CHAPTER IV

THE INFLUENCE OF LAKE MICHIGAN

CHEAPER COAL FROM THE EAST

Along its whole eastern boundary Wisconsin faces on Lake Michigan, a link in the most important inland waterway in North America and perhaps in the world. To be situated upon such a waterway gives to any state or province important commercial advantages. As a rule, transportation on such a waterway is the least expensive of all forms of transportation except that on the sea. For example, lake boats bring coal from ports on Lake Erie to Milwaukee for 50 to 70 cents a ton, and at times in the past for 35 cents a ton. The distance is nearly a thousand miles; at 50 cents a ton the cost of thus transporting coal is only 1/20 of a cent per ton-mile, while the rail rate from Buffalo to Milwaukee is at least five times as much.

Each year Wisconsin uses hundreds of thousands of tons of coal which comes by way of the lakes, for the cost of bringing eastern coal to Wisconsin by rail is nearly prohibitive. Even with the great advantage of lake transportation, anthracite coal costs the consumers in Wisconsin from 16 to 20 dollars a ton. Few people in the state would feel that they could afford anthracite coal if it cost very much more than it now costs.

This is one illustration of the advantage which Wisconsin possesses in facing on the Great Lakes. This advantage of cheap transportation extends also to other commodities which enter and leave the state. Lake transportation was still more important in the past when great quantities of lumber and wheat were shipped by lake boats. Water transportation is best adapted to heavy and bulky commodities, which are transported overland only at high cost. Lake transportation was the most important factor in building up the early industries of the lake shore counties; and the growth of industries causes the growth of other forms of business, which in turn, increases population and wealth.
EASTERN AND WESTERN WISCONSIN

On the western boundary of Wisconsin is another waterway, once regarded as an important traffic route; but the usefulness of the Mississippi River to Wisconsin makes a poor showing when compared with that of the Great Lakes. Ten manufacturing cities have grown up along the shore of Lake Michigan (including Green Bay) but only two on the Mississippi River; and the larger of these two, La Crosse, ranks only sixth among the manufacturing cities of the state.

Population. The effect of Lake Michigan upon the growth of population shows in the fact that nearly 1,000,000 people live in the eleven counties bordering on Lake Michigan and only ¼ as many in the eleven counties on our western boundary. Nine out of the eleven counties on Lake Michigan gained in population between the decade 1900–1910, while six out of the eight on the Mississippi River lost population. Nor is this growth of population in the lake shore counties confined to the cities; in nine out of the eleven counties which touch Lake Michigan the rural population increased, but in all of our counties along the Mississippi it decreased.

Wealth. The favorable influence of the Lake Michigan waterway is even more striking when we compare the wealth of the lake shore counties with that of the eleven counties on the western boundary. The valuation* of the former is about $200,000 per square mile, while that of the latter is less than $50,000 per square mile. The valuation of the three lake shore counties treated in this bulletin is nearly $1,000,000 per square mile.

LAKE MICHIGAN AND THE EARLY DEVELOPMENT OF WISCONSIN

The advantages enjoyed by the eastern counties on account of their position on Lake Michigan are now more largely indirect than direct. Before railroads became the chief arteries of transportaton, natural waterways were of utmost importance, and they benefited the regions which they served in a most direct way. In the case of Wisconsin, the Great Lakes were the only convenient means of connecting the region with the more highly developed East. From the East the early settlers must come, bringing with them furniture, tools, and implements. Such machinery as the early industries required

* State Tax Commission.
must come mainly from the East; and for a long time the pioneer settlements secured a large part of their supplies of clothing and other manufactured goods from that section of the country. During this stage, the Great Lakes constantly and directly assisted the development of the state and particularly the part near Lake Michigan.

It was precisely this advantage of water transportation that caused the location and growth of the early settlements on the shore of the lake. When railroads became numerous and their service speedy and reasonable in cost, they gradually took over an increasing amount of the former traffic and absorbed most of the new business; yet the momentum given to the growth of the early shore cities by lake transportation continued down to the present. These lake ports were the termini from which the early railroads pushed their way into the back country; consequently they became the gateways through which the products of farms and forests proceeded to markets, and through which goods from the East passed westward to Wisconsin, Iowa, and Minnesota.

LAKE TRANSPORTATION AND EARLY INDUSTRIES

The lake ports not only were points of transshipment between water routes and land routes, but their advantages for commerce were also advantages for all kinds of industries. The lake not only gave better shipping and receiving facilities but created competition which lowered rail rates.

Settlers from the East and from overseas poured into the new West, coming in large numbers by way of the Erie Canal and the Great Lakes. Many of these people landed in Milwaukee, Racine, Kenosha, and other lake ports and furnished a constant supply of labor which was a distinct advantage to manufacturers. The wave of German immigrants brought skilled workmen, notably in the tanning, brewing, and leather working trades; and this supply of skilled labor entering these cities gave them an advantage which cities situated away from the lakes did not possess.

SUMMARY. Thus (a) in securing machinery and raw materials, (b) in facilities for shipping out their products, (c) in rail connections with other sections of the state and country, and (d) in securing labor, the lake ports occupied the most strategic points in the state for the development of manufacturing. Milwaukee, which had the best harbor, and became at an early date the focus of extensive railroad construction.
offered the best advantages, and so secured the lion’s share of the manufacturing of the state. Now its manufactured products equal in value those of the next twenty cities of Wisconsin, while Racine and Kenosha rank second and third as manufacturing centers.

**Contrasts in the Economic Development of the Michigan and Wisconsin Shores of Lake Michigan**

A body of water three hundred miles in length and nearly one hundred miles wide projecting into the very heart of a rich territory must influence the economic development of that territory. Lake Michigan influences air temperatures for some twenty miles inland from its eastern shore in Michigan, but considerably less in Wisconsin. Land heats and cools more rapidly than water. The heat stored up in the waters of Lake Michigan in summer is given off in autumn and early winter to the prevailing westerly winds and is carried over the Michigan shore lands. During the winter the lake radiates its accumulated summer heat, and as spring advances, the water warms more slowly than the land; consequently the winds blowing across the lake are cooled and give the shore lands of Michigan a lower temperature than would prevail were the lake not present. This retards the spring and prevents vegetation—including fruit trees—from responding too promptly to the early warmth and thus becoming exposed to the danger of frosts. Herein lies one explanation of the high development of fruit growing on the Michigan side of the lake.

Grand Haven in Michigan lies directly opposite Milwaukee. Its average January temperature is four degrees warmer than that of Milwaukee, and six degrees warmer than that of interior cities of Wisconsin and Iowa in the same latitude. The lowest January temperature is ten degrees warmer at Grand Haven than at points in the interior of Wisconsin and Iowa in the same latitude. The extremely low winter temperatures which visit Wisconsin are seldom so severe on the Michigan shore of the lake.

**Fruit Growing**

The accompanying map, Fig. 17, showing the number of orchard trees in the counties bordering on Lake Michigan in Wisconsin and in Michigan, brings out the lake influence impressively. The shore counties in Michigan make up one of the...
Fig. 17—Map showing the effect of Lake Michigan upon fruit growing on its east and west sides. The prevailing westerly winds cause the climatic influence of the lake to be greater on the Michigan side.
great fruit belts of the United States, while fruit growing on
the Wisconsin side is only an incident. For example, Van
Buren County in Michigan had* 550,000 orchard trees, Oceana
600,000, Allegan 800,000, and Berrien nearly 1,000,000; while
the highest number of orchard trees in any shore county in
Wisconsin is in Sheboygan with only 130,000. Berrien County,
Michigan, produces 50,000,000 pounds of grapes in an average
year, while no county on the Wisconsin side of the lake pro-
duces over 30,000 pounds. A single county on the Michigan
side produces 8,000,000 quarts of small fruits, while the high-
est production on the Wisconsin side is less than 1/16 as much.
The most striking difference is seen in peach growing. This
has not maintained its former importance in Michigan, yet in
1910 many counties of Michigan produced from 100,000 to 200,-
000 bushels of peaches, while the whole Wisconsin shore pro-
duced only a few hundred bushels. In short, peach growing
has been a large industry in Michigan, while just across the
lake it has never attained even incidental importance.

SUMMER RESORTS

There are forty or fifty places along the Michigan shore
of the lake in which summer hotels and a general develop-
ment of summer resort activities have attained prominence.
Several towns on the Michigan side have from five thousand
to ten thousand additional summer residents, and some of these
towns entertain from fifty thousand to one hundred thousand
transient visitors during the summer. Fig. 18 shows the num-
ber of passengers (mostly tourists) taken by steamer to vari-
ous cities along the shore of Lake Michigan on the Wisconsin
side and on the Michigan side. On the Wisconsin side the only
city receiving any considerable number of passengers by lake
boat is Milwaukee, and scarcely any of these are summer
tourists.

POPULATION AND INDUSTRY

Of Michigan’s ten largest cities only one is on the shore of
Lake Michigan, and this one, Muskegon, is the smallest of the
ten. Of Wisconsin’s ten largest cities five are on Lake Michi-
gan, and one of these has a larger population than all of the
cities and towns in Michigan on the Lake Michigan shore (Fig.
19). In Wisconsin the most marked concentration of popula-

* U. S. census of 1910.
Fig. 18—The Michigan shore of Lake Michigan has many summer resorts to which tourists and excursionists are taken by lake steamers. The only city on the Wisconsin side receiving many excursionists is Milwaukee. A large proportion of the passengers landed at Milwaukee are regular passengers, not excursionists.
Fig. 19—Diagram showing the population of cities on the Wisconsin side and the Michigan side of Lake Michigan.
tion and industries is along the shore of the lake, while no concentration of importance exists on the opposite side.

LAKE COMMERCE

The great movement of commercial products from both Wisconsin and Michigan is toward the east. The water gates through which the products of Wisconsin pass eastward are those of Lake Michigan, while in Michigan they are those on the eastern side of the state. The cities of western Michigan have practically no commercial hinterland. Incoming lake traffic enters Michigan from the east and enters Wisconsin from the east. This gives a large importance to the Wisconsin ports on Lake Michigan but practically no importance to those of Michigan. This is emphasized by Fig. 20, showing the freight movements in and out of Lake Michigan ports. Aside from Ludington and Grand Haven on the Michigan side, there is practically no freight movement in or out of the lake ports. These two cities are the termini of car ferries from Kewaunee, Manitowoc, and Milwaukee, and the freight movements to these ports are almost entirely through-freight destined to eastern markets. The freight movements in and out of the Michigan harbors of Lake Michigan are negligible, while those on the Wisconsin side rise to millions of tons annually.

DEVELOPMENT OF MANUFACTURING

Half of all the manufacturing done in Wisconsin is done in six cities on the shore of Lake Michigan. Aside from lumber there has been little manufacturing on the Michigan side of the lake. Not one city, excepting Muskegon, can be called a manufacturing city; on the contrary, Kenosha, Racine, Milwaukee, Manitowoc, Sheboygan, and Green Bay are all distinctively manufacturing centers deriving most of their advantage of location from their position on the Lake.

CONCLUSION

The influence of Lake Michigan upon its two shores has been very different indeed. On the Michigan side it is mainly a matter of climate, resulting in a high development of fruit growing and summer resorts. On the Wisconsin side neither of these developments has taken place, but the lake has induced a very marked concentration of population, wealth, industry,
Fig. 20—Diagram showing the value of freight handled by Wisconsin ports on Lake Michigan and by Michigan ports.
and commerce. There has been no development of urban centers on the Michigan side, but a very notable development in Wisconsin. None of the cities on the east side of the lake are railroad termini of importance. All of Wisconsin's important railroad termini are on Lake Michigan, and all but one of its more important early railroads were built inland from points on the lake. The maximum influence of Lake Michigan in the industrial development of Wisconsin was reached in the past. To this there is one marked exception, namely the advantage which the lake shore cities have in the securing of coal from the East. In short, Lake Michigan has been only a minor influence in the economic life of Michigan, but it has been a major influence in that of Wisconsin.