SEPTEMBER 1960

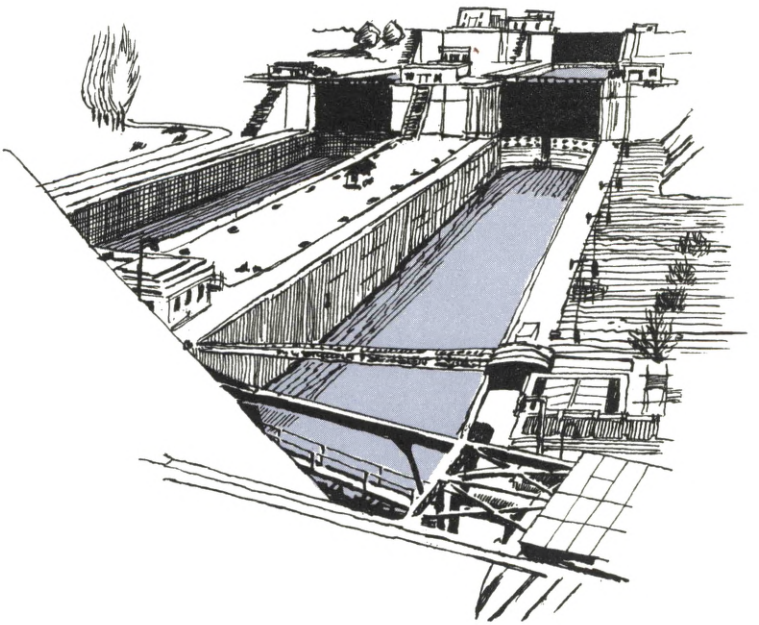
# BUSINESS REVIEW

The St. Lawrence Stairway to the Sea

Unemployment in a Growing Economy

FEDERAL RESERVE BANK OF PHILADELPHIA

# THE ST. LAWRENCE STAIRWAY TO THE SEA



## *How Its Commerce Is Shaping up Now That the Seaway Is in Business*

Queen Elizabeth and President Eisenhower officially opened the St. Lawrence Seaway on June 26, 1959. About 1,520,000,000 B.C., in the Archeozoic Era, the project was begun and still isn't finished—but it works.

In that far, far distant past before man began to mess up North America, it was in quite a mess of its own doing. Great turmoil boiled within the earth, with volcanoes erupting and earthquakes quaking. Gigantic fissures opened and soft rock pressed against hard rock. The weaker rocks broke into enormous blocks and slowly, ever so slowly, they sank. Into the biggest sinks the sea rushed and covered the rock. Fierce was the battle for dominion between the waters of the sea and the land that was to be. This went on for millions of years, and shorelines were constantly shifting.

Then came the glaciers. They were geological Johnny-Come-Latelys but they did a powerful amount of topographic sculpturing. Formed far up in the northland of eternal cold and snow, these rock-shod crusts of ice of continental magnitude bulldozed their way southward slowly but relentlessly. With cosmic crunching, the icecaps, perhaps a mile or more in thickness, did a mighty job of landscraping and landscaping. With irresistible force the glaciers leveled off the peaks of

the highest mountains and where they encountered softer bottom they gouged out great depressions.

When warmer climes prevailed, the icecaps melted away and the sunken lands, relieved of the great weight they had borne so long, sprang up again. Unevenly, the land pushed upward for thousands of years, forming a great plain and a valley into which rivers ran, constantly fed by the frigid waters of the melting icecaps to the north. At the southwestern end of the great plain was a bridge of hard rock and beyond it was a great depression containing large bodies of waters that subsequently shrank to become the Great Lakes. Slowly the depression rose and eventually the fresh waters began to spill over the bridge of hard rock, and the waters found their way northeastward to the sea. And so the St. Lawrence River was wrought.

When man arrived on the scene, the St. Lawrence was still an unfinished river. The seaward section of the river is wide, deep, and handsome —an open invitation to navigation. Upstream, however, the river is more like a series of lakes connected by turbulent rapids, that have defied every form of water craft from birch-bark canoes to argosies of commerce. Thereby hangs a tale to unfold.

## GEOGRAPHY WITH TEARS

Of all the rivers in the world, the St. Lawrence is one of the most, if not the most, unusual— not because of its length or because of its numerous rapids and their power potentialities or even because of its wide mouth. It is unique in the way that it begins.

Most rivers, if traced from the mouth to the source, start as a little trickle of water on a hillside 'way up in the backwoods section of the country, get gradually bigger as they wander along picking up other streams and so, by and by, become respectable rivers before emptying into a sea or an ocean. Not so the St. Lawrence. It starts right out with a flood of waters from the world's largest system of interconnected lakes. With such wondrous waterworks as its source, the St. Lawrence instantaneously springs into full-grown riverhood.

A map of the region shows what looks like clear sailing from the Atlantic Ocean up the river and through the lakes deep into the continent at the head of Lake Superior, right to the doorstep of the rich Canadian-American granary and the great Mesabi iron ore deposits. The Great Lakes, as you know, have long served as a maritime highway for the Midwestern steel industry. Iron ore is floated down the Lakes and Appalachian coal is floated up the Lakes to the big steel mills at Chicago, Gary, Cleveland, Detroit, and other Lakeside steel centers spread-eagled from Duluth to Buffalo.

What the map does not show are the obstacles to navigation that have so long frustrated Canadians in trying to utilize fully this 2,300-mile waterway for exporting grain from the prairie provinces. The two biggest obstacles were the famous falls on the Niagara River which connects Lake Erie with Lake Ontario, and the series of rapids in the comparatively short section of the St. Lawrence River between the eastern end of Lake Ontario and Montreal where, in 1535, Jacques Cartier was blocked in his search for a western route to the "East."

Climate and natural resources favored original settlement and subsequent expansion along the river. Almost as long as there have been Canadians it has been their dream to conquer the obstacles and open the river to navigability. It is difficult for us to comprehend the importance of the river to Canadians. The St. Lawrence is the Canadian Mississippi.

# FLASHBACK

As early as 1700, the Canadians began digging a mile-long, 3-foot-deep canal around Lachine Rapids, just above Montreal, but they ran out of money before the canal was finished. By 1825, Lachine Canal had been deepened to five feet. In the same year, New York opened the Erie Canal between Buffalo and Albany, providing an all-water route for the shipment of grain from the Great Lakes to the port of New York City.

Though the Erie Canal prospered, the Canadians kept on dreaming and digging.

In 1832, they bypassed Niagara Falls with the 7-foot Welland Canal. Two years later, they began digging to bypass the long Saulte Rapids with the 9-foot Cornwall Canal; and in 1841, deepened the Welland Canal to 9 feet. By 1855, when Michigan canalled around St. Mary's Falls between lakes Superior and Huron, a 9-foot throughway had been completed so that it was possible for a ship to sail into Lake Superior.

The Erie Canal continued to attract most of the grain traffic, so that the St. Lawrence canal system was obsolete almost as soon as it was completed to 9 feet. Came the railroads, after mid-century, and before long they spelled the obsolescence of both the St. Lawrence chain of canals and the Erie Canal. Thereupon the Canadians dug deeper. The Welland Canal was deepened to 10 feet in 1853, and to 14 feet in 1887. By the turn of the century, Canada had completed a 14-foot channel from Montreal to Lake Erie, and the United States had deepened the St. Mary's Canal to 25 feet to accommodate larger ships carrying an ever-growing volume of grain and iron ore from the head of Lake Superior. Meanwhile the westward shift of population and the expansion of the grain-growing area generated a flow of grain that the railroads and the canals together could scarcely handle. The 14-foot canal system was too shallow, and Canadians dreamed of deeper ditches.

In 1901, a little hydroelectric power plant was built at Massena, New York. The new source of electric power attracted an aluminum reduction plant but more than a decade elapsed before the vast power potentialities of the St. Lawrence were fully appreciated. In 1914, the United States suggested to Canada an International Joint Commission to study "the question of development of boundary waters for navigation and power." Though a bit slow in responding because of preoccupation with World War I, the Canadians came to realize the advantage of linking power development to the project of deepening the Seaway. Shortly after World War I, the grain growers in our Wheat Belt formed the Great Lakes-St. Lawrence Tidewater Association. This was an American lobby, the counterpart of the Canadian Deep Waterway and Power Association. Together the two organizations pressed for an improved waterway to wider markets.

In 1924, President Coolidge appointed a special United States-St. Lawrence Commission, and its "Hoover Report" strongly urged a joint power and seaway project. Canadian-American cooperation was required inasmuch as one of the best power-producing sections of the St. Lawrence Seaway (technically, the part of the river between Montreal and Lake Ontario) lay in the international section bordering both Canada and the state of New York. Moreover, from an engineering standpoint it was the better part of wisdom to join power development with ditch deepening because each required digging in the same area. After much cross-border palaver and consultation, Canada and the United States, in 1932, signed the St. Lawrence Deep Waterway Treaty, providing for joint development of the Great Lakes Basin in the interests of both navigation and power, only to have the treaty rejected by the United States Senate in 1934.

At the same time that the idea of joint seaway and power project gained support, it also gained opposition. The railroads of the eastern United States were opposed to the Seaway because of the grain trade and other traffic they would lose. The Atlantic and Gulf Coast ports were opposed to it for the same reason. The coal companies were opposed because hydroelectric power would cut into their markets for coal. Labor in the mines and on the railroads shared the views of its employers. Private power companies did not like the idea of public power. The battle raged on and on, with the wheat growers as the principal sponsors for the Seaway and the railroads the major opponents. Every President from Wilson to Eisenhower championed the Seaway as a "must," but Congress delayed approval.

World War II, when both countries were pre-

occupied, caused a further delay of the Seaway. But the war and its aftermath brought additional pressures for the project. War-induced expansion of industrial capacity left Canada with a serious power shortage. In this country, the war had made heavy inroads on our dwindling iron ore resources. Communist-conspired international tensions caused a redoubling of our national defense efforts and national defense played right into the hands of the Seaway proponents. Finally, in 1954, Congress passed the Wiley-Dondero Act authorizing construction of the Seaway. Whether the decision came as a result of Canada's threat to go it alone or as a result of the discovery of rich iron ore deposits on the Labrador-Quebec border will be left to the reader's judgment.

The entire project which took about 40 years of exhortation required only a little over four years of excavation, with power dams to boot. The engineers had to build about 50 miles of dikes, excavate 50 million cubic yards of rock, clay, sand, and silt, raise bridges without interrupting traffic, build dams and cofferdams (walled-off sections of the river to deepen the river bed), pour over 3 million cubic yards of concrete, and create an artificial lake of 38,000 acres which required the removal of individual homes and entire communities.

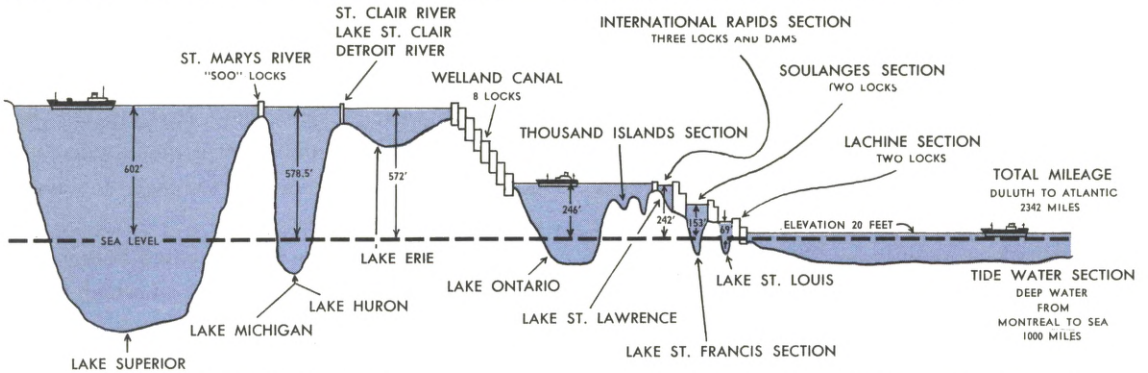
The bill, as you might expect, came pretty high. In round numbers, the Seaway cost Canada $340 million and the United States $130 million. The total cost of $470 million is supposed to be paid off in 50 years with tolls collected by both countries in proportion to their respective investment. The power project came to $650 million, shared equally by the builders—the Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York. Furthermore, the United States has to do about $150 million of dredging in the channels between various sections of the Great Lakes in order to attain a system-wide 27-foot depth already given to the Seaway proper. So the total bill will run about $1¼ billion and that's not counting the $300 million the Canadians had already spent on the Seaway and the Welland Canal in earlier years before the recent fussing began.

## DOWN TO THE SEA IN SHIPS

The Seven Wonders of the World might well be amended to add the Great Lakes-St. Lawrence Seaway as the eighth wonder. With locks to bypass the rough spots between uppermost Lake ports and Montreal, ocean-going vessels burdened with 8,500 tons of cargo and "lakers" laden with 25,000-ton cargoes are raised and lowered as much as the height of the Washington Monument. Nowhere else in the world is there so much lifting and lowering of such large vessels. The reason, of course, is that the waters of the Great Lakes and the upper St. Lawrence are on different levels—and all elevations are considerably above sea level. The Great Lakes themselves have different levels. Only Huron and Michigan have a common water level, but it is unlike that of any of the other three. Consequently, an ocean-bound vessel starting out from a port on Lake Superior has to go down a record-making series of stairways before it reaches tidewater at Montreal. The stairway to the sea is shown in the accompanying sketch.

A cargo of wheat setting out from Duluth-Superior for Rotterdam does real fancy split-level navigation before reaching sea level. The biggest drop is encountered before the vessel reaches the Seaway. A battery of eight locks at the Welland Canal lowers the ship 326 feet to bypass Niagara Falls between Lake Erie and Lake Ontario. Then, upon entering the St. Lawrence, the vessel is in the Seaway proper, where seven more locks between the Thousand Islands and Montreal ease the vessel down 246 feet to tidewater. On reaching the bottom of the stairway, the vessel has clear sailing for a thousand miles to the sea—clear, that is, when there are no fogs.

## PROFILE VIEW OF ST. LAWRENCE—GREAT LAKES WATERWAY




### GREAT EXPECTATIONS

In the years immediately preceding the deepening of the Seaway, annual traffic through the shallow channel averaged about 12 million tons of cargo. Most of the tonnage was bulk cargo—stuff that can be blown, shoveled, or pumped, like grain, coal, ores, and petroleum.

Prior to the opening of the deeper channel there were great expectations as to the amount of traffic and the tonnage of commerce that the new Seaway would attract. Great cities like Chicago, Detroit, and Cleveland would have access to the sea and, in effect, become seaports. So would smaller cities like Buffalo, Erie, Toledo, Milwaukee, Duluth-Superior, Hamilton, Toronto, Port Arthur, and Ft. William. With varying degrees of effectiveness, all these cities and others readied their harbor and port facilities in anticipation of greatly increased domestic and international trade.

Estimates of the tonnage of cargo to be handled by the new Seaway ranged optimistically from 25 million to 30 million tons a year—two to three times the tonnage carried through the older and shallower channel. Such was the short-run outlook. Within a decade after the opening of the new Seaway, the traffic was expected to grow to 50 million tons a year. Some Government estimates were as high as 84 million tons.

At long last the Great Lakes-St. Lawrence waterway was expected to capture the lion's share of the export grain trade, and ocean-going vessels would be able to unload imported foreign automobiles right on the doorstep of Detroit. Moreover, with a railroad to bring iron ore from the new Labrador-Quebec deposits to Seven Islands on the Gulf of St. Lawrence, grain-laden lakers unloading their cargoes at down-river ports in Canada would be able to return heavily loaded with iron ore for the steel mills at Hamilton, Cleveland, and Chicago, thus assuring profitable two-way traffic. The optimistic forecasts were probably nothing other than the human propensity for overestimating the chances of gain.

### LAMENTATIONS WITH EXPLANATIONS

In 1959, the first year of operation, the Seaway lifted almost 8,000 vessels of various types which hauled a fraction over 20 million tons of cargo. Although this was a 75 per cent increase over the tonnage transported the preceding year, commerce fell short of even the most conservative estimates. There were extenuating circumstances, however. To begin with, the weather was unfavorable. Customarily ice-bound for four

months of the year, the ice was abnormally late in thawing. No doubt more iron ore would have been hauled in the waterway had it not been for the prolonged steel strike in the United States. It was also a year in which sales of Canadian grain declined, and American exports, generally, were sluggish. Moreover, the Seaway was new to many skippers who navigated it for the first time and that fact accounted for numerous incidents and delays. Delays also occurred at the Welland Canal, stampeded by vessels in the opening race to be first through the new Seaway. In numerous ports, the harbors were too shallow or the berths too few, or the lift cranes too light, or the stevedores too inexperienced. The first season's experience has been likened to the opening night at a theatre.

Perhaps too much was expected in the way of general cargo, consisting of essentially manufactured products such as newsprint, sheet steel, motor vehicles, and miscellaneous package freight. As it turned out, fully 91 per cent of the tonnage consisted of the less profitable bulk cargo, like grain, iron ore, coal, petroleum, sulphur, salt, and other minerals.

**1959 TRAFFIC ORIGINS AND DESTINATIONS**

| O. and D. | Tonnage (thousand short tons) |
|---|---|
| Canada to Canada | 7,274 |
| Canada to United States | 5,761 |
| United States to foreign | 2,759 |
| United States to Canada | 1,795 |
| Foreign to United States | 1,053 |
| Foreign to Canada | 842 |
| Canada to foreign | 823 |
| United States to United States | 44 |
| | 20,351 |

N.B. "Foreign" means countries other than Canada and the United States.

A whence-and-whither analysis of the Seaway commerce confirms its essentially Canadian character. Over one-third of the total tonnage, as the table shows, was commerce between Canadian lake and river ports. About half of this was down-bound wheat and other grains, and almost two-thirds of the up-bound tonnage was industrial raw materials and fuel.

Canadian shipments to the United States made up over one-fourth of the traffic, of which almost 90 per cent was iron ore.

Ranking third in tonnage through the Seaway were United States' exports, principally grain—barley, corn, oats, and wheat, in that order.

Seaway shipments from the United States to Canada amounted to 1,795,000 tons, of which coal represented 40 per cent, corn 22 per cent, and wheat 12 per cent.

United States' imports from abroad via the Seaway were just slightly over 1 million tons. Almost half of the imports (49 per cent) consisted of general and mixed cargo; principal items in the remainder consisted of iron and steel manufactures, "other manufactured products," minerals, and woodpulp, in that order.

Canada's imports and exports were almost equally divided. Over three-fourths of her exports were grain and other agricultural products. Her major imports were fuel oil, sugar, and crude petroleum.

A summary of the first year's traffic reveals the importance of the Seaway as a channel for trade within Canada, trade between Canada and the United States, and a grain export route for both countries. Tonnage-wise, the Seaway is essentially an iron ore and grain waterway, as these two commodities accounted for two-thirds of the bulk carried. The anticipated backhaul of ore by down-bound grain carriers, however, did not materialize.

## WHAT DID THE SEAWAY DO TO PHILADELPHIA?

The Delaware River port has not collapsed as a result of the first year's operations of the new Seaway. Exports through the Delaware River port in 1959 were down three-quarters of a million tons from the preceding year, but about half of the decline is attributable to anthracite coal and about one-quarter of the decline is attributable to bituminous coal. There was a decline of almost 150,000 tons in exports of wheat, but part of that was counterbalanced by increased exports of corn and soybeans, the latter almost tripling. Wheat, however, is the biggest tonnage grain moving out of this port and part of the 30 per cent decline last year is no doubt attributable to Seaway competition. For all grains inspected for export, last year's decline from the 1958 tonnage amounted to 15 per cent. Baltimore fared better; Buffalo and Albany, worse.

Imports through the Delaware River ports, which usually overshadow exports by 15 or 20 to 1, tonnage-wise, were greater in 1959 than the preceding year. As usual, the lion's share of the imports consisted of petroleum and iron ore. In 1959, there was a small decrease in petroleum but an increase in iron ore, so it doesn't seem likely that the Seaway hurt our iron ore trade, and the petroleum industry had troubles of its own unrelated to the Seaway.

The Delaware River port is essentially an industrial and not a commercial port. As already indicated, most of its traffic is inbound and consists chiefly of industrial raw materials which are worked up into manufactured products right here in the Delaware Valley industrial area. Even with respect to exports, this port heretofore has drawn on a shorter hinterland than the ports of New York and Baltimore.

## STEEL'S NEW LIFELINE

How nicely the new Seaway fits into the changing pattern of our increasing reliance on foreign iron ores!

Iron ore is heavy stuff; so it is shipped by water wherever possible. Billions of tons dug out of the Mesabi and neighboring ranges have already been shipped down the Great Lakes, which are fringed with steel mills from Duluth to Buffalo. With such a splendid waterway lying between our richest ore deposits and our great Appalachian coal beds, it was inevitable that a substantial part of our steel industry developed on the Lake shores. Over one-third of the country's blast furnace capacity (and 85 per cent of Canada's) is concentrated in the Lakes district.

Although Mesabi ores are not in imminent danger of exhaustion, they have already yielded their best; so much so that the industry has spent millions to develop taconite and to scour the world for new iron ore deposits. Thus far the best finds have been in Canada and Venezuela. Currently, these two countries are supplying (in about equal proportions) three-fourths of our import ores. Traditionally, Lake Superior ores supplied about four-fifths of the steel industry's requirements but imports are assuming proportions of major magnitude. In 1959—admittedly not one of the best years for the steel industry—total imports (36 million tons) came within challenging tonnage of our Lake Superior shipments (44 million tons).

North of Seven Islands, on the mouth of the St. Lawrence, in the heretofore wasteland astride the Labrador-Quebec border and stretching up to Ungava Bay, is a boot-shaped area rich—perhaps fabulously rich—in iron ore. After intensive prospecting, the Iron Ore Company of Canada, in which some of the blue-chip steel companies of the United States are represented, was

sufficiently convinced of the ferrous wealth in the wasteland to build a 360-mile railroad to haul ore from the ankle of the boot, near Schefferville, to Seven Islands on the St. Lawrence. In 1954, production began with 1¾ million tons of ore railed down to the river where it was dumped into the holds of ships for transport to steel mills. The flow of ore has been increasing steadily ever since, and in 1959 over 13 million tons passed through Seven Islands.

Before the new Seaway was opened, over half of the tonnage moving through Seven Islands went to the Eastern Coast of the United States—primarily Baltimore and Philadelphia. Approximately one-fourth went to Europe, and about 18 per cent found its way up the pre-Seaway route to steel mills in Canada and the United States. In 1959, about 41 per cent went up the new Seaway, 36 per cent went to the Eastern Coast of the United States, and only one-fifth to Europe.

Widespread exploration in the Labrador-Quebec boot by more than a hundred companies has already led to the discovery of other deposits, some of which are said to contain reserves of over a billion tons of economically recoverable ore. More and more of the ore coming out of this region is expected to be shipped up the Seaway to steel mills in the United States and Canada. It has been estimated that iron ore production in this region may grow to 30 million tons by 1965 and 50 million tons by 1970, resulting in substantially larger shipments through the Seaway. The estimates could be too optimistic, but it is possible that the new Seaway may become an ore way primarily.

## THE GRAIN TRAFFIC TURMOIL

What has the new Seaway done for the grain growers who have long been its strongest and most persistent advocates? Has it brought about the anticipated reduction in costs of moving grain into foreign markets? The answers are complicated by the battle that was raging among the railroads, truckers, and waterways before the new Seaway opened for business. Its opening intensified the grain traffic turmoil.

For many years the railroads did a thriving business of hauling export grain to cities on or near Atlantic, Gulf, and Pacific coasts that were accessible to ocean carriers. Under pressure of rising costs of operations, rail transport rates on grain inched upward during the postwar period; so much so that between 1946 and 1958 the rail rates for grain virtually doubled. As rates rose, grain shippers sought other forms of transportation.

Truckers began to cut in on the railroads by hauling grain from country elevators to terminal markets. As bad, if not worse, for the railroads was the growing tonnage of grain that moved by barge from terminal elevators to tidewater. The area served by barge transportation on the Mississippi, Illinois, and Ohio rivers turned increasingly to water transportation for the shipment of grain to the Gulf Coast. The changes taking place in grain transportation were tantamount to a traffic revolution, in which the railroads were coming off at the short end.

Then came the new Seaway. The Seaway intensified the competition for grain from the eastern, western, and north-south railroads, inasmuch as two of the traditional export gateways—the Gulf and Atlantic coasts—were faced with a new export gateway, the Great Lakes-St. Lawrence Waterway.

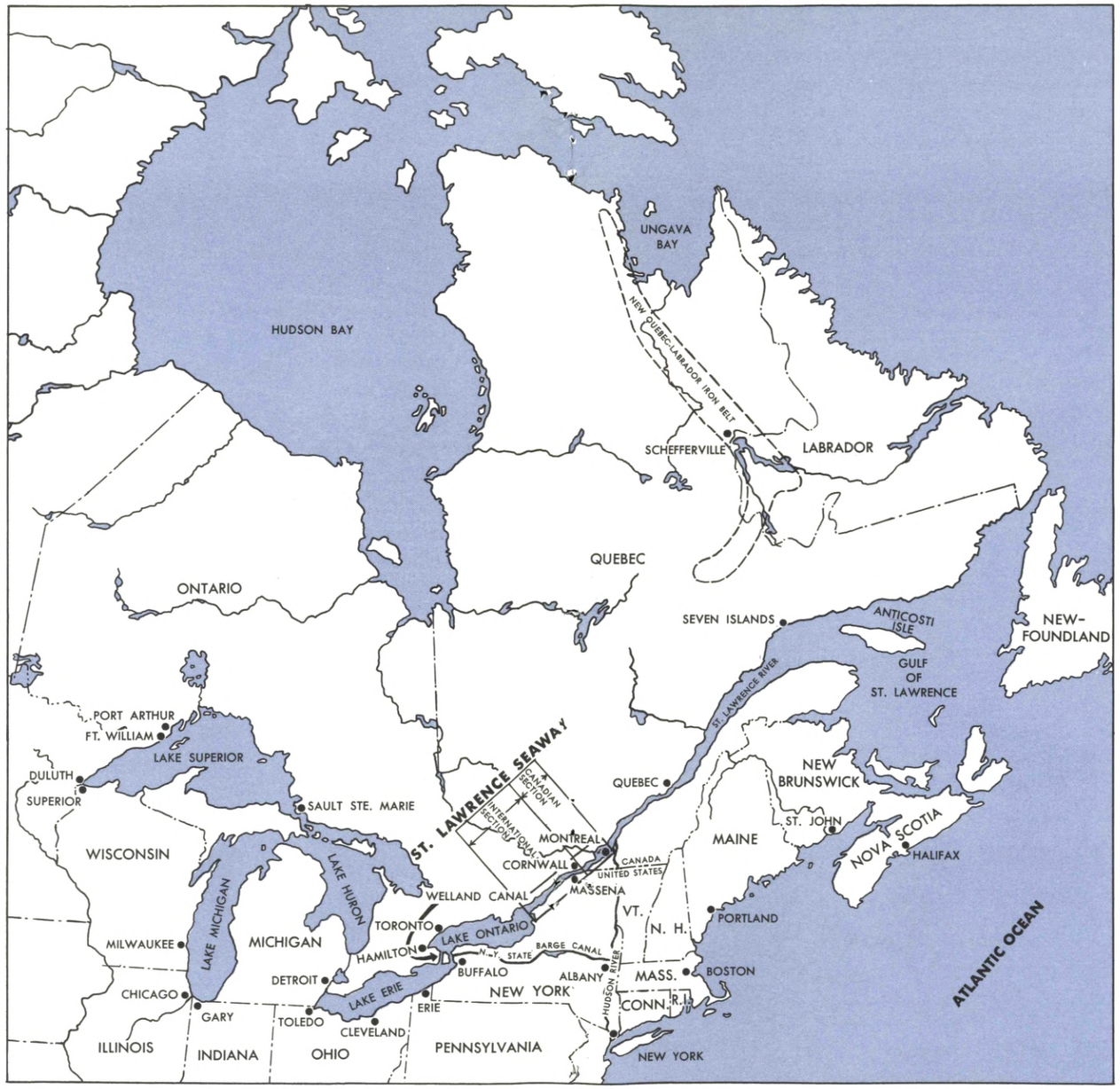
The railroads fought back with their best competitive weapon—rate reductions. In June of last year, the lines serving the area east of the Mississippi and north of the Ohio River made

substantial rate reductions. The reductions applied to export grain hauled to North Atlantic coastal cities. To meet the competition of the eastern adjustment, railroads serving the Gulf Coast reduced their rates on grain moving out of Illinois and Missouri. Elsewhere, still other rail rates were reduced to meet the competition of truckers hauling grain into Lake port terminals such as Duluth and Toledo. As the battlelines draw tighter it is apparent the rails are determined to meet the competition of the Seaway, trucks, and barges.

Despite all the rate readjustments which brought rail rates on export grain from the territory east of the Mississippi and north of the Ohio down to the levels prevailing 10 years ago, the Seaway holds the edge on rates. In 1959 it cost less to ship grain from the Lakehead to Europe by way of the Mississippi and Gulf gateway than the Lake-rail-ocean route from Duluth-Superior through Buffalo and North Atlantic ports. But it cost less than either of these routes to ship the grain from Duluth-Superior via the Great Lakes-St. Lawrence Seaway. Savings via the Lake-Seaway route ranged from 6 to 14 cents a bushel on heavy grain such as wheat, corn, or soybeans, depending upon alternative ports of exit.

In 1959, the year the new Seaway opened for business, nearly a billion bushels of United States grain were inspected for export at all ports of the country. The Gulf ports handled 52½ per cent of the total grain exports, the same percentage as in 1958. Grain shipments declined 5 per cent through Atlantic ports, and 3 per cent through North Pacific ports. Ports on the Great Lakes increased their share from 4 per cent to 14 per cent. Thus it appears that barge transportation of grain to the Gulf for export offers the greatest competition to the

## ST. LAWRENCE—GREAT LAKES WATERWAY




Seaway route and that the Atlantic ports are hit hardest. Philadelphia, however, as previously mentioned, came off reasonably well.

Practically all of the Canadian grain that goes to market over the Great Lakes originates at the lakehead ports of Port Arthur and Ft. William. The 1959 shipments fell short of the 1958 shipments by about 11 per cent. In 1959 the amount that moved via the Seaway directly to markets overseas, though 27 times the 1958 pre-Seaway tonnage, was only 6 per cent of the Canadian grain movement down the Lakes. Most of the Lake-borne grain went to eastern Canadian ports west of Montreal for both domestic consumption and transfer to lower St. Lawrence ports.

### GROWTH WITHOUT GLAMOUR

At mid-season of the second year of operation there is some doubt whether the Seaway will attain the predicted goal of 29 million tons of cargo. A 40 per cent increase in traffic over the first year seems unlikely with the steel industry in the United States in the doldrums. Unless there should be a tremendous upsurge in grain transportation, the Seaway faces another year of disappointment; not a decline, but too little incline.

Another dark cloud over the Seaway is the recent cut in rail rates. Major Eastern railroads, just a few months ago, reduced rates as much as 20 per cent on steel and chinaware, along with substantial reductions in rates on paper, paper products, and farm machinery moving between Chicago and New York. The rails have not given up.

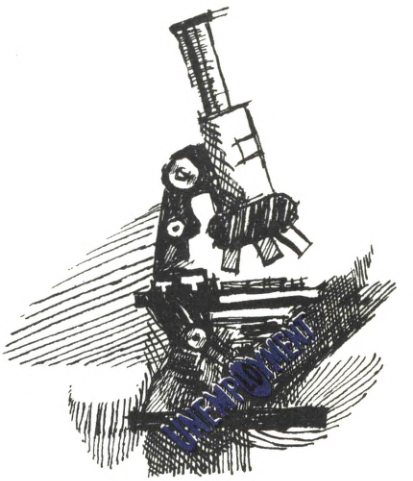
The Seaway, now 27 feet deep, is deep in the groove of competition—competition with the railroads and barges and motor trucks, competition in rates, routes, and services. The glamour

days are over. From now on it is ton for ton, rate for rate, route for route, and service for service.

The new waterway is still unfinished—probably never will be finished completely, for it is committed to a continuous program of improvement. New safety devices are being installed, the Welland bottleneck has been eased, upper Lake channels and harbors are being deepened, new grain elevators are going up, and more efficient cargo-handling equipment is being installed. And if warranted by future growth in tonnage, the locks can be expanded to accommodate two-way traffic. Difficult, though not insuperable, is the ice problem which limits use of the Seaway at present to eight months in the year.

It may take more than a decade to achieve the most enthusiastic dreams of Seaway traffic, but in time there may very well be enough traffic for the Seaway as well as for its competitors. Meanwhile, the Seaway's silent partner produces 5½ billion kilowatt hours of electricity annually.

# UNEMPLOYMENT IN A GROWING ECONOMY




## *The Third District Since 1950*

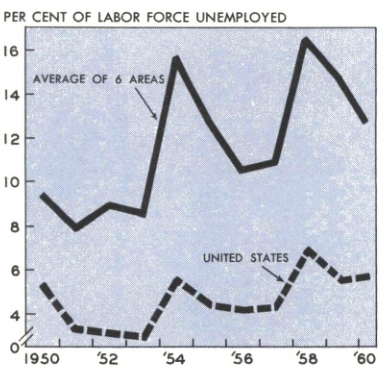
Growth is in the news today. There are many who argue that other economies now are growing more rapidly than ours, and that ours should grow faster. Unemployment especially causes concern, for unemployment means lost production, while economic growth requires continually increasing output.

Certainly, in a perfect world, unemployment never would accompany maximum growth. But growth requires change, change forces adjustments, and we live in the real world, where adjustments to change are slow and reluctant. The inescapable facts are that the new techniques, the new kinds of plants, and the new skills by means of which the economy grows displace other skills and plants and processes. But the old plants do not just disappear, nor do the people trained to operate them. The plants are

### CHART 1

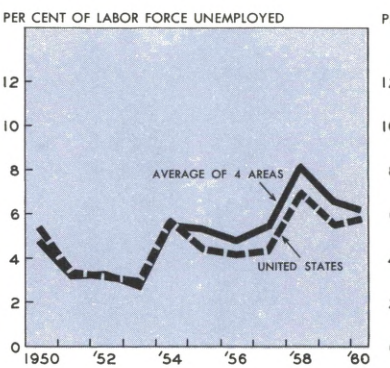
THIRD DISTRICT UNEMPLOYMENT SINCE 1950

*Altoona, Atlantic City, Johnstown, Pottsville, Scranton, Wilkes-Barre—Hazleton*



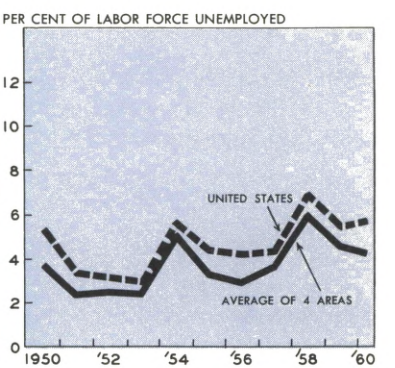

### CHART 2

*Philadelphia, Reading, Trenton, York*




### CHART 3

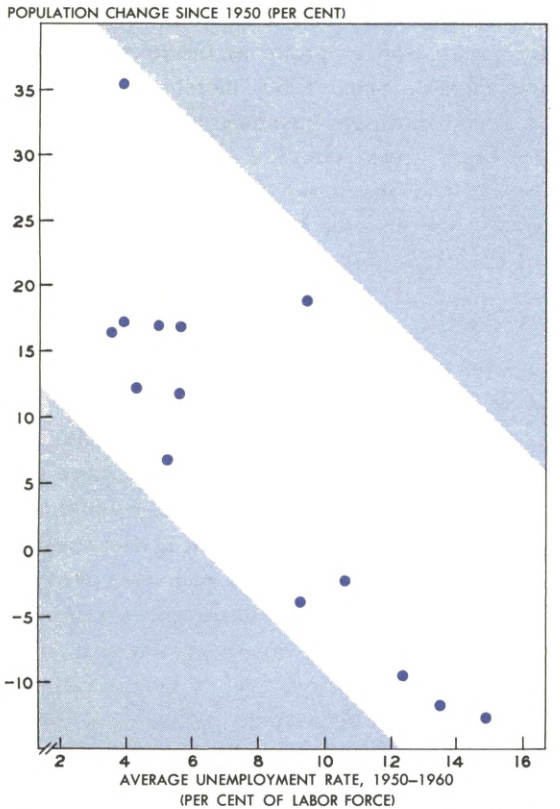
*Harrisburg, Lancaster, Lehigh Valley, Wilmington*



## CHART 4

### POPULATION CHANGES AND UNEMPLOYMENT

*Low-unemployment areas have gained and high-unemployment areas have lost population. There is a regular progression—the lower the unemployment rate, the greater the population gain.*




there, empty; the people are there, unemployed.

People do not move quickly into new occupations or to new places. It may be perfectly obvious to the detached observer that work opportunities are better in one city than another, but it is not so obvious to a family which has lived in a place for several generations. Nor are the advantages of a new trade very attractive to one who has worked at one now obsolescent. Consequently, when an industry declines, pockets of unemployment appear both in the industry as a whole and in the locations where it was dominant. Such local concentrations of unemployment sometimes seem so everlastingly persistent that it is difficult to see that adjustments do occur, that people and resources do respond, albeit slowly and imperfectly, to economic change.

In the Third Federal Reserve District, just such a shifting of resources has been going on for many years. Our purpose here is to review how it worked out during the decade after 1950.

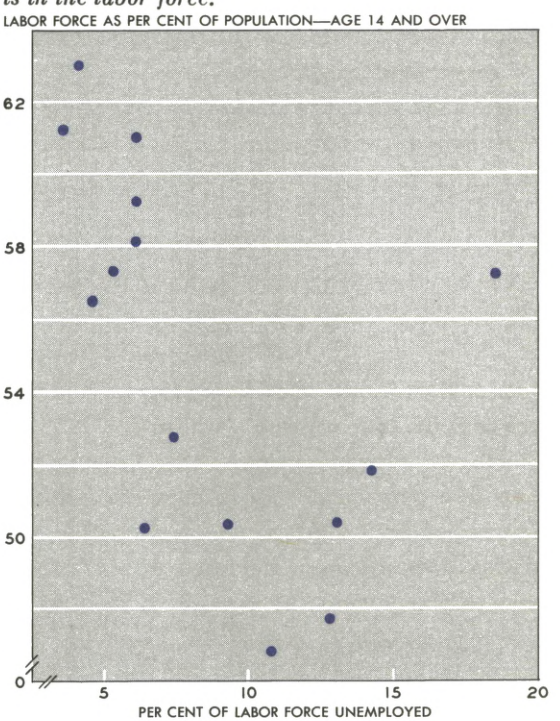
### Third District unemployment rates since 1950

Unemployment in the United States was relatively low at the outset of the nineteen fifties, when the labor force was under considerable

## CHART 5

### LABOR FORCE PARTICIPATION AND UNEMPLOYMENT, 1960

*In low-unemployment areas, more of the population is in the labor force.*



pressure. Since then, it has drifted upward. Also, there were fluctuations associated with alternating periods of greater or lesser business activity. Such changes from year to year in the Third District have not varied greatly from those in the nation. On the other hand, the level of unemployment—the per cent of labor force unemployed—usually seemed higher here than in the country as a whole.

Averages can be misleading, however. A look at the important labor market areas in the district reveals distinct groups. One group comprises those regions which had unemployment rates so high that they usually were and still are classified as areas of substantial labor surplus. Unemployment in these labor markets (shown on Chart 1) was much greater than in the nation as a whole. These places account for less than 16 per cent of population in the district's regularly reporting labor market areas, and for only about 13 per cent of its total population.

In the rest of the district (Charts 2 and 3) unemployment rates either approximated the U.S. experience (Chart 2) or were lower (Chart 3). The eight reporting areas shown on these two charts have almost 83 per cent of the population in regularly reporting labor markets, and about 70 per cent of the district's total population.[1]

## Population in the district seeks areas with low unemployment

On Chart 4 each point represents a labor market area. The position of the point on the graph is determined by two things: (1) How fast its population grew between 1950 and 1960; (2) its unemployment rate. For example, a place which grew rapidly but had high unemployment would plot at the upper right of the graph. One which had little unemployment but grew slowly would appear as a point at the lower left.

The interesting thing about this graph is that such points aren't there. Instead, the points on the graph tend to group at the upper left and lower right. Since 1950, therefore, population in areas with high unemployment has tended to decrease; areas with low unemployment have grown, and the lower the unemployment, the greater the growth, on the average. Five areas actually have lost population since 1950. They are Altoona, Johnstown, Pottsville, Scranton, and Wilkes-Barre–Hazleton. Population during the nineteen fifties has been shifting out of the areas of high unemployment.

In terms of labor forces, instead of total population, this tendency has been even more pronounced. Chart 5 employs ground rules similar to the previous one, except that it compares the percentage of the people in each area who are working or seeking work to the area's unemployment rate. Places with high unemployment which also have a high percentage of their population in their labor forces would appear as points at the upper right of the graph. Again, such points are scarce. The usual situation is that in places with high unemployment the labor forces constitute a smaller percentage of the population.

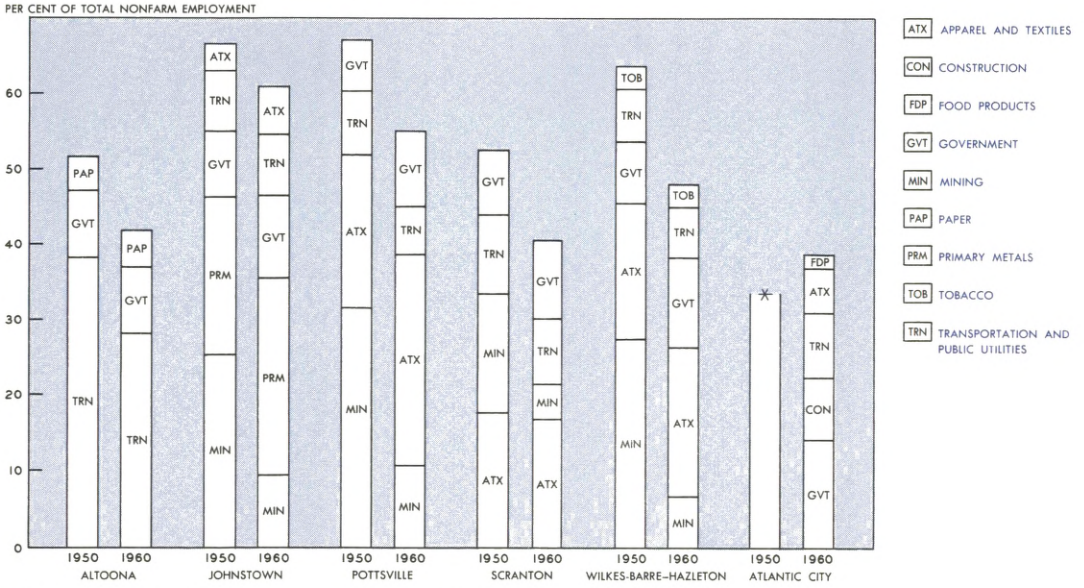
In summary, not only are the regions with high unemployment in the Third District not growing, they also have relatively smaller labor forces. Clearly, therefore, since 1950 the human resources of the district have tended to shift out of the areas of high unemployment into the more prosperous regions. This is quite in line with what might have been predicted in 1950, but it is interesting to see it confirmed by the population figures. More interesting yet is what

[1] In the Third District outside the areas represented, unemployment is not estimated frequently or in detail. These regions are predominantly rural; they contain about 16 per cent of the district's population.

# CHART 6

## IMPORTANT INDUSTRIES IN THIRD DISTRICT, 1950 AND 1960

*Areas of Substantial Labor Surplus.*




* Comparable industrial classifications not available for 1950.

has been happening *within* the district's labor forces, namely . . .

**Diversification**

Charts 6 and 7 depict how the district's labor forces have shifted since 1950 out of certain industries and into others. Chart 6 shows the situation for the areas of labor surplus. In each of these areas for which data are available, a large —in some cases an overwhelmingly dominant— industry has declined very sharply in importance. The net effect has been that these labor forces now are considerably more diversified than they were in 1950. At the very least, a declining industry which continually turned workers into the ranks of the unemployed has dropped from dominance to a relatively minor position. This bodes well for the future. In cities like Wilkes-Barre and Hazleton, mining a decade ago occupied more than one-fourth of the working population. But mines kept closing, turning people into the ranks of the unemployed. Mining in ten years has declined to occupy only one-fifteenth of the labor force. If the decline continues at the old rate, trouble from that source shortly will no longer occur, for the industry will be no more. If the rate of decline moderates, so will the contribution of the industry to the area's unemployment.

Similar situations can be identified in other places. In Scranton, mining dropped from one-sixth to one-twentieth of total employment; in Pottsville, mining declined from one-third to one-tenth; in Altoona, the transportation industry, which is a major source of unemployment there, employs considerably less of the labor force than it formerly did.

Of course, there is more to the problem. Where will the displaced workers go? We have already seen that many have left either the labor force or the area. But what industries now fill the void left by those which declined? In some cases, the newly dominant firms are in industries which have high rates of unemployment, and this tends to counterbalance the near demise of the occupation which caused the trouble in the first place. In the important textile and apparel category, there is a further complicating factor. These industries employ women predominantly, whereas the declining industries were staffed mostly by men. So wives are forced into the labor force when it is the husbands who most need employment.

Facts like these tend to some extent to counterbalance the corrective effect of the shifts of population and industry we noted previously. Replacing a declining industry with one that brings with it similar problems does not constitute a great improvement. Nevertheless, the changes within the labor forces of these areas of labor surplus since 1950 have been in the direction of less dependence on one overwhelmingly dominant industry.

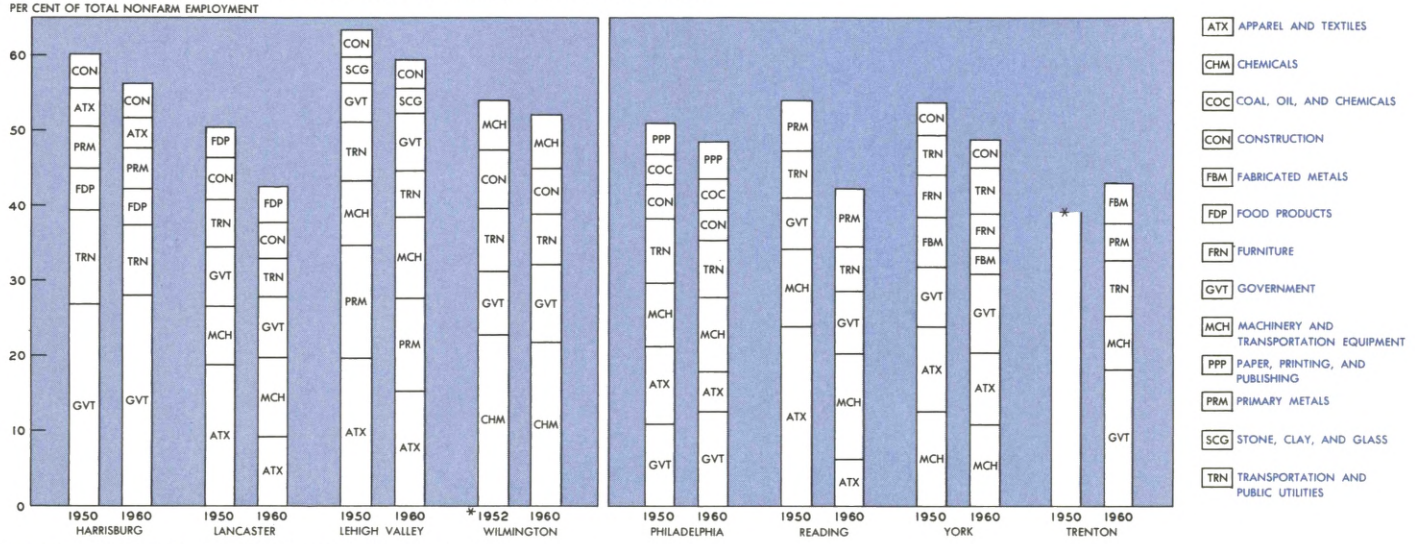
If we now consider not just the one predominant industry in each area, but rather all large industries taken as a group, Chart 6 again reveals useful information. Invariably, the group of leading industries shown represents a considerably smaller per cent of the labor force in 1960 than it did in 1950. Not only have the dominant industries become less important in these labor forces, the large industries in each area have as a group become less important.[2]

It follows that, in spite of the uncertain advantages of some of the industries which have become more important since 1950, the regions with labor surpluses are in less danger of being badly hurt because of special circumstances

[2] The rule used in organizing the information in Chart 6 was that an industry got onto the graph if it was important in *either* the 1960 or 1950 labor forces.

# CHART 7

## IMPORTANT INDUSTRIES IN THIRD DISTRICT, 1950 AND 1960




* Comparable industrial classifications not available for 1950.

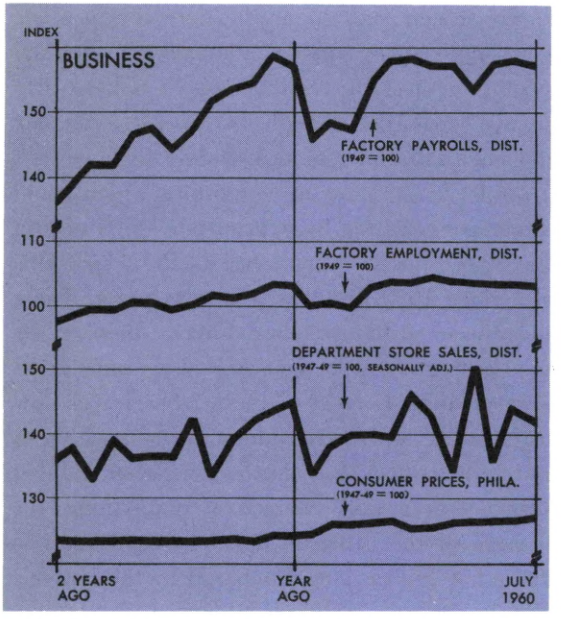
affecting just one kind of business.

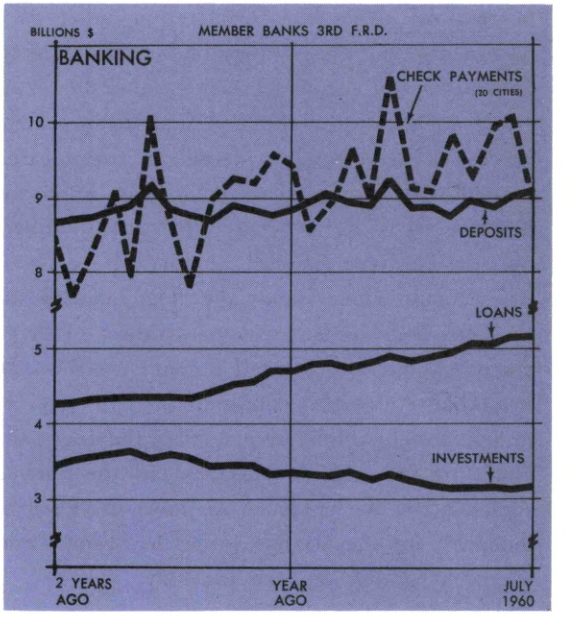
Turning now to Chart 7, we see that similar labor force shifts have occurred in other parts of the district. They have not been as marked, and this is not surprising. These labor forces already were more diversified than those of the areas we just have considered. In many cases, the industries we singled out as most important in those areas are in total slightly less dominant only because the general category of "services" has become more important. The chances are that this development also contributes to diversification, but we can't tell for sure, because the available statistical compilations are not detailed enough so that we can study the degrees of concentration within "services" in the various regions. But the evidence we have discloses no tendency for these labor forces to become concentrated unduly in one industry.

## Conclusions

We began with the premise that growth in a free society requires that resources be redirected to adjust to changes in demand and technology. In theory at least, the incentives which cause people to act should lead to appropriate reallocations when imbalances appear. Persistent unemployment is a most distressing case of unused productive capacity. Although its causes are complex and not fully understood, certainly in some part it results from changing conditions which could be compensated for by appropriate shifts of productive resources. Experience in the Third District since 1950 provides a case in point. There have been shifts in labor forces; these shifts have been greatest in the areas where imbalances were greatest. Certain of these labor forces now are smaller, and their industrial composition is more diversified than formerly. These changes have not been fully corrective. If anything, the average of the district's unemployment rates is somewhat higher now compared to the nation's than it was ten years ago. Nevertheless, compensatory adjustments did occur; they were in the right direction, and they were stronger where maladjustments were greatest.

# FOR THE RECORD...




**SUMMARY**

| | Third Federal Reserve District | | | United States | | |
|---|---|---|---|---|---|---|
| | Per cent change | | | Per cent change | | |
| | July 1960 from | | 7 mos. 1960 from year ago | July 1960 from | | 7 mos. 1960 from year ago |
| | mo. ago | year ago | | mo. ago | year ago | |
| **OUTPUT** | | | | | | |
| Manufacturing production. | — 1 | — 3 | 0 | — 6 | + 1 | + 4 |
| Construction contracts ... | + 1 | — 1 | — 7 | + 4 | — 2 | — 6 |
| Coal mining ..... | —19 | + 9 | — 4 | —21 | +15 | + 1 |
| **EMPLOYMENT AND INCOME** | | | | | | |
| Factory employment (Total) ..... | — 1 | 0 | + 2 | — 1 | — 1 | + 2 |
| Factory wage income..... | 0 | 0 | + 3 | .... | .... | .... |
| **TRADE*** | | | | | | |
| Department store sales ... | — 1 | — 2 | + 2 | + 3 | + 1 | + 1 |
| Department store stocks .. | — 1 | + 1 | .... | + 1 | + 6 | .... |
| **BANKING** (All member banks) | | | | | | |
| Deposits ..... | + 1 | + 3 | + 1 | + 1 | 0 | 0 |
| Loans ..... | + 1 | +10 | +11 | — 1 | + 7 | +11 |
| Investments ..... | + 1 | — 6 | — 8 | + 4 | — 7 | —12 |
| U.S. Govt. securities..... | + 1 | — 7 | —10 | + 5 | — 8 | —14 |
| Other ..... | 0 | — 2 | — 2 | + 1 | — 4 | — 4 |
| Check payments ..... | —10† | — 5† | + 5† | —11 | — 5 | + 5 |
| **PRICES** | | | | | | |
| Wholesale ..... | .... | .... | .... | 0 | 0 | 0 |
| Consumer ..... | 0‡ | + 2‡ | + 2‡ | 0 | + 1 | + 2 |

*Adjusted for seasonal variation. †20 Cities ‡Philadelphia

**LOCAL CHANGES**

| | Factory* | | | | Department Store† | | | | Check Payments | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Employment | | Payrolls | | Sales | | Stocks | | | |
| | Per cent change July 1960 from | | Per cent change July 1960 from | | Per cent change July 1960 from | | Per cent change July 1960 from | | Per cent change July 1960 from | |
| | mo. ago | year ago | mo. ago | year ago | mo. ago | year ago | mo. ago | year ago | mo. ago | year ago |
| Lehigh Valley | — 1 | + 1 | 0 | + 2 | .... | .... | .... | .... | —12 | — 5 |
| Harrisburg .. | + 2 | — 1 | + 1 | 0 | .... | .... | .... | .... | — 7 | — 6 |
| Lancaster ... | — 1 | — 2 | — 2 | — 2 | +19 | + 6 | + 1 | + 3 | —10 | — 9 |
| Philadelphia | — 1 | 0 | 0 | + 2 | — 4 | — 7 | + 1 | 0 | —12 | — 6 |
| Reading .... | — 2 | — 1 | 0 | — 2 | 0 | + 1 | +10 | + 2 | —11 | — 5 |
| Scranton .... | — 2 | — 1 | — 3 | + 1 | 0 | + 1 | + 1 | — 4 | —13 | + 1 |
| Trenton ..... | — 3 | 0 | — 1 | + 2 | +10 | + 6 | — 5 | + 5 | — 8 | —17 |
| Wilkes-Barre | — 1 | 0 | — 2 | + 1 | — 3 | — 5 | 0 | — 5 | —10 | — 3 |
| Wilmington . | + 1 | 0 | + 1 | + 7 | 0 | — 1 | + 1 | + 3 | — 3 | +18 |
| York ..... | — 1 | — 1 | — 2 | — 2 | + 2 | — 1 | — 3 | — 2 | —12 | — 8 |

*Not restricted to corporate limits of cities but covers areas of one or more counties.
†Adjusted for seasonal variation.