubber	237	360	201	215	396	132	177	125
Millinery and lace goods	297	322	127	202	302	217	102	706
Electrical machinery, apparatus and supplies	414	307	541	439	458	312	324	751
Motor vehicles (not including motorcycles)	608	404	657	340	482	2,861	171	675
Furniture	279	273	221	265	279	255	248	299
Iron and steel (including rolling mills)	339	363	281	401	297	490	323	611
Tobacco—cigars and cigarettes	158	108	196	159	61	..	87	151
Confectionery and ice cream	318	306	316	296	346	312	307	444
Carpets and rugs, wool, other than rag	330	360	308	..	..	497	266	..
Silk manufactures	269	307	278	..	..	220	324	..
Shirts	198	180	232	153	178	269	125	220
Boxes, paper and other (except wooden)	289	228	252	418	313	416	240	116
Canning and preserving, fruits and vegetables	249	152	396	143	242	334	..	156
Cotton goods	271	279	386	..	..	295	229	..
Collars, men's	177	177	129	..	..	..	..	..

in manufacturing industries. Once again New York State takes lowest rank with the exception of Massachusetts. By this measure of progress, it is clear that New York did not push forward so fast as other states. In other words, the relative amount of wages going to New York State industrial workers, which constitute the bulk of the buying power of the state and so the mainstay of its business life, did not increase nearly so much as for the United States as a whole

or most other states. A number of individual industries contributed to the unfavorable trend in the state, among them being men's clothing, knit goods, electrical machinery and supplies, motor vehicles, paper box manufacture and the canning and preserving of fruits and vegetables. This trend suggests the question whether or not the smaller increase in wages paid indicates declining wage costs for New York industries.

Wage Cost per Wage Earner

Taking into account both the relative change in number of wage earners in New York manufacturing industries and that in wages paid, Table 33 shows that the wage cost per wage earner in New York industries as a whole increased 131% as compared with 117% for the United States. All six of the competing states, furthermore, show smaller percentages of increase in this respect than does New York. Thus, while it has cost the New York employer relatively more for each worker than in other states, the aggregate of purchasing power provided by New York industries has not relatively increased.

Unless it were obvious that New York industries in the aggregate and individually are of such a peculiar kind as to involve a very different type of worker than manufacturing industry generally, it would be reasonable to infer from this disparity the influence of special factors upon wage costs in New York State. This probability is emphasized when a comparison of wage costs is made by specific industries. In each of the twenty industries listed, except foundries and machine shops, electrical machinery and supplies, and canning and preserving fruits and vegetables, the wage cost per wage earner in New York State has increased more since 1914 than for the United States. The disparities are quite large and significant, and it should be noted especially that they are greatest in the cases of the industries employing a large proportion of women workers. The three exceptions, foundries and machine shops, electrical machinery and supplies, and canning and preserving establishments are relatively unimportant as employers of women workers. The printing and publishing industry also, in which the disparity

TABLE 33: INDEX NUMBERS OF WAGE COST PER WAGE EARNER, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	217	231	230	225	210	229	213	227
Clothing, men's	242	274	213	227	260	301	229	208
Clothing, women's	242	262	191	226	218	231	227	180
Foundry and machine shop products	213	207	224	221	217	226	215	207
Printing and publishing	221	225	233	220	230	223	210	221
Knit goods	218	224	251	194	193	220	204	210
Boots and shoes, other than rubber	201	228	202	224	199	206	197	202
Millinery and lace goods	248	272	224	207	220	212	229	182
Electrical machinery, apparatus and supplies	208	202	228	212	205	209	210	212
Motor vehicles (not including motorcycles)	200	209	218	200	170	225	183	194
Furniture	216	232	214	210	223	240	211	219
Iron and steel (including rolling mills)	217	230	221	214	201	219	197	258
Tobacco—cigars and cigarettes	185	203	219	183	187	..	152	190
Confectionery and ice cream	227	238	247	228	235	267	221	247
Carpets and rugs, wool, other than rag	293	314	279	..	..	294	287	..
Silk manufactures	233	251	238	..	..	222	226	..
Shirts	199	222	200	196	172	229	176	155
Boxes, paper and other (except wooden)	230	245	227	268	234	273	199	198
Canning and preserving, fruits and vegetables	219	212	269	193	208	260	..	151
Cotton goods	218	233	277	..	..	235	227	..
Collars, men's	171	171	80	..	..	..	..	..

in wage costs was small, employs a relatively small proportion of women as compared with some of the other industries listed.

Practically the same condition is found to prevail when New York is compared with the competing states. Among the twenty industries, there are only three in which the wage cost per wage earner did not increase more in New York than in a majority of the six states.

Wage costs have not only grown more rapidly in New York, but they appear to be absolutely higher than in other states. Taking all manufacturing industries in the United States as well as in each state, and comparing the actual average cost of labor per wage-earner month, it is found that the cost in New York exceeds the average for the United States as a whole and for all the New England states and for New Jersey and Pennsylvania, and is exceeded among the competitive states by Ohio, Illinois and Michigan. These differences may be in part the result of difference in type of labor in the industries of the various states, but they are nevertheless large enough to suggest the effect of other factors as well.

Management Costs

Unfavorable external influences upon wage costs may be met by better organization of production. The only statistical measure possible of the extent of this readjustment is to be found in the trend of management costs, calculated in terms of the salaries paid to official, supervisory and clerical employees in relation to the working force. Here again comparison must be made as among identical industries in different states. The comparative trend of management costs also has a secondary significance in that it may reflect the extent to which regulatory legislation has directly involved increased costs of supervision in industrial establishments.

Table 34 illustrates the changes in salaries paid in New York, the United States and competing states between 1914 and 1923. The table reveals that the increases of salary to industrial officials have not been so great in New York as in the United States, or in any one of the six competing states except Michigan. When comparisons are made in specific industries, it is found that in twelve cases out of twenty the salaries in the United States as a whole have been increased more than those in New York, while in the six competing states there are eleven of the listed industries in which all but one or two of the states have exceeded New York in salary increases and only six industries in which the increases of salary in New York have been in excess of those in more than half of the competing states.

TABLE 34: INDEX NUMBERS OF SALARIES PAID IN MANUFACTURING, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	234	220	242	247	242	246	238	215
Clothing, men's	209	185	337	226	213	532	235	160
Clothing, women's	231	254	138	112	263	226	139	92
Foundry and machine shop products	232	209	251	214	241	271	191	300
Printing and publishing	239	217	226	272	251	271	225	262
Knit goods	323	335	381	208	344	293	353	148
Boots and shoes, other than rubber	216	261	203	154	404	170	220	100
Millinery and lace goods	276	288	160	181	314	216	71	910 c
Electrical machinery, apparatus and supplies	392	397	326	504	501	250	369	502
Motor vehicles (not including motorcycles)	365	252	654	328	741	1,258	229	353
Furniture	240	234	194	178	240	264	238	235
Iron and steel (including rolling mills)	267	253	239	286	262	421	257	419
Tobacco—cigars and cigarettes	169	88	187	98	54	..	120	195
Confectionery and ice cream	258	233	288	219	269	282	248	282
Carpets and rugs, wool, other than rag	207	144	223	..	..	697	197	..
Silk manufactures	265	309	311	..	..	247	191	..
Shirts	212	203	255	127	209	163	185	139
Boxes, paper and other (except wooden)	302	240	346	373	307	405	351	138
Canning and preserving, fruits and vegetables	246	187	279	95	169	172	..	227
Cotton goods	254	313	318	..	..	290	219	..
Collars, men's	188	193	185	..	..	..	..	..

It is of interest to note that in three of the four industries in which New York recorded low net product and low wages, namely, the production of motor vehicles, paper boxes, and canned fruit and vegetables, the index of salary increases likewise is comparatively low. In the fourth industry, furthermore, that is, the manufacture of electrical machinery and supplies, New York is practically on a parity with the United States and the competing states.

The changes in aggregate salary cost, however, are only an indirect indication of industrial growth and throw no light on changes in productive methods and management made in adjustment to unfavorable industrial environment. In view of the fact that the increase in wage earners (Table 29) was less than the increase in salary costs (Table 34) one might expect the increase in salary cost per wage earner to be relatively high. From Table 35 it is seen that the manage-

TABLE 35: INDEX NUMBERS OF SALARY COST PER WAGE EARNER IN MANUFACTURING, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	187	201	204	180	190	205	216	116
Clothing, men's	186	205	187	142	214	358	179	195
Clothing, women's	293	338	214	218	265	218	163	188
Foundry and machine shop products	188	163	221	169	193	229	253	155
Printing and publishing	222	203	220	252	212	205	208	233
Knit goods	250	295	321	154	241	216	322	133
Boots and shoes, other than rubber	184	166	204	160	203	266	244	161
Millinery and lace goods	230	243	281	185	229	211	160	235
Electrical machinery, apparatus and supplies	197	261	137	243	224	168	240	142
Motor vehicles (not including motorcycles)	120	131	217	194	261	99	244	101
Furniture	185	199	188	142	191	249	202	172
Iron and steel (including rolling mills)	171	161	188	153	177	188	157	177
Tobacco—cigars and cigarettes	198	165	208	113	167	..	211	246
Confectionery and ice cream	185	181	225	168	183	241	179	157
Carpets and rugs, wool, other than rag	184	126	203	..	..	412	212	..
Silk manufactures	229	252	266	..	..	249	133	..
Shirts	213	251	219	163	201	139	259	98
Boxes, paper and other (except wooden)	240	258	312	240	229	266	291	236
Canning and preserving, fruits and vegetables	216	260	190	128	145	134	..	219
Cotton goods	204	262	228	..	..	231	217	..
Collars, men's	181	186	114	..	..	..	..	..

ment cost per wage earner, as measured by salaries paid to officers, superintendents and clerical employees, has increased more in New York State than for the United States as a whole, so far as all manufacturing industries are concerned. The most notable exceptions among the specific groups examined are the foundry, printing and publishing, boot and shoe, iron and steel, tobacco, and carpet and rug industries.

For all industries combined, the increase in salary cost per wage earner was higher in New York than in the United States, but with the six competing states New York was almost equal. In the twenty individual industries the New York figure in thirteen cases was in excess of that for the United States, while eleven of the twenty industries showed increases in costs greater than those in a majority of the states in competition.

Installed Power

The extent to which unfavorable external influences on wage costs have been met by improvement in the processes of industrial production may be more concretely gauged by the trend of installed primary power utilized in production than by management expenses. Other things being equal, a pronounced increase in installed power per worker in identical industries in one state as compared with another or with the country as a whole would strongly suggest the operation of some external influence, such as regulatory legislation in making necessary such reduction in production costs through increased use of power machinery as would offset the increased wage cost arising from legislative factors.

Table 36 shows the increase in the use of power between 1914 and 1923. New York made less progress in the aggregate amount of power used than the United States or any competing state with the exception of Massachusetts. In the twenty specific industries, furthermore, there are only three cases in which progress was greater in New York than in the United States, and four cases out of twenty in which New York was not behind a majority of the competing states. Not a single instance occurs in which New York was ahead of all states, but in three of the industries all of the competing states were ahead of New York.

TABLE 36: INDEX NUMBERS OF INSTALLED HORSEPOWER, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	148	141	145	167	153	161	140	203
Clothing, men's	149	108	157	309	185	190	272	88
Clothing, women's	99	95	76	66	163	91	129	39
Foundry and machine shop products	162	146	151	187	140	148	110	255
Printing and publishing	121	115	108	113	155	127	127	106
Knit goods	149	133	126	126	193	152	167	141
Boots and shoes, other than rubber	134	154	133	89	240	89	107	49
Millinery and lace goods	125	125	45	30	134	140	70	2,738
Electrical machinery, apparatus and supplies	212	128	201	340	221	132	189	533
Motor vehicles (not including motorcycles)	415	244	330	241	349	2,675	95	488
Furniture	203	136	819	136	133	115	121	135
Iron and steel (including rolling mills)	152	121	131	147	143	238	126	295
Tobacco—cigars and cigarettes	185	89	118	169	47	..	55	4
Confectionery and ice cream	267	213	268	206	230	279	283	359
Carpets and rugs, wool, other than rag	126	143	107	..	..	145	99	..
Silk manufactures	185	169	183	..	..	158	187	..
Shirts	82	62	83	83	93	93	92	85
Boxes, paper and other (except wooden)	165	121	197	275	186	309	109	9
Canning and preserving, fruits and vegetables	158	94	181	99	155	160	..	110
Cotton goods	138	163	158	..	..	246	129	..
Collars, men's	150	133	167	..	..	..	..	..

This is not surprising in view of the characteristics of New York State industries which have already been revealed in the earlier discussion. It emphasizes still more strongly the fact that New York is persistently a state of small scale establishments, and is characterized by industries in which relatively little power in the aggregate is required. Properly regarded, this fact and the relatively small increase in the amount of power used suggest a definite handicap inherent

in New York State industry as regards its adjustment to competitive pressure through increased scale of operations and use of power.

Installed Power per Wage Earner

The extent to which this handicap has been met, under the pressure of competitive conditions, however, can be seen only by comparing the change in use of power with that in the amount of labor. Although the amount of power used in New York is comparatively small, and the increase since 1914 has not been striking, the adjustment to unfavorable competitive conditions of wage and management costs through the greater use of power per worker has been surprising.

It is clear from Table 37 that for all manufacturing industries combined the installed power per wage earner in New York State has increased more largely than for the country as a whole or for any competing state except New Jersey. The individual industries listed, however, happen in most cases to be those in which the growth was less in New York than in the United States or the competing states. Notable illustrations are the men's clothing, foundry, boot and shoe, electrical machinery, furniture, iron and steel, tobacco, confectionery and ice cream, and silk industries. In the cotton goods and the wool carpet and rug industries, however, New York ranked above the competing states as regards increase in installed horsepower per wage earner.

These comparisons suggest strongly that New York industries, because of their peculiar character, have not been able to adjust themselves to changing competitive conditions as fully as the industries in other states by increased use of power and larger scale of operations. The fact that they have remained predominantly small scale, low-powered enterprises would suggest that they have found it easier in this way to meet the local conditions that have faced them, than by increasing their employment and mechanization. It is likely that undue legislative regulation of employment and working conditions would favor such an adaptation.

In considering the changes in installed power as an indicator of industrial trends, it should be noted that they

TABLE 37: INDEX NUMBERS OF INSTALLED HORSEPOWER PER WAGE EARNER, 1923

Base, 1914=100
(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	119	129	122	122	120	134	127	109
Clothing, men's	133	120	87	194	187	128	208	107
Clothing, women's	126	126	118	128	163	88	151	79
Foundry and machine shop products	131	114	133	148	111	125	146	132
Printing and publishing	112	108	105	105	131	96	118	94
Knit goods	116	117	106	93	135	112	152	126
Boots and shoes, other than rubber	114	98	134	93	120	139	118	79
Millinery and lace goods	105	106	78	30	97	137	157	707
Electrical machinery, apparatus and supplies	107	85	85	164	98	88	123	151
Motor vehicles (not including motorcycles)	136	127	109	142	123	211	102	140
Furniture	157	116	795	108	106	108	103	99
Iron and steel (including rolling mills)	97	77	103	78	96	106	77	125
Tobacco—cigars and cigarettes	217	168	131	195	144	..	97	5
Confectionery and ice cream	191	166	209	159	156	239	203	200
Carpets and rugs, wool, other than rag	112	125	97	..	..	86	107	..
Silk manufactures	160	138	156	..	..	159	131	..
Shirts	83	76	71	107	90	79	130	59
Boxes, paper and other (except wooden)	132	130	178	177	139	204	91	16
Canning and preserving, fruits and vegetables	139	130	123	134	133	124	..	107
Cotton goods	111	136	113	..	..	196	128	..
Collars, men's	145	128	103	..	..	..	..	..

afford only an indirect measure of increase in the use of machinery to offset increased labor costs. In the textile industry and some branches of the clothing industry, there has been an increase in the amount of machine operation per employee. The effect of such changes can be seen only in the growth of output in relation to installed power and number of workers.

Value Added by Manufacture per Unit of Installed Power

Though the manufacturing industries as a whole in New York State in 1923 utilized considerably less power per worker than the average for the United States, and less than for any of the competitive states except New Jersey, the net product or value added by manufacture for each unit of installed power increased tremendously in New York, and substantially the same in New York as in the United States

TABLE 38: INDEX NUMBERS OF VALUE ADDED BY MANUFACTURE PER UNIT OF INSTALLED HORSEPOWER, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	177	175	186	176	162	162	175	161
Clothing, men's	174	241	226	90	120	235	99	225
Clothing, women's	271	309	214	236	156	251	157	233
Foundry and machine shop products	171	188	171	145	208	185	164	163
Printing and publishing	203	199	232	252	176	264	197	274
Knit goods	217	228	288	212	150	210	154	132
Boots and shoes, other than rubber	184	224	171	268	190	172	168	207
Millinery and lace goods	208	219	250	679	205	143	146	35
Electrical machinery, apparatus and supplies	194	225	221	153	215	215	149	176
Motor vehicles (not including motorcycles)	116	187	313	196	282	110	412	73
Furniture	146	214	28	197	225	203	201	224
Iron and steel (including rolling mills)	223	343	210	280	232	185	356	217
Tobacco—cigars and cigarettes	133	127	181	81	129	..	179	3,629
Confectionery and ice cream	125	153	139	125	109	140	109	100
Carpets and rugs, wool, other than rag	302	253	367	..	..	459	306	..
Silk manufactures	139	183	149	..	..	124	168	..
Shirts	275	355	323	223	255	307	137	391
Boxes, paper and other (except wooden)	189	218	140	137	184	143	273	1,163
Canning and preserving, fruits and vegetables	209	145	195	143	166	239	..	151
Cotton goods	223	211	249	..	..	95	195	..
Collars, men's, s	135	152	87	..	..	..	..	..

and the six states listed as competitors between 1914 and 1923. In fact, New York is slightly ahead of the other states, and only two points behind the United States as a whole.

Table 38 brings this out very clearly. In fifteen of the twenty individual industries examined, New York is ahead of the record for the United States as well as of a majority of the competing states. This is not true, however, in such industries as printing and publishing, cigars and cigarettes, wool carpets and rugs, canning and preserving of fruits and vegetables, and cotton goods.

These comparisons suggest, in general, that in most New York State industries employers have sought since 1914 to offset the relatively higher and increasing wage costs per wage earner by changes in organization or by increasing the efforts of management per wage earner so as to secure a higher net product for a given amount of power. In the meantime, the average size of establishment has remained relatively small in New York, decreasing in this state, while it was increasing in the country generally. Taken in connection with the trend of industrial growth in New York State as compared with the United States as a whole, these facts would suggest an increasing competitive pressure upon New York State industries, particularly upon those employing large proportions of women workers.

Value Added by Manufacture per $1,000 Wage Cost

The question then arises as to whether the relatively high and increasing wage cost per wage earner has been sufficiently offset by the increased use of power, or by greater expenditures on management, so as to keep the relation of wage costs to effective production fairly constant and on a level with other states. Reference to Tables 39 and 41 indicates that for manufacturing industries as a whole and for most of the specific industries this appears to have been barely accomplished. For all manufacturing industries in New York State the value added by manufacture for a given expenditure in wages (Table 39) has declined only slightly since 1914, and this decline is 1% less than that for the manufacturing industries of the United States generally. In such industries as printing and publishing, the

TABLE 39: INDEX NUMBERS OF VALUE ADDED BY MANUFACTURE PER $1,000 OF WAGE COST, 1923

Base, 1914=100

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	97	98	98	95	92	95	104	77
Clothing, men's	96	105	93	77	87	100	89	116
Clothing, women's	141	149	133	134	117	95	105	102
Foundry and machine shop products	105	104	102	97	107	102	111	103
Printing and publishing	103	95	105	120	100	114	110	117
Knit goods	115	119	121	101	105	107	115	79
Boots and shoes, other than rubber	104	96	113	111	115	117	101	81
Millinery and lace goods	88	85	88	100	91	92	100	136
Electrical machinery, apparatus and supplies	100	94	82	119	104	91	87	125
Motor vehicles (not including motorcycles)	79	113	157	139	204	102	230	53
Furniture	106	107	104	101	107	91	98	101
Iron and steel (including rolling mills)	100	115	98	103	111	90	139	105
Tobacco—cigars and cigarettes	155	105	109	87	99	..	114	100
Confectionery and ice cream	105	106	118	87	72	126	101	81
Carpets and rugs, wool, other than rag	115	100	128	..	..	134	114	..
Silk manufactures	96	101	97	..	..	89	97	..
Shirts	114	122	115	122	133	106	101	150
Boxes, paper and other (except wooden)	108	115	110	90	109	106	124	93
Canning and preserving, fruits and vegetables	133	89	89	99	106	114	..	107
Cotton goods	113	123	102	..	..	79	110	..
Collars, men's	115	114	112	..	..	..	..	..

manufacture of boots and shoes, and the canning and preserving of fruits and vegetables, the ratio of productive contribution to wage costs has decreased in New York State both absolutely and relatively to the increase in the United States as a whole. In the millinery and lace goods industry, furthermore, there was a relative as well as an absolute decline in both the United States and New York, but it was greater in the latter than in the former. In the manufacture

of electrical machinery and supplies, there was a relative and an absolute decline in New York, while the record for the United States remained practically at the 1914 level. In carpet and rug manufacture New York maintained a stationary position, while the United States as a whole advanced 15%. For the other industries listed, the value added by manufacture in proportion to wage cost has generally shown a greater increase than for the entire United States.

These figures may, of course, be interpreted in the converse sense, as measures of changes in the wage cost per $1,000 of net product. In this sense it is seen that wage costs in terms of product have increased slightly in New York. The increase for all industries was a little less than that for the United States as a whole and less than for any competing state except Massachusetts. It is of interest to note here, as is shown in Table 40, that the average cost of labor per $1,000 of value added by manufacture in all New York State industries combined was lower in 1923 than for the country as a whole and for all competitive states. In other words, New York State industries in 1923 got more production for a given wage expenditure than did the industries of the country as a whole or those of the competing states. This may again be in part a reflection of the differences in industries among the states, but it nevertheless indicates a special emphasis upon efficiency in New York industry.

In slightly more than half of the twenty industries listed,[1] there were marked increases both absolutely and relatively to the country as a whole in the net product for a given wage expenditure. This fact strongly suggests that New York State industries have been under some pressure to offset increased wage costs per wage earner and secure a greater product for a given wage expenditure by improvements in industrial operation, and that they have met this pressure with considerable success. In so far as this situation is the result of legislative factors, it would indicate several possibilities. If the industries in competing states have not been under so great a pressure to maintain a favorable ratio between wage costs and value added by manufacture as in New York State, it would apparently be because the wage costs

[1] In Table 39.

TABLE 40: ANALYSIS OF CENSUS OF MANUFACTURES, 1923

Division and State	Average Number of Wage Earners per Establishment	Average Primary Horsepower per Establishment	Average Primary Horsepower per Wage Earner	Average Cost of Labor per Wage Earner, Month	Average Cost of Labor per $1,000 of "Value Added"	Average "Value Added" per Primary Horsepower
United States	44.72	168.6	3.77	$104.51	$425.89	$781.11
New England	65.75	217.6	3.31	97.80	470.42	753.97
Middle Atlantic	40.81	145.9	3.57	111.21	417.36	894.74
East North Central	54.28	206.1	3.80	116.38	435.45	844.83
West North Central	28.29	103.2	3.65	100.04	388.64	846.53
South Atlantic	48.80	184.4	3.78	73.10	405.57	572.41
East South Central	46.21	194.5	4.21	74.49	434.31	488.91
West South Central	33.61	159.7	4.75	82.78	370.69	563.90
Mountain	26.71	195.9	7.33	115.72	405.18	467.37
Pacific	29.70	133.3	4.49	117.21	420.58	745.18
New England:						
Maine	50.75	347.5	6.85	91.86	494.96	325.28
New Hampshire	69.86	327.1	4.68	87.49	536.57	417.89
Vermont	30.15	173.6	5.76	93.92	501.55	390.36
Massachusetts	63.43	183.6	2.90	99.84	460.59	898.41
Rhode Island	79.64	231.8	2.91	94.37	481.31	808.42
Connecticut	84.10	232.3	2.76	99.67	466.19	928.89
Middle Atlantic:						
New York	30.14	85.5	2.84	114.50	376.87	1,285.81
New Jersey	51.11	143.4	2.81	107.67	426.58	1,079.77
Pennsylvania	57.47	268.1	4.66	109.20	468.76	599.34
East North Central:						
Ohio	62.45	295.5	4.73	116.77	437.87	676.40
Indiana	59.31	279.5	4.71	107.20	444.99	613.41
Illinois	45.01	138.1	3.07	117.87	406.51	1,134.31
Michigan	88.35	258.3	2.92	127.34	477.26	1,095.05
Wisconsin	31.65	118.7	3.75	99.91	413.47	772.88
West North Central:						
Minnesota	26.66	118.0	4.43	100.62	397.94	685.57
Iowa	22.76	82.6	3.63	100.85	368.43	905.66
Missouri	37.18	104.6	2.81	96.60	378.07	1,089.83

North Dakota	10.45	49.2	4.71	120.46	448.77	683.86
South Dakota	10.52	33.7	3.20	100.57	455.06	829.26
Nebraska	22.67	93.9	4.14	105.97	393.55	780.58
Kansas	28.70	143.1	4.99	105.77	431.95	589.34
South Atlantic:						
Delaware	51.03	248.3	4.87	98.66	470.12	517.54
Maryland	40.66	157.2	3.87	88.16	407.54	671.58
District of Columbia	16.37	53.1	3.24	125.52	367.71	1,263.52
Virginia	40.68	157.2	3.86	78.18	429.62	565.03
West Virginia	57.61	250.0	4.34	106.95	498.90	592.84
North Carolina	65.05	263.2	4.05	61.19	292.68	620.01
South Carolina	82.04	345.5	4.21	55.74	465.17	341.41
Georgia	44.96	147.1	3.27	55.85	413.79	494.98
Florida	38.49	81.8	2.13	67.08	498.30	759.90
East South Central:						
Kentucky	38.85	127.4	3.28	89.77	447.51	734.17
Tennessee	46.17	169.7	3.68	72.36	418.18	564.94
Alabama	54.92	321.1	5.85	72.38	436.60	340.25
Mississippi	44.01	143.9	3.27	61.36	441.25	510.40
West South Central:						
Arkansas	36.19	134.2	3.71	70.66	461.56	495.49
Louisiana	53.18	226.2	4.25	73.05	382.16	539.21
Oklahoma	20.52	123.2	6.00	108.11	389.29	555.36
Texas	27.72	148.5	5.36	90.75	335.99	605.03
Mountain:						
Montana	23.48	280.6	11.95	128.27	531.50	242.35
Idaho	32.05	141.5	4.41	116.67	516.68	613.96
Wyoming	30.53	97.4	3.19	138.72	305.39	1,708.63
Colorado	22.68	127.9	5.64	108.49	386.81	596.88
New Mexico	29.35	90.7	3.09	98.97	619.38	620.77
Arizona	31.83	454.2	14.27	116.89	298.11	329.76
Utah	27.13	241.8	8.91	103.68	319.93	436.49
Nevada	44.87	269.1	6.00	139.22	633.64	439.62
Pacific:						
Washington	36.86	195.9	5.31	116.75	510.39	516.57
Oregon	32.82	168.8	5.14	108.76	487.32	520.62
California	26.70	105.3	3.95	119.57	379.03	959.34

in their case have not been so large a factor in industrial operation. In New York State, where the wage costs per wage earner have risen more markedly than elsewhere, it is probable that competitive conditions have enforced changes in industrial operation to meet the situation. This is the normal outcome of unfavorable competitive conditions, but there is an economic limit to this process, and in the comparison of installed power and salary costs in proportion to value added by manufacture, there is at least a suggestion that this limit is being approached.

Value Added by Manufacture per $1,000 of Salary Cost

That the management of New York States industries has not lagged behind in efficiency is further suggested by comparison of the increase in net product with that in salary costs. The net product for a given expenditure on management, as measured by salary costs, shows a considerable increase in New York as well as in the entire United States. In about three-fifths of the industries examined, the increase in New York has been greater than for the same industries throughout the country. In four of the groups, namely, knit goods, millinery and lace goods, electrical machinery and supplies, and the canning and preserving of fruits and vegetables, however, New York has experienced a decided decrease in the net product in proportion to salary costs.

Table 41 shows increases in value added by manufacture per $1,000 of salary cost. It will be observed that New York exceeded the records of Pennsylvania, Illinois, New Jersey and Massachusetts, but that Ohio and Michigan were in the lead. In about half of the industries New York made a better record than the competing states.

Industrial Growth and Population

Perhaps the broadest question that may be asked regarding the manufacturing industries of a state is whether they have grown as rapidly as the population of the state. If they have grown faster than this, it is reasonable to assume that they have found expanding markets in other states; if they have grown less rapidly, it is likewise reasonable to

TABLE 41: INDEX NUMBERS OF VALUE ADDED BY MANUFACTURE PER $1,000 OF SALARY COST, 1923

Base, 1914=00

(Source: U. S. Census of Manufactures)

Industry	United States	New York	Competitors of New York					
			Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
All industries	112	113	111	119	102	106	103	152
Clothing, men's	125	141	106	124	105	84	114	124
Clothing, women's	117	115	118	139	96	101	146	98
Foundry and machine shop products	119	132	103	127	120	101	94	138
Printing and publishing	103	106	111	105	109	124	111	110
Knit goods	101	90	95	128	84	109	73	126
Boots and shoes, other than rubber	114	132	112	155	113	90	82	102
Millinery and lace goods	95	95	70	111	87	93	143	105
Electrical machinery, apparatus and supplies	105	73	137	103	95	113	76	186
Motor vehicles (not including motorcycles)	132	181	158	144	133	233	172	101
Furniture	123	125	119	150	125	88	102	128
Iron and steel (including rolling mills)	127	165	115	144	126	104	175	153
Tobacco—cigars and cigarettes	145	129	114	140	111	..	82	77
Confectionery and ice cream	129	140	129	118	93	139	124	128
Carpets and rugs, wool, other than rag	184	251	176	..	..	96	154	..
Silk manufactures	97	100	87	..	..	79	164	..
Shirts	107	108	105	146	114	175	68	238
Boxes, paper and other (except wooden)	104	109	80	101	111	109	85	78
Canning and preserving, fruits and vegetables	135	73	127	148	152	222	..	74
Cotton goods	121	110	124	..	..	80	114	..
Collars, men's	108	105	78	..	..	..	..	..

suppose that industries in other states have found increasing markets in the state in question. If the industries of New York State, therefore, have grown as rapidly in relation to the population of the state as the manufacturing industries of the country as a whole have developed in relation to the total population, it would be suggestive of a normal economic environment and development for New York State industries, barring the possible differences in the effect of

changes in foreign trade. This is especially true because of the fact, noted in an earlier chapter, that except for few variations New York State presents a representative cross-section of manufacturing industry in the country as a whole. Such a comparison, of course, would be of little significance for specific industries which might be located in New York State and yet find their chief markets elsewhere. Only a detailed study of population growth in relation to industrial development as among the various competing states would give any clue as to how far an industry in any state was losing its market to competitors in other states.

Table 42 is presented as a measure of the growth of New York State industries in relation to population between 1914 and 1923, the basis of measurement being the number of establishments, the number of wage earners and the value of manufactured products. Because the figures relate to all industries in each of the states listed and in the United States, it has been possible to eliminate from the 1914 census data all establishments rated at less than $5,000 in value of products. Thus the figures for the two years are comparable.

TABLE 42: GROWTH OF INDUSTRY AND POPULATION, 1914 AND 1923

(Source: U. S. Census of Manufactures)

	United States	New York	Pennsylvania	Ohio	Illinois	New Jersey	Massachusetts	Michigan
Number of establishments per 1,000 population:								
1914	1.83	3.53	2.25	2.03	2.04	2.48	2.55	1.81
1923	1.76	3.51	2.08	1.81	2.09	2.56	2.60	1.41
Wage earners per 1,000 population:								
1914	70.53	107.72	112.47	97.03	83.33	131.91	168.73	84.20
1923	78.59	105.71	119.26	112.87	94.17	130.75	164.86	124.43
Value of manufactured products per 1,000 population:								
1914	$245,213	$391,155	$346,024	$340,634	$371,668	$498,851	$456,782	$339,044
1923	$542,165	$823,059	$803,930	$830,887	$735,285	$991,137	$882,269	$959,751
Index numbers in 1923 of relations above stated (1914 = 100)								
Number of establishments	96.2	99.4	92.4	89.2	102.5	103.2	102.0	77.9
Number of wage earners	111.4	98.1	106.0	116.3	113.0	99.1	97.7	147.8
Value of manufactured products	221.1	210.4	232.3	243.9	197.8	198.7	193.1	283.1

The table reveals that in two out of three respects the industries of New York State have shown declines since 1914

in relation to population, and that in the third case the development has been relatively less than in the United States as a whole.

For the entire country the number of manufacturing establishments in relation to the population in 1923 was 3.8% below the 1914 level, while for New York State it was only 0.6% lower than it had been in 1914. Three of the competing states show considerably greater percentage declines than occurred in New York, but the other three show an advancement of 2% to 3.2%. From this it is apparent that while the growth in number of manufacturing establishments in New York did not keep up with the growth of population, in this respect it has merely shared in the general tendency. The tendency toward small establishments in New York State industry, however, is evident in the fact that the number of enterprises has grown somewhat faster in relation to the population than in other states.

Comparisons of the changes in the number of wage earners and in the value of products in relation to the population are more directly significant in this connection. For the United States as a whole the number of wage earners in manufacturing industries in proportion to the population increased 11.4% during this period and the value of products of all manufacturing industries 121.1%. In New York State, however, the number of wage earners in manufacturing industries in relation to population was smaller by about 2% in 1923 than in 1914, and the value of manufactured product had increased only 110.4% in comparison with the population growth. All of the competing states except one made better records than New York in respect to the increase in number of wage earners in relation to the population growth, and three of the active competitors likewise bettered New York in growth of manufactured products as compared with population figures. These comparisons are striking enough to suggest that the manufacturing industries of New York State in relation to their own market have been losing ground relatively in comparison with the manufacturing industries of the United States as a whole.

This impression is further strengthened by a comparison of the relative growth of the various specific industries in

New York State and the same industries in the United States. In New York State the number of wage earners employed in the manufacture of men's and women's clothing, printing and publishing, cigars and cigarettes, shirts, paper boxes, canned fruit and vegetables, and men's collars, has shown a decline in relation to the population of the state since 1914. In each of these cases except printing and publishing and the manufacture of men's collars, furthermore, the retrogression has been greater in New York than in the United States as a whole. Seven other New York industries among the twenty specially studied made some progress in number of wage earners as related to the growth of population, but failed to advance as rapidly in this state as the same groups did in the United States. These industries are the manufacture of knit goods, millinery and lace goods, electrical machinery and supplies, motor vehicles, furniture, confectionery and ice cream, and cotton goods.

In respect to value of products, ten of the twenty industries made relatively less growth in New York in relation to population than they did in the country as a whole. These are printing and publishing, knit goods, electrical machinery and supplies, furniture, cigars and cigarettes, confectionery and ice cream, carpets and rugs, shirts, paper boxes, and the canning of fruits and vegetables.

It is, of course, impossible to say definitely to what extent the relatively slower development of New York State industries during this period has been due to differential influence of legislation affecting industrial operation, but these comparisons at least suggest that New York industries have been keeping up with the demand of the market in their own and other states less rapidly and fully than American industry as a whole has grown with the American market as a whole.

The question here arises as to how far the relatively slower growth in production and industrial employment compared with population in New York State is a reflection merely of the fact that New York was more highly developed industrially at the start—nearer the saturation point, in other words.

It is evident that as regards number of manufacturing establishments per 1,000 population, New York is more

highly developed than the United States or the states classed as competitors. But this is because, as noted earlier, New York is characterized by smaller establishments than the average, and whether a relatively large number of small establishments means greater industrial development is questionable. On the basis of number of wage earners or value of manufactured products per 1,000 of population, however, it seems that New York is only an average state—that it is not more highly developed industrially than the competing states. New York, with more establishments in proportion to its population than any competing state, in 1923 did not have so many manufacturing wage earners and did not produce so much value in manufactured products in proportion to population as did Ohio, New Jersey, Massachusetts or Michigan. Not only were these four states ahead of New York in per capita industrial development, but Pennsylvania was ahead in number of wage earners per 1,000 of population, and was behind only a few dollars per capita in value of manufactured products.

In spite of the growth it has attained in respect of the value of its products, and despite the relatively large number of its factories, it would appear from these figures that New York is still less fully industrialized than some of the competitive states, so far as the proportion of its population engaged in industry is concerned. But this cannot be definitely affirmed without further knowledge of how the reservoir of real labor supply for industrial work in New York compares with that in other states. Such knowledge is lacking, but it is evident that the concentration of a large part of the commercial and financial activity of the whole country in New York City creates relatively larger demands upon the available working population in New York than in other states. It is difficult, moreover, to give any exact measure of the relative degree of industrial development, because it is not a matter merely of the relative number of establishments, value of products, or employment, but depends in large part as well upon the character, organization and equipment of the industries. Whether New York State is in a relatively advanced stage of industrial development from these points of view cannot be determined from available data.

The Textile Industry

A definite indication of relative industrial conditions in New York and other states is afforded specifically by the cotton textile industry, for which comprehensive official data regarding growth and activity are available. These data are in terms of spinning spindles in place, spinning spindles active, and active spindle hours, and so enable a strict comparison to be made as among the various states in respect to the trend of the industry.

It is true that the cotton industry is not one of the leading industries in New York State, in respect of number of wage earners or value of products, but for several reasons it may be considered a sensitive indicator of the pressure of external or artificial factors on industrial operation. In the first place, wide changes in market conditions for cotton textile products, due to changes in clothing styles and habits, as well as high prices of raw materials, have adversely affected the industry as a whole in the United States during the years since the World War. This has made the industry unusually sensitive to high or rising wage costs, and to the factors, legislative and otherwise, affecting them, and has put a premium upon improvements in equipment and management to meet these conditions. In the second place, the relatively large proportion of women employed in the industry has made it especially sensitive to legislative influences affecting hours and employment in the various states.

But, as has been reiterated frequently in earlier discussion, it is impossible to disentangle from the complex of factors which have affected the northern cotton industry the precise influence of the legislative environment. In this case, as in all others discussed, it is mainly desired to see whether the industry in New York State appears to be retarded by adverse influences, for any marked evidence of that sort carries with it a warning to the state to consider its policies affecting industry with special care.

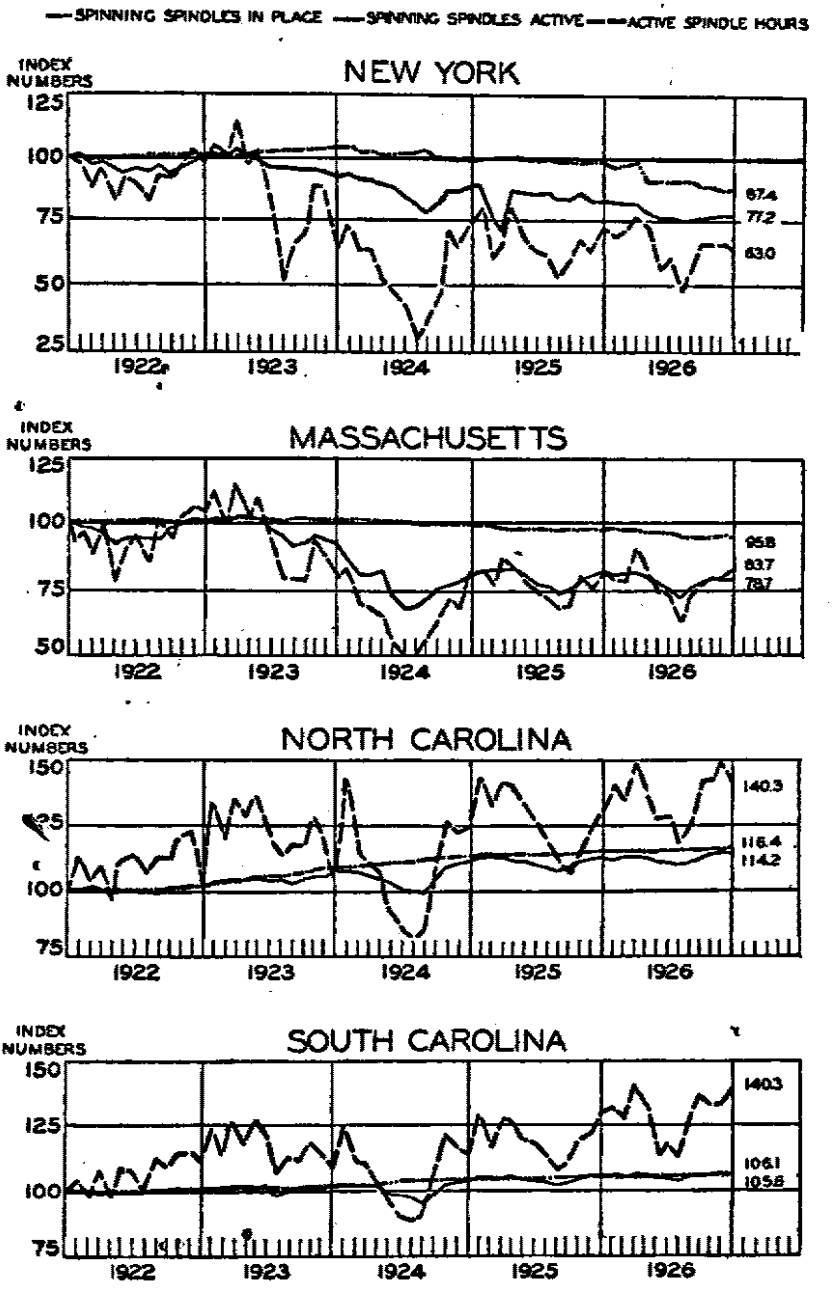
Table 43 and the accompanying chart show the changes in spindles in place, spindles active and active spindle hours in the cotton industry in New York, Massachusetts and North and South Carolina during the years from 1922 through 1926, as compared with the last month of 1921 as a starting

TABLE 43: INDEX NUMBERS OF COTTON SPINNING ACTIVITY IN SELECTED STATES, DECEMBER, 1921 TO DECEMBER, 1926

(Source: Computed from Returns of the United States Bureau of the Census)

		Spinning Spindles								Active Spindle Hours			
		In Place				Active							
		Massachusetts	New York	North Carolina	South Carolina	Massachusetts	New York	North Carolina	South Carolina	Massachusetts	New York	North Carolina	South Carolina
1921	Dec...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1922	Jan...	100.1	100.1	100.5	100.2	98.2	101.1	100.8	100.3	97.7	96.4	112.9	104.5
	Feb...	100.3	99.2	101.1	100.3	97.9	97.6	101.9	100.3	88.5	87.2	104.5	97.9
	Mar..	100.3	99.3	100.7	100.3	95.2	98.5	100.8	99.6	98.8	94.3	110.1	109.5
	Apr...	100.4	99.8	100.8	100.0	90.7	96.3	100.2	99.4	77.6	82.4	96.6	98.8
	May .	100.4	99.4	100.7	100.0	93.3	94.7	100.4	99.7	91.0	91.9	111.8	107.9
	June .	100.4	100.5	100.7	100.0	94.4	96.0	100.3	99.7	95.3	90.1	114.0	108.1
	July..	100.7	100.4	100.8	100.2	93.9	95.0	100.3	99.8	85.8	81.8	105.3	100.6
	Aug..	100.7	100.5	100.9	100.2	94.3	96.8	100.2	100.2	101.1	91.7	111.5	111.8
	Sept..	101.4	100.5	101.0	100.5	98.4	93.4	100.9	100.3	94.2	91.4	111.6	109.9
	Oct...	101.4	100.5	101.0	100.5	99.5	94.6	101.2	101.0	100.2	94.2	120.6	112.9
	Nov..	101.4	100.7	101.8	100.5	101.2	99.1	102.0	101.0	106.4	103.4	123.1	115.6
	Dec...	101.4	100.7	102.0	100.5	101.1	100.5	102.0	100.8	103.8	96.7	102.9	111.5
1923	Jan...	101.2	101.0	102.6	100.7	101.4	101.3	103.3	101.1	111.2	103.7	133.4	123.3
	Feb...	101.2	101.0	103.4	100.7	101.0	100.7	103.5	101.3	99.5	101.2	119.9	113.1
	Mar..	101.3	101.0	103.6	100.8	102.1	102.6	104.3	101.4	113.9	114.5	134.6	126.0
	Apr...	101.1	101.0	103.9	100.8	102.2	100.3	104.4	101.2	102.6	97.3	127.3	118.0
	May .	101.1	102.2	104.3	100.8	101.3	99.7	104.5	101.2	108.7	102.4	136.1	125.9
	June .	101.1	102.2	104.8	101.0	97.8	96.6	104.0	100.7	95.2	85.5	121.4	119.0
	July..	100.9	102.2	105.0	101.1	95.6	96.6	104.0	98.5	79.4	56.5	112.2	106.8
	Aug..	101.0	102.5	105.5	101.1	91.4	95.9	103.0	99.9	78.8	65.0	117.4	112.3
	Sept..	101.0	102.5	106.7	101.2	93.0	94.5	104.5	100.6	78.0	70.0	117.1	110.9
	Oct...	101.1	102.5	107.0	101.6	95.3	95.0	105.7	100.2	93.2	88.1	128.1	118.6
	Nov..	100.9	102.7	107.6	101.8	94.4	94.3	105.7	100.7	86.6	87.4	121.3	115.5
	Dec...	100.9	102.7	108.1	101.9	92.9	92.5	107.1	101.6	79.2	64.3	104.1	107.3
1924	Jan...	101.2	102.7	108.9	102.1	85.4	92.7	107.7	101.8	83.0	73.2	143.1	125.6
	Feb...	101.2	101.7	109.1	102.1	81.3	90.7	107.4	101.8	70.4	62.9	116.1	111.8
	Mar..	101.0	101.8	109.4	102.2	81.2	90.8	105.8	101.4	69.2	63.0	112.1	110.0
	Apr...	100.4	100.8	110.3	102.3	81.7	88.8	105.2	101.8	65.8	56.3	107.3	103.2
	May .	100.3	100.8	110.9	102.4	73.2	87.8	103.2	98.8	54.2	48.2	93.4	96.3
	June .	100.3	101.0	111.0	102.8	67.7	83.3	100.5	98.5	48.7	42.6	83.5	90.1
	July..	99.6	100.9	111.7	103.7	69.0	80.6	99.9	97.4	49.2	29.9	83.8	89.2
	Aug..	99.5	101.7	112.2	103.8	72.2	77.4	99.1	94.9	57.1	35.3	81.9	90.0
	Sept..	99.5	99.3	112.5	104.0	75.5	81.2	104.8	98.6	63.0	47.1	104.1	105.8
	Oct...	99.5	98.3	112.6	103.9	76.5	85.6	108.5	101.8	72.5	70.9	126.7	121.9
	Nov..	99.5	98.2	112.6	104.1	77.9	85.7	110.5	103.3	68.4	63.8	122.0	115.8
	Dec...	99.4	98.2	113.5	104.1	81.1	87.8	111.9	103.5	82.1	74.3	124.6	114.4
1925	Jan...	99.1	98.3	113.7	104.3	82.4	88.5	113.1	104.9	82.4	79.5	144.7	129.6
	Feb...	98.8	98.3	113.8	104.3	82.6	76.6	113.1	104.9	77.6	60.7	131.6	116.3
	Mar..	98.2	98.3	113.5	104.3	82.9	71.2	112.6	104.5	87.6	66.4	141.4	126.9
	Apr...	98.1	98.3	113.6	104.3	83.1	86.8	111.9	105.0	83.5	79.5	139.9	126.8
	May .	98.1	98.3	113.8	104.4	81.0	85.9	111.4	104.0	77.1	67.8	131.9	120.3
	June .	98.1	97.9	113.8	104.7	77.1	85.2	109.9	103.4	74.7	62.6	125.6	118.7
	July..	98.0	98.1	114.0	104.8	76.1	85.3	108.2	102.7	72.1	61.4	119.2	113.2
	Aug..	97.3	97.6	113.9	104.8	74.1	83.2	107.1	101.6	68.8	52.8	110.8	107.6
	Sept..	98.0	97.6	114.1	105.0	75.1	83.1	108.7	102.7	69.1	59.5	107.0	110.1
	Oct...	98.1	97.4	115.0	105.0	78.1	84.7	111.1	104.1	80.0	68.1	116.0	119.1
	Nov..	98.1	97.5	115.1	105.0	80.4	82.5	111.7	105.2	75.6	63.3	124.0	122.0
	Dec...	97.8	97.6	115.4	105.0	80.7	82.1	112.6	105.6	81.9	72.9	129.7	130.0
1926	Jan...	98.0	95.9	115.5	105.0	80.5	82.2	111.9	105.8	78.9	69.6	141.2	131.5
	Feb...	97.9	97.6	115.6	105.1	80.9	81.7	112.8	105.6	78.1	71.8	134.8	126.7
	Mar..	97.9	97.6	115.7	105.4	81.4	81.5	112.7	106.2	90.8	75.8	149.3	142.1
	Apr...	97.3	90.3	115.7	105.4	80.0	78.6	112.3	106.2	79.7	73.2	136.4	133.6
	May .	97.0	90.4	115.7	105.4	77.8	76.2	110.9	104.9	75.0	56.8	127.4	111.5
	June .	97.0	90.3	115.8	105.5	75.4	76.2	110.6	104.6	73.6	61.7	128.2	117.9
	July..	96.4	90.3	115.8	105.5	72.5	75.1	109.8	104.0	62.3	47.7	118.3	112.6
	Aug..	96.4	90.3	115.9	105.5	75.6	76.3	109.9	105.2	73.2	56.4	124.4	127.6
	Sept..	95.9	88.0	115.9	105.6	77.7	76.8	111.7	105.6	77.3	66.1	142.1	136.5
	Oct...	96.0	88.1	116.1	105.6	78.8	77.1	113.4	106.0	79.5	66.5	143.0	132.4
	Nov..	95.9	87.2	116.4	105.6	78.6	77.3	114.2	106.4	79.0	67.0	148.9	138.0
	Dec...	95.8	87.4	116.4	105.6	78.7	77.2	114.2	106.1	83.7	63.0	140.3	140.0

Chart 1: Index Numbers of Cotton Spinning Activity in Selected States, 1921 to 1926



point. The outstanding fact they reveal is the expansion and relatively high activity of the cotton industry in the southern states, and the decline in the two northern states during this period. In North and South Carolina, the states competing most keenly with New York and Massachusetts in the cotton industry equipment as represented by spindles in place, activity as represented by spindles active, and production as represented by active spindle hours, all have risen steadily since 1921, while in New York and Massachusetts there has been a decline in all respects.

It is noteworthy that the situation in New York seems to be relatively worse than in Massachusetts. The decline in spindles in place has been more marked, and the active spindle hours show a less favorable relation to the number of active spindles in New York than in the New England state. Taken together with the facts pointed to in the preceding analysis of industrial trends, namely, the relatively great rise in wage costs, salary costs and installed power per worker in the cotton goods industry in New York as compared with the entire United States, the decline of activity in the manufacture of cotton goods in this state seems to indicate an increasing pressure upon the industry to meet unfavorable competitive conditions. Only limited success has been met in this respect. There has been a greater rise in net product for a given expenditure in wages in New York than has been true in the United States generally, but the reverse has been true in regard to net product for a given increase of installed power and for a given unit of expenditure in salaries. Despite a worse condition in Massachusetts as far as net product per unit of installed power is concerned, this state, which has even greater restrictions on working hours and employment than those found in New York, appears from Table 43 to have been better able than New York to meet the competition of southern mills.

Summary

As regards the sum total of industrial accomplishment within state or nation, the tables show that New York made a smaller percentage of growth than the United States or than most of the competing states between 1914 and 1923 in

value of manufactured products, value added to raw materials by manufacturing processes, number of wage earners, wages and salaries paid, power installed for use in factories, and net product per unit of installed power.

In like manner, New York faced growing costs of production, as shown by the fact that the relative increase of wage cost per wage earner was greater in this state than in the United States or in any competing state, while the increase of salary cost per wage earner in New York exceeded that of the United States and half of the states in chief competition. In all nine of the standards or measures of industrial development so far mentioned, therefore, New York made relatively less progress than was made elsewhere.

Although New York lagged industrially in the installation of power, the record as to the employment of wage earners was even worse, and as a consequence the percentage increase of installed power per wage earner was greater in New York than for the country as a whole or for five of the six competing states. Perhaps it was this relative improvement in one of the factors of production which enabled New York to avoid defeat according to every measure of industrial progress, for in spite of adverse conditions in most respects New York State did achieve a percentage leadership over the United States as a whole, and over four of the six competing states, in the increase of production per $1,000 of wage cost and of salary cost. Such facts would seem to indicate that New York State has struggled somewhat successfully against the keen competition of other states, and by means of improved management and greater increase in use of power and machinery per wage earner has partly overcome the competitive handicaps. The evidences of special effort made by New York State manufacturers to adjust themselves to an unfavorable situation, however, are clear.

Aside from the situation in industry as a whole, there are several specific industries in which New York has lost much ground relatively in comparison with other states. Among these may be mentioned the canning and preserving of fruits and vegetables, the manufacture of electrical machinery, apparatus and supplies, the making of boxes from paper and allied materials and the cotton spinning industry. Other

industries which appear to be laboring under difficulties in this state are printing and publishing and the manufacture of men's clothing, shirts, knit goods, and furniture.

In relation to population growth, many of the important industries of New York are shown to be underdeveloped in comparison with the same industries in the United States and in the leading competitive states.

This analysis of the main features of the industrial development of New York State since 1914 suggests clearly, if it does not prove conclusively, that industrial progress in the state has been in some way hampered by unfavorable influences in the economic, social or legislative environment. New York State does not show a free, healthy industrial growth in this period when compared with other competitive states or with the country as a whole. This has not, evidently, been due to any failure of New York manufacturers to seek greater efficiency in operation, for in this respect the record of New York is striking. To what extent the decisive hampering factor has been the relatively rapid growth and advancement of industrial legislation cannot be definitely stated, but the conditions indicated warrant the feeling that if New York State continues to proceed, as it has, faster than the competing states in adopting costly regulatory laws, the results may be destructive of New York's industrial leadership.

CHAPTER V

GENERAL SUMMARY AND CONCLUSIONS

THE relation of the regulatory legislation of New York State to its industrial progress presents a problem not only of considerable importance to the people of the state, but also of more general interest. The growth of legislative regulation of industry, as the latter extends its influence in the life of the community, the diversity of standards among the various states, the interstate character of modern business, and the increasing dispersion of industry throughout the states, all render timely and important a careful consideration in each state of the question whether its standards of industrial regulation are appropriate to the conditions and prospects of its industrial development.

No more fitting subject for such a scrutiny could be chosen than New York State. Its manufacturing industries are the pivot of its economic life, despite the importance of its larger cities as financial and trade centers. At the same time, as the leading industrial state, its industries bulk larger in the industrial life of the nation than those of any other commonwealth. It presents, moreover, in no sense a highly specialized industrial picture. Except for the clothing and allied industries, its industrial make-up is representative of the average industrial state, and is highly diversified—more emphatically so than in the case of other states because of the large number of relatively smaller establishments which particularly characterize its industries. Neither in this respect nor in the characteristics of its population, or of its working force, as regards sex, race, urbanization, does it present any peculiarities so significant as to invalidate comparison of legislative regulation or of industrial development with other industrial states. There are, in other words, no reasons inherent in the character of its industrial or social life which would lead one to expect that New York should require special standards of industrial regulation, or that its indus-

trial development should not compare favorably with that of the other leading industrial states.

On the contrary, there are grounds for believing that the industrial situation in New York State is such that its industrial position and progress under present conditions are especially vulnerable to excessive or ill-conceived regulatory legislation, that the normal industrial growth of the state has already been retarded and that its future industrial progress presents serious problems. Though the state has long been and still is in the lead industrially among all the states, and has a well diversified and balanced group of industries, there are suggestive, though not conclusive, indications that New York still belongs industrially among the older industrial states of the New England group. When the urban clothing industries and those of the New York district are excluded, New York's manufacturing enterprises are still predominantly small scale, employing relatively few workers per establishment (a relatively large proportion of whom are probably skilled workers of American stock), using relatively little power per establishment and turning out products of relatively high labor content, of specialized character and high value. Because of the distance from sources of raw materials, the large basic or heavy industries like iron and steel and textile manufacture using much unskilled and foreign-born labor are not prominent in the industrial picture, nor do some of the newer industries of distinctively modern technique and large scale production figure very largely in New York as they do in some of the mid-western and western states. New York is evidently not attracting such industries.

In a few of its industries New York has as yet no substantial competition in other states; but from an examination of the twenty-five leading industries of the state it is clear that New York has formidable competition in the home market from Pennsylvania, Ohio, Illinois, New Jersey, Massachusetts and Michigan, and that some of the newer industrial states like Wisconsin are making their power felt in this regard.

If the period since 1914, which coincides with the adoption of the larger part of the state's regulatory legislation and its

compensation laws, be considered, an analysis of the census data suggests strongly that there have been at work factors which have hampered or retarded New York's industrial growth relative to that of other states and of the country as a whole. New York has made relatively less progress industrially between 1914 and 1923 than the United States as a whole or than its chief competitive states measured by the increase in workers employed in its manufacturing industries or in the value of their products in proportion to the increase that has taken place in the local market through population growth. Contrary to the general tendency, the number of wage earners in manufacturing in New York State in proportion to its population has actually declined in this period. In printing and publishing, the manufacture of men's and women's clothing, cigars and cigarettes, shirts, paper boxes, canned fruit and vegetables, men's collars, there has been a marked relative decline in the number employed in proportion to the population. Seven others of the twenty leading industries showed a smaller relative growth in New York than in the country as a whole. In respect of value of products in proportion to the population ten of the twenty industries showed less growth in New York than in the country as a whole.

These instances of relative declines or relatively slower growth are not merely the natural reflections of a relatively advanced industrial development in New York in 1914, at the beginning of the period of comparison, for even in 1923 New York did not have as many employed in manufacturing, or produce as much, in proportion to its population as Ohio, New Jersey, Massachusetts or Michigan. Pennsylvania was ahead of New York in respect to wage earners per capita and about even with New York in respect of value of products per capita.

According to practically all measures of industrial development available, New York failed to keep pace with the chief competing states or with the country as a whole during this period. This is true in respect of the increase in workers employed in manufacturing, total value of products and net product of manufacturing industries, total wages and salaries paid, power installed and net product per unit of installed

power. In point of total value of products New York made less progress between 1914 and 1923 than the United States as a whole or than four of the six chief competing states. Industries in which this retardation was particularly evident are: canning and preserving, the manufacture of paper boxes, shirts, electrical machinery and supplies, knit goods, and printing and publishing.

In respect of increase in net product, New York lagged behind the country as a whole and all competing states except Massachusetts. This same relative retardation is evident in such manufacturing groups as printing and publishing, electrical machinery and supplies, motor vehicles, carpets and rugs, shirts, canning and preserving of fruits and vegetables, and paper boxes.

In respect of number of workers in its manufacturing industries New York showed less growth than the country as a whole or than any of the competing states. This is true for about two-thirds of the leading industries of the state.

It is particularly striking that, despite the fact that in 1914 the average size of manufacturing establishments in New York was less than for the United States as a whole or for any of the competing states, there was not only no improvement in this respect from 1914 to 1923 but a distinct retrogression. The average number of workers per establishment in New York declined about 1% from 1914 to 1923, whereas for the United States as a whole it increased 16%. Increases ranging from 10% to 90% took place in four of the competing states. In view of the definite trend toward large scale enterprise which is characteristic of recent industrial development in some of the newer industrial states, this fact strongly suggests that industry in New York State is in some basic manner out of step with the trend of the times, or for some reason has found the smaller establishment best adapted to the local environment. The centering of the needle trades in and about New York City is partly, but not wholly, the cause of this situation.

In respect of the total of wages paid in New York State industries—a factor that vitally affects the buying power of the local market—New York also fails to show as great an increase between 1914 and 1923 as the country as a whole or

as any of the competing states except Massachusetts. Here again most of the industries noted earlier as exhibiting signs of retardation are seen particularly to lag behind.

Along with these evidences of retarded development in respect of employment, production, size of establishment and total wages paid, the main costs of manufacture in New York State, as measured by wages paid per worker, have increased more than for the country as a whole, or for any of the competing states. This is true also for each of the twenty leading industries of the state. Wage costs have not only grown faster in New York, but they appear to be absolutely higher than the average for the United States as a whole or for all the competitive states except Ohio, Illinois and Michigan. The same tendency is evident, though not to such degree, in regard to management costs as measured by salaries paid to officials per wage earner.

It is impossible to ascribe these evidences of industrial retardation to any single obvious cause. A broad consideration of industrial developments since pre-war days makes it appear likely that this situation is due partly to the failure of New York State to attract industries of the newer type, and partly to the tendency of manufacturers located in New York to seek other places in which to expand their scale of operations. It seems clear, however, that they are not due to any lack of energy and application on the part of the manufacturers of the state who have remained and sought to adapt themselves to the existing conditions and trend. An analysis of the few indicators of improvement in efficiency available from census data makes it evident that New York State industrialists have struggled, and with a large measure of success, to resist the unfavorable conditions of whatever sort with which they have been faced. Though New York has been a state characterized by relatively small use of power, and though the total power installed in its manufacturing industries has increased less than for the country as a whole or than for all the chief competitive states except Massachusetts, in practically all the leading industries the amount of power installed per wage earner has increased more than for the country as a whole or for any competing state except New Jersey. This is not so true of individual

leading industries as it is for all industries combined, but this fact suggests that some of the industries which are not yet dominant in the state have made a greater effort to overcome obstacles and to modernize their processes and management than those industries which have heretofore been in a leading position.

But, whether by the larger application of power or by more effective use of high cost labor, the productive accomplishment has been noteworthy. Though the aggregate of wages paid, salaries paid and power used increased less in New York than in other states, and though wage and salary costs per worker have been high and have increased more largely than in other states, the net product per horsepower installed, and per $1,000 paid in wages and salaries has either increased more largely than or kept pace with the country as a whole and the chief competitive states, despite the fact that New York has remained a relatively small-scale, low-powered industrial state. In some of the specific industries, however, the efforts toward increased efficiency appear to have been less successful than was generally true, and these industries are in most cases those noted earlier as evidencing an especially unfavorable position.

It is not possible to say conclusively to what extent the legislative environment in New York has been a factor in this situation. It is clear that though New York has been lagging behind in industrial growth, it has gone ahead rather more rapidly than other industrial states in the standards of legislative regulation of industry. Industry in New York is subject to relatively more numerous and more severe regulation than the average industrial state in such matters as hours of work for women, factory safety and sanitation, workmen's compensation, the regulation of canning and preserving establishments, and attendance at continuation schools.

Only six of the forty-eight states have enacted laws limiting the hours of women employed in manufacturing to an absolute maximum of forty-eight hours per week. Of these six only two, Massachusetts and California, are important enough from the industrial standpoint to make such legislation mean much in the economic life of the state. From the point of

view of the number of women affected by the law, only Massachusetts is important.

Of the eight states which have limited the hours of women to eight per day, not one is located east of the Mississippi River, and California is the only one among them which might in any sense be classed as an industrial state.

All of the six industrial states which compete actively with New York permit women to work at least nine hours a day, just as is the case in New York, while Illinois, Pennsylvania, and New Jersey allow ten hours of work. Ohio limits the work week for women to fifty hours, and Massachusetts limits it to forty-eight hours, but the other competitors, along with New York, permit at least fifty-four hours. Illinois imposes no weekly limit whatever, and does not even prohibit Sunday work.

Under the new law in New York (to be effective January 1, 1928), permitting women to work forty-eight hours in a six-day week or forty-nine and one-half hours in a five-and-one-half-day week, and allowing overtime which may be so spread out as to make a regular fifty-one-hour week, New York will be handicapped in comparison with Pennsylvania, Illinois, New Jersey and Michigan.

Canneries especially are under more rigid restrictions as to hours of work in New York than in any competing state except Massachusetts, the tendency in most states being to remove rather than to increase restrictions.

• The legal restriction of working hours in New York State has gone forward more rapidly than in other industrial states despite the fact that in many lines of industry the length of the present working day is shorter than that legally allowed. Working hours in the factories of New York State have been adjusted to economic conditions and to the nature of the employment. Over 56% of the women employed in New York industries, according to the State Department of Labor, and 55%, according to the investigations of the Conference Board, work not to exceed forty-eight hours, while 85% to 87% work fifty-one hours or less. The present situation allows a flexible adjustment to economic requirements in highly seasonal industries. The length of the work week in New York State shows a downward trend, but there is a

great difference between the voluntary shortening of the working day and arbitrary establishment and universal application of a short work week in manufacturing industries. In certain industries hours have been reduced without loss of efficiency or earnings. But in the case of industries subject to acute competition from other states, there is reason in New York State to consider with especial care the legal establishment of a working day which it has not as yet been found to be economically possible to adopt voluntarily in all industries.

In the industries of the United States generally there has been a swing toward a longer standard work week since 1921. In 1921 the percentage of workers employed on a work week of forty-eight hours or less was 51.5%, but between 1921 and 1923 the proportion dropped to 46.1%. This indicates definitely that the tendency throughout the country in recent years has not been toward a work week as short as forty-eight hours.

Whatever the precise part which the rapid development of regulatory legislation has played in the retardation of industry in New York, the manufacturers of the state are viewing its trend with serious concern. They feel, according to the testimony gathered in this study, that the legislative environment—in which the workmen's compensation laws, the fiscal policy as well as the regulatory legislation are included and not separable—has put a definite handicap upon industrial operation and expansion in New York State.

The magnitude of this burden, of course, cannot be measured in monetary terms. The cost of compliance with specific requirements of the regulating laws, which may be estimated at about three million dollars annually, is inconsiderable in comparison with those of the workmen's compensation laws or with the production of the industries of the state; but it weighs heavily in the balance for the business man considering expanding or establishing an enterprise in the state. If it is not the straw that breaks the back of industry already established in the state, it is the straw that shows to potential enterprise the way the legislative wind blows in New York. It is clear from the testimony of the manufacturers of the state that they do not view the future with con-

fidence, that concerns already located in New York prefer to make their plans for future expansion in other states, and that new industry is not coming to the state as rapidly as it might be expected to.

In conclusion, it is justifiable to say that the general industrial situation and tendencies in New York, together with the very fact of leadership which the state has already attained in the magnitude of its manufacturing output, are likely—even apart from further disturbing artificial factors—to make it ever more difficult for New York to maintain its leadership in the future against the competition of Pennsylvania, Ohio, Illinois, New Jersey, Massachusetts, Michigan and other states in the South and West in which rapid industrial development along modern lines is going forward, and in which legislative regulation has in many cases not yet caught up with the advanced standards of the older industrial states. This situation is one which may well command the earnest attention of the business men, workers and legislators of the state.