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Transportation on the Tennessee

NO ONE doubts that specialization is one of the foundations of the country's economic progress. Because of the nation's wide free-trade area, specialized production can be concentrated in those areas where the required resources are most abundant and where costs are the lowest. But it is often forgotten that this specialized production is only possible when an efficient transportation system makes the profitable exchange of the products of one region with another feasible.

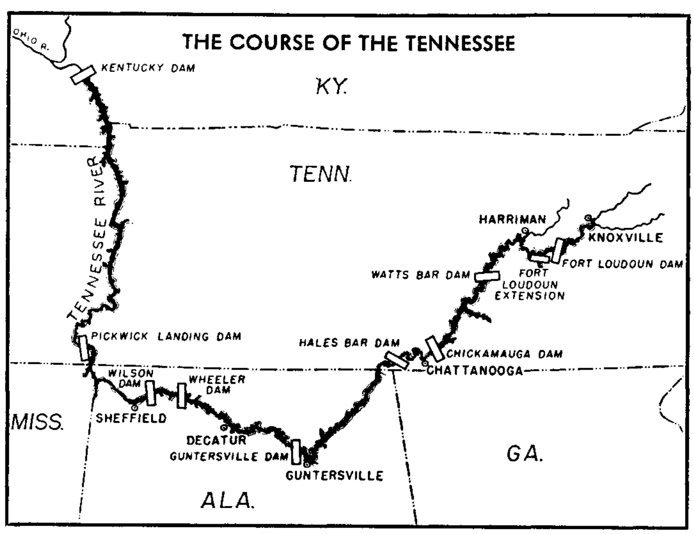
Like most other phases of American economic life, the country's transportation system has been characterized by rapid change. Many of these changes are recent enough that only a short backward look to the immediate prewar years evidences striking advances, an example of which is the advent of air transportation. But changes are not confined to recent years. The small frail ships by which the early colonists came to America were soon supplanted by the clipper ships and later, by the steamships. Pack trains surrendered to the stage coach and freight wagon as highways were developed, only to be superseded by the railroads for long hauls. Improved motive power and roadbeds make the modern railroad a much different carrier from the railroad of the mid-nineteenth century. Equally significant, but often overlooked, have been changes in inland water transportation.

Besides forwarding economic progress of the country generally, each of these transportation improvements had marked influences on the economic development of individual communities. Moreover, further changes in methods and modes of transportation and in adaptations can be expected. An example, in fact, is being portrayed in the northern part of the Sixth Federal Reserve District today. A vastly improved transportation system, if not an entirely new one, is now available in that region through the completion of the Tennessee River improvements. The region has yet to feel the full economic effects of the new system, but some of its potential influence is apparent already.

The course of the Tennessee River on a map curves like a giant bent arm into the heart of the Southeast. Beginning with the confluence of the Holston and French Broad Rivers in the valley of East Tennessee, it flows past Knoxville, southwest across the eastern part of Tennessee, and on past Chattanooga. Below Chattanooga it turns westward and then southwest into Alabama for a distance of about 60 miles. It then turns northwest to the extreme northwest corner of Alabama where it forms the boundary for the peculiar jag that is characteristic of the northwest corner of the map of Alabama. The river then turns north through Tennessee providing most of the boundary between the Sixth and Eighth Federal Reserve Districts. Continuing northward into Kentucky, it empties into the Ohio at Paducah. The Tennessee travels 652 miles and drains a total area of 40,875 square miles.

The territory of the Tennessee Valley was originally heavily wooded and the eastern half is mountainous and rugged. It was natural, therefore, that in the early history of the region, water transportation provided the best way to penetrate the country. The route was difficult, not only because of unknown hazards of the river, but also because of hostile Indian tribes and disputing foreign governments. The Louisiana Purchase settled the question of the free use of the Mississippi in 1803, however, and difficulties with the Indians were overcome by treaties and expeditions. As a result, the settlers going westward used the river increasingly and in the early nineteenth century Knoxville, at the headwaters of the Tennessee, became an important trans-shipment point for the South and West.

As the region became more fully settled, and particularly as cotton became the predominant crop in eastern Tennessee and northern Alabama, trade grew up along the river between the cotton-raising slave communities and the general farming communities. Such settlements as Kingsport, the head of



The 650-mile length of the river from Knoxville, Tennessee, to Paducah, Kentucky, is now navigable at any time of the year by vessels drawing up to nine feet.

flatboat and keelboat navigation on the Holston; Newport on the Pigeon; Clinton on the Clinch; and Chattanooga on the Tennessee were typical. In what is now Alabama, two settlements became important trading centers on the lower Tennessee; Decatur, which is on the south shore of the river, and Huntsville which is 11 miles inland and which was connected with the river by a canal.

Before the introduction of, and even during the height of, steamboat transportation, flatboats for downstream and hand-propelled keelboats for upstream traffic were used for freight hauling. Steamboats, however, emphasized the imperfections of the stream as a transportation artery. Natural obstacles abounded in the form of reefs, sand bars, snags, and shoals over which steamboats could not pass except at periods of high water. On the lower river were the Big Bend Shoals and Colbert Shoals. Muscle Shoals, the greatest obstacle, was only 258 miles from the mouth. Further up the stream, the relatively steep slopes of the river created swift currents that also made navigation difficult.

The advantages of water transportation over land transportation were so great, however, that most of the commerce of the valley moved by river. A steamboat came up the Tennessee as far as Florence, Alabama, as early as 1821, and in 1828 the first boat negotiated Muscle Shoals and reached Knoxville. A canal built around Muscle Shoals by the state of Alabama with Federal aid and opened for use in 1836 was not entirely successful. A Huntsville newspaper, however, reported in 1840 that 58 boats passed through the canal during one month. Several steamboat companies were organized and regular schedules were maintained whenever possible. Some of the boats successfully crossed the shoals. On the upper river, trade increased rapidly, but the natural obstacles of the river always prevented its full utilization. The advent of the railroads in the mid-nineteenth century naturally took much of the traffic away from the river.

After the War Between the States, the river provided a means of transportation for the cotton and other commodities which could not be shipped during the war and which the damaged railroads could not handle. This postwar revival of river trade reached its peak by 1880. Bulk products such as coal, lumber, iron ore, hay, and grain continued to be transported in sizable quantities during the early 1900's and there was also a substantial passenger traffic.

The relative decline in river transportation during the first part of this century can be explained partly, of course, by the entrance of new transportation means which were more readily adapted to certain types of freight and passenger service. In addition, the character of the unimproved river itself probably helps explain the loss in traffic.

An Improved River

Public recognition of the river's limitations led to continual agitation for improvement during the entire history of the Tennessee Valley. Some early improvements were made by the states and the Federal Government, but even by 1926 the condition of the river was such that the average haul was only 20 miles. By 1927 the hazards of Muscle Shoals had been largely eliminated by the completion of Wilson Dam and an auxiliary dam, together with the necessary canals and locks. Many of the improvements, however, had been localized and done in piecemeal fashion. In 1930 the minimum depth of the river at low water varied from one foot for the 184 miles between Knoxville and Chattanooga to nine feet in the Wilson Dam pool, just above which the minimum depth for a considerable distance was only three feet.

Because the power activities of the Tennessee Valley Authority have received most attention in the public mind, the provisions of the act creating the TVA that apply to navigation are sometimes overlooked. In Section 4 (j) of the Act, it is stated that the TVA has power to ". . . construct such dams and reservoirs in the Tennessee River and its tributaries as . . . will provide a nine-foot channel in the said river and maintain a water supply for the same from Knoxville to its mouth and will best serve to promote the navigation in the Tennessee River and its tributaries and control destructive flood waters in the Tennessee and Mississippi River drainage basins. . . ."

Each dam added during the 16 years of TVA's existence to those already built brought the nine-foot channel closer to completion. Kentucky and Pickwick Dams below Muscle Shoals; Wilson at the Shoals; Wheeler, Guntersville, Hales Bar, Chickamauga, Watts Bar, and Fort Loudoun Dams, in that order above Muscle Shoals, have created a series of long inland lakes, each connected by locks.

By 1939 the head of navigation had been shifted up river to Chattanooga with a minimum channel of six feet available at all times. The opening of the Kentucky Lock in 1945, near the mouth, provided a channel of the nine-foot project depth all the way to Knoxville. Completion of further improvements in 1947 now make the Tennessee River navigable its entire 650-mile length to Knoxville by vessels drawing nine feet at any time of the year. Not only have the hazards of the river been removed, but because of the lakes, the relative freedom from current makes the stream ideal for navigation. According to the Authority's financial statement as of June 30, 1948, its investment in navigation improvements has a book value of 138 million dollars. Flood-control improvements are valued at slightly more. These values do not include the investments allocated to the power program.

The Tennessee River system is but a part of approximately 27,300 miles of improved inland waterways in the United States that have been developed and are now commercially navigable. By its link with the Ohio River, the Tennessee is a part of the Mississippi River system, which has waterways with a nine-foot minimum depth as far north as Minneapolis. By connection with the Illinois waterway, shipments can be made to Chicago where further water transportation is available over the Great Lakes. Up the Ohio from Paducah a nine-foot channel is provided to the northeast all the way to Pittsburgh. Down the Mississippi from Cairo, Illinois, where the Ohio enters the Mississippi, lies New Orleans 870 miles away. At New Orleans the Intracoastal Waterway makes navigation possible for a distance of almost 700 miles west to Brownsville, Texas, and 430 miles east to St. Marks, Florida. The Warrior Tombigbee Waterway connects with the Intracoastal Waterway at Mobile and extends northward through Alabama for about 450 miles. Thus, any city on the Tennessee River is directly connected by a waterway having a minimum nine-foot depth with cities in at least 16 other states and by waterways of lesser depths to many more states.

Improvements of the inland waterways system by the Federal Government began when Congress took the first steps to improve the Ohio and Mississippi Rivers in 1824. Two years later it passed the first general river and harbor act. Although practically every session of Congress saw some action toward improving the inland waterways, the modern system is largely the result of a program begun with the appointment of an Inland Waterways Commission by Theodore Roosevelt in 1907.

Additional development of inland water transportation was stimulated during, and after, World War I. During that war the waterways were used to relieve transportation pressure on railroads; but they were found inadequate for modern transportation. New types of vessels were needed as well as new methods. River transportation along the Mississippi had been carried on, during the war, by an agency of the War Department. In 1924 this agency became the Inland Waterways Corporation, a Government corporation, under the direction of the War Department until 1937, and since 1939 under the direction of the Department of Commerce. This corporation was charged with the responsibility of operating a Government barge line until such time as the operation could be successfully carried on by private enterprise.

Although the Federal Barge Lines, operated by that corporation, have been important pioneers in inland waterway transportation since World War I, private carriers have also played an important role. The river-packet boat has been largely replaced by the Diesel powered towboat, which normally has a tow of several steel barges. Although the dimensions of the barges vary according to the requirements of local conditions, the most common size of 175 feet long by 26 feet wide carries up to one thousand tons. Some new barges are 195 feet long and have a normal carrying capacity of about 1,400 tons. A typical large tow consists of several of these barges, and can carry as much freight as three or four hundred loaded 50-ton railroad cars.

As a result of these improvements and developments, traffic on the Mississippi River system reached 5.9 billion ton miles in 1934, and it has increased practically every year since then. In 1946, it was over three times the 1934 traffic, or 18.4 billion ton miles. The most important product carried in 1946 was coal, which, together with petroleum, sand and gravel, logs and lumber, and grain and its products accounted for about 85 percent of the total traffic of the Mississippi River system that year.

River, Rail, and Highway

In a system of free enterprise where transportation facilities are largely in the hands of private business, it is inevitable that controversy should frequently arise over the relative merits of each type of transportation. In most businesses, competition is the chief means of securing relatively cheap and efficient services. For transportation, however, this means was found ineffective, and the American people turned to Government regulation many years ago. Decisions of the regulatory authorities may bring advantages or penalties to certain types of carriers. Because the public determines general policy in a democratic government, publicized attacks and counterattacks among the various types of carriers have been frequent. In the 1880's, for example, many complaints came from the steamboat companies on the Tennessee when the railroads were awarded mail contracts. Which carrier is best from the standpoint of the public interest depends, however, on which one can provide transportation at the lowest cost in terms of material and manpower.

Advocates of inland water transportation believe that it provides a means of more efficiently utilizing the nation's resources. Its advantages, they say, include lower rates to the shipper, particularly on bulky commodities of comparatively low unit value, because of lower operating costs. It is claimed, therefore, that inland water transportation facilitates the exchange of products which could not be profitably transported otherwise and makes many commodities available at a cheaper cost to a wider market. More economical, large-scale production is encouraged. Widened markets, lower costs, and greater competition, the advocates of inland water transportation insist, increase the nation's productivity and eventually result in lower real costs to the public.

Critics of inland water transportation do not deny that water freight rates are lower. They maintain, however, that low rates are only possible because the public bears the costs of waterway improvements and maintenance. Inland waterways, they claim, result in private benefits at public expense. Some critics contend that in order to make legitimate comparisons between the economic costs of shipping by water and those of shipping by rail, for example, charges covering the capital costs of the waterways and the cost of maintaining them should be included. Savings to the public, they believe, must be greater than these total costs in order to justify public investment in inland waterways. The controversy is not settled even when these general principles are agreed upon. Differences of opinion as to what costs should be included, how long the period of amortization should be, and what measure of use should be employed lead to different conclusions about the economic soundness of particular waterways.

American policy since 1824, when a Supreme Court decision invalidated the attempt of one state to give exclusive rights of transportation on one of its rivers, has been that waterways are public highways. In 1882 an act of Congress prohibited the collection of tolls or operating charges on ". . . any canal or other improvement of navigation belonging to the United States." As provided for in the transportation act of 1940, public policy has been centered upon creating an adequate system in which the inherent advantages of rail, highway, and water transportation will all be preserved. The inland waterways have an important role to play in the system. Many persons believe that after the public has made a capital investment of over a billion dollars in inland waterways, its interest lies in their full utilization.

Savings in transportation charges, however, do not represent all the benefits of an improved transportation system. Other benefits flow from the fuller utilization of resources that is often made possible by the investment of public funds, even in a free enterprise economy. The improved Tennessee River, many believe, provides an example of this principle.

Decatur and Guntersville

Although the effect of improved waterways upon the general public welfare is difficult to measure, it is easier to discern in individual communities. Decatur and Guntersville, Alabama, because of their location, have enjoyed the use of the improved river longer than most other ports. Moreover, because of their relatively small size, the tangible economic benefits are more apparent than in larger communities.

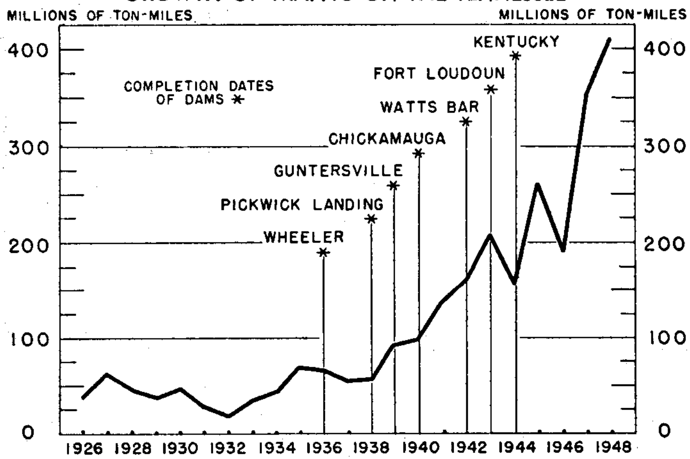
In 1820 President Monroe reserved a site for the town of Decatur about 304 miles from the mouth of the Tennessee River near Muscle Shoals; and in 1826 the Alabama General Assembly chartered the city. Transfer of freight overland around the Shoals constituted an important business during the city's early history, especially after a railroad was built, in 1834, around the Shoals. Growth was stimulated by the organization of the Decatur Land Improvement Company in 1887, but it was not until 1900 that the population exceeded 3,000 and 20 years later the census showed that only 4,750 persons lived there.

Improved river transportation certainly cannot be given as the principal reason for the growth in the city's population to over 15,000 in 1930, although certain navigation improvements had been made. The city was developing as a manufacturing center, and as a marketing center for the agricultural area surrounding it. It is served by two railroads, the Louisville and Nashville, and the Southern.

Wheeler Dam, below Decatur, was completed for navigation by 1937 and completely eliminated the remaining hazards of Muscle Shoals. The city was then on the shores of a lake. By 1938 the navigation improvements on the lower river were sufficiently advanced so that the Gulf Refining Company began to transfer petroleum products by barge to its terminal at Decatur, as well as to those at Sheffield, Alabama, 50 miles downstream; Guntersville, 54 miles up the river; and Perryville, Tennessee, below Muscle Shoals. The Texas Company built a terminal at Decatur two years later.

The possibility of shipping grain from the Middle West by barge at a saving of from three to four dollars a ton led the Alabama Flour Mills to build a mill and terminal on the river in 1941. Although the mill was originally established to take advantage of river navigation, it has in practice bought more locally produced grain than it has imported. Thus, even before the beginning of World War II, there was a noticeable development arising from the improved transportation on the river.

GROWTH OF TRAFFIC ON THE TENNESSEE



Traffic growth reflected the completion of each major improvement.

SOURCE. — Data for 1926-46 from Department of the Army, Chief of Engineers; for 1947-48, TVA estimates.

The improvements on the river demonstrated their value during the recent war. Decatur became a manufacturing center for ocean-going vessels. Because of the wartime policy of industrial dispersion, Decatur's location was especially favorable because it was connected with the ocean even though it was inland. The Ingalls Shipbuilding Company manufactured certain types of inland waterway craft before the war.

A large new capital investment was made to increase the capacity of Ingalls, and to establish a facility for the Decatur Iron and Steel Company. The total expansion of war facilities between 1940 and 1944, including that undertaken at the Decatur Goodyear Mills, was in the neighborhood of five million dollars. The Ingalls Company built cargo vessels and small boats for the Maritime Commission. These vessels were floated down the Tennessee, Ohio, and Mississippi Rivers to New Orleans. The Decatur Iron and Steel Works manufactured tugs and a number of steel shapes for use in shipbuilding, as well as other types of war equipment. All together, manufacturing plants in Morgan County, where Decatur is located, employed about 3,000 persons during 1939, but at the peak of war activity that figure was almost doubled.

Decatur has kept many of its wartime gains. After the close of the war, the Decatur Iron and Steel Company went out of the shipbuilding business although it continues to fabricate steel. The Ingalls Company, however, added the Government war-created facilities to its own and is now concentrating operations in manufacturing inland waterway craft. In 1947 total manufacturing employment in the county was over one thousand more than it was in 1939 and about two-thirds of what it was during the peak war period.

The high postwar employment is probably explained by the establishment of other industries in the area since the war. In 1947 the Indiana Grain Company, Incorporated built a new grain terminal. Perhaps the availability of grain and feed accounts for the growing chicken-raising industry and for the establishment of processing plants in Decatur. The chicken industry, in turn, led to commercial hatcheries and to a new feed mill built by the Tennessee Valley Cooperatives, Incorporated. The Alabama Flour Mills also added to its plant after the war.

How much of this activity can be traced to the initial impetus given by the river improvements cannot, of course, be exactly determined. It is interesting, however, that for 1947 the population of Decatur was locally estimated at 24,000. Business and personal bank deposits at the end of that year for Morgan County amounted to 17.7 million dollars, an increase of 250 percent since the end of 1941. For the entire state of Alabama the increase was 190 percent.

Guntersville, in Marshall County, Alabama, 358 miles from the mouth of the Tennessee, is the port farthest south on the Tennessee River. The river also played the leading role in the early history of this city which grew out of the location in 1813 of Fort Deposit, eight miles from the present site of Guntersville. Even in those early days, the city was an important trading point on the Tennessee. Since 1893 the river has been used for the 22 miles between Guntersville and Hobbs Island by the Nashville, Chattanooga, and St. Louis Railway whose car ferries transport loaded freight cars between the south and north shores of the Tennessee. By 1920, however, the city's population was only a little over two thousand and most of the 33,000 persons in the entire county were living on farms. There was some manufacturing in the county but the total manufacturing employees numbered only 753.

When Guntersville Dam was finished in 1939, the city found itself located on a large inland lake connected to a waterway system having a channel with a minimum depth of 6½ feet, but which was later deepened to nine feet. Even before the completion of the dam, however, river improvements below Guntersville had made possible river transportation that was not feasible with the old three-foot channel. In May 1939 the city became a distribution point for petroleum products which the Gulf Refining Company brought in by barge to its terminal. The Texas Company later established a similar terminal.

A local farmer, Oliver J. Walls, recognized that adequate handling facilities were required before advantage could be taken of the opportunities for shipping grain by river. After he had constructed a grain elevator and terminal in 1940, successful shipments of grain from the Midwest were begun and local distribution was undertaken. He sold the terminal in 1944 to the Cargill Company of Minneapolis. About the same time, the Norris Grain Company built a terminal, which was doubled in capacity in 1946.

Grain comes by water to these terminals from great distances and at a considerable saving in costs, such as the 1,250-mile haul from Minneapolis at an estimated saving of $3.41 a ton in 1947. These terminals serve not only the local areas but interior points as well. For example, total savings were estimated in 1947 at $5.35 a ton on grain shipped from Minneapolis to Gadsden with shipment made by water to Guntersville and by rail from Guntersville to Gadsden. Similar savings to Atlanta, Georgia, were estimated at $3.45 and to Newnan, Georgia, at $3.65.

The incoming grain movement led to the establishment of a feed mill in 1945 which became a part of the McMillan Feed Mills of Fort Wayne, Indiana. Besides manufacturing nationally advertised formula feeds, the company has encouraged farmers in the area to raise broilers. Shipping grain, however, is tending to become a two-way activity. Grain raised in at least 50 counties in Alabama and Tennessee is now brought into a local market by truck. Also, in 1947, two barge loads of Marshall County white corn were shipped by water from Guntersville to the Chicago area.

Shipments of steel railroad car sills were received for the first time at Guntersville in 1948. The shipments originated at Pittsburgh, came down the Ohio, and up the Tennessee to Guntersville. From Guntersville they were taken overland to Bessemer, Alabama, to be used by the Pullman Company.

In 1940 the Commercial Barge Lines began the transportation of automobiles, chiefly from Evansville, Indiana, and Cincinnati, Ohio, on the Ohio River to Guntersville. Standard equipment was used at first and the cars were loaded and unloaded by use of cranes. By 1942 approximately five thousand vehicles had been transported. From Guntersville, the cars were taken to points all over the Southeast.

During the war years the use of the river for this type of transportation increased. Approximately 20,000 jeeps, trucks, weapon carriers, and other military vehicles came from midwestern points up the Tennessee to Guntersville and to other river points. After the end of the war, an improved service was inaugurated. The Commercial Barge Lines recently put into service new articulated vessels with specially designed hulls and capable of speeds up to 17 miles an hour. As many as 600 cars may be carried on one barge and by the use of floating docks, all four decks of the tow can be loaded or unloaded within four hours. The retail value of such a load is approximately a million dollars.

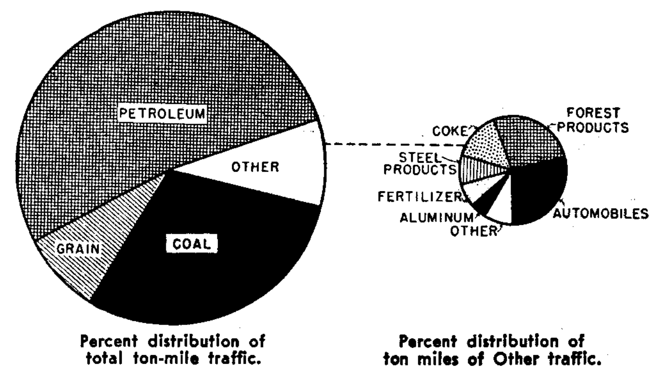
The influence of these changes upon the economic life of the community is readily measurable. In 1930 the population of Guntersville was 2,800; by 1948, according to local estimates, it had more than doubled. Throughout Marshall County, manufacturing employment had increased from 1,300 in 1939 to 1,559 in 1946. Bank deposits in the county rose 277 percent from 1941 to 1947.

Up the River

Because improvements in the upper river came later and because the communities on the upper river were larger, the economic impacts upon the ports above Decatur and Guntersville are at present less striking. Nevertheless, as soon as the river improvements were completed, transportation on the river increased. For 1945 it was reported that only 40,000 tons of freight, excluding sand and gravel, were handled through Chattanooga and only 7,500 through Knoxville. Official data for later years will not be available for some time, but it is estimated that in 1948 Chattanooga handled about 150,000 tons and Knoxville, over 250,000.

Completion of improvements on the upper river can be dated approximately by the establishment of petroleum terminals. In 1941 the Gulf Refining Company built its terminal at Chattanooga, and after river improvements had made transportation further up the river feasible, it built another terminal at Knoxville in 1947. The Texas Company, in addition to its terminals at Decatur and Guntersville, built a terminal at Chattanooga in 1940 and one at Knoxville in 1946. The latest company to enter the field is the Pure Oil Company, which received its first shipment by barge from Texas in June 1948. All together, on the basis of the first six-months experience of the year, about 400,000 tons of petroleum products were handled on the river in 1948, a transportation job equivalent to over 200 million ton miles.

DISTRIBUTION OF TRAFFIC BY COMMODITIES



Petroleum products, coal, and grain accounted for 91 percent of the total estimated ton-mile traffic on the Tennessee in 1947. Other products, however, were also shipped in considerable quantities.

This movement of petroleum on the river offers an example of integration in the use of water, rail, pipe line, and truck transportation. One oil company, for example, which is served by a pipe line in Chattanooga uses barges to transport its products from there to Knoxville, 170 miles up the river. At Knoxville the products are distributed further by truck and rail. Other companies serve the Tennessee River ports entirely by barge, but the petroleum is frequently brought from various oil fields to the point of embarkation by pipe lines or by rail. In recent years petroleum products have been shipped on the Tennessee from as far west as Port Arthur, Texas; from Helena, Arkansas; Mt. Vernon, Indiana; Lockport and Hartford, Illinois; New Orleans, Norco, and Baton Rouge, Louisiana; Cincinnati, Ohio; Belle, West Virginia; and Louisville, Kentucky.

Besides handling bulk petroleum shipments in tank barges, some of the companies have recently started to handle so-called package freight. At least two of the 13 petroleum terminals on the Tennessee are equipped for handling this type of freight. Cardboard cartons containing oil in cans and oil in drums are being transported in increasing quantities. Modern developments in handling materials are admirably adapted to, and promise to reduce further the cost of, water transportation.

Over 360,000 tons of coal were carried on the Tennessee River during 1947, whereas the total handled during 1948 probably reached 500,000 tons. Some of this coal comes from a privately owned terminal at South Pittsburg, Tennessee, near Chattanooga. The TVA has built a public-use coal terminal at Harriman, Tennessee, which is located near the heart of the Southern Appalachian coal fields on a tributary of the Clinch River. Coal from this area is shipped to the upper Mississippi Valley region where it commands a premium for domestic use. A study made in 1944, when the first barge load of this coal was shipped, showed that a rail-barge route for shipping coal by the Tennessee River to the Midwest effected savings ranging up to two dollars a ton.

Other ports on the Tennessee, in addition to Decatur and Guntersville, have handled grain. In 1939, the Mountain City Mill, Incorporated, of Chattanooga built a terminal to which it brought grain from the Midwest by its own barges. At Knoxville, the J. Allen Smith Company and the Security Mills have received grain by river transportation. In 1947, a total of 78,000 tons of grain were shipped on the Tennessee, the equivalent of 29 million ton miles. Almost the same amount was shipped in 1948, if traffic continued at the same rate in the last half of the year as it was in the first half.

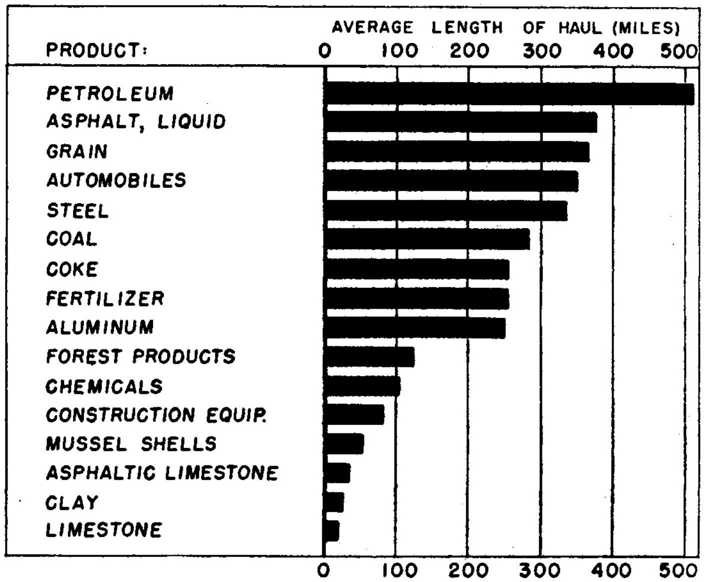
In 1946 it was estimated that manufactured iron and steel from Illinois, Missouri, West Virginia, and Pennsylvania could be shipped by the Tennessee to points in the Southeast at savings averaging about $2.45 a ton. Pig iron could be shipped from the South to midwestern river ports at savings averaging over $1.50 a ton. Cast-iron pipe, whose manufacture in the Sixth District constitutes almost one-half of total United States production, could be shipped to points on the Mississippi, Illinois, and Ohio Rivers at savings averaging $1.37 a ton. The river has consequently been increasingly used for such shipments with the total tonnage handled in 1947 estimated at 7,800 and approximately the same in 1948.

The Small Shipper

So far on the Tennessee River, it is the shippers transporting coal, petroleum, and grain, for the most part by their own facilities, that have accounted for all but less than 10 percent of the total ton miles of traffic. However, other inland waterways have been used to a much greater extent by small shippers of diversified commodities. Also, a survey made by the TVA in 1940 indicated that coal, petroleum, and grain shipments were expected to amount to less than 50 percent of the prospective commerce. Among the wide variety of commodities which businessmen expected to ship were such diverse items as whiskey, baking powder, matches, syrup, bicycles, road-building equipment, stoves, and refrigerators, as well as the heavy bulky commodities. Many of them, however, expected to ship only in comparatively small quantities. Were this type of traffic developed, the benefits of the improved Tennessee would not be confined to large shippers as at present. Before these benefits can be spread, at least three obstacles to greater use of the Tennessee must be overcome: lack of adequate public-use terminals, absence of frequent and regular common carrier barge-line service for less-than-barge-load shipments, and the nonexistence of joint-barge-truck and joint-barge-rail rates.

Adequate public-use terminals, whether privately or publicly owned, are essential for developing diversified traffic. At a well-run terminal, the small shipper's freight is handled by the terminal upon the payment of specified tariff charges. He is also able, in some cases, to take advantage of forwarding and limited storage services. Some terminals, of course, have been built on the Tennessee. At Sheffield, Alabama, for instance, there is a privately operated terminal owned by the city. The city of Chattanooga owns and operates its Broad Street wharf which, however, has no cargo handling facilities. The TVA has constructed and operates for public use, terminals at Chattanooga, Decatur, Guntersville, and Knoxville, as well as a coal terminal at Harriman, Tennessee. As soon as traffic develops further and as public bodies or private agencies can assume operation of the terminals, however, the TVA expects to get out of the terminal business.

LENGTH OF TENNESSEE RIVER HAULS IN 1947



But the lack of frequent and regular barge-line service, even where public-use terminals exist, has hampered the use of the river by the small shippers. Among the various types of carriers operating on the Tennessee, none of them have a regularly scheduled service of this kind. Some shippers, such as oil and grain companies that are called private carriers, have sufficient freight to justify their owning towboats and barges. Other shippers on the Tennessee use the services of two types of "for hire" barge lines—contract carriers and common carriers. Contract carriers generally confine their operations to barge-load shipments and the matter of rates is adjusted directly with the shipper through bargaining. Common carriers, on the other hand, are required to accept shipments of any size at published rates.

The small shippers, however, have been unable to utilize the services of the common carriers except for a short period before World War II, which was the only time when a regularly scheduled service was in operation. The Commercial Barge Lines was forced to discontinue this service because of war conditions, and, since the war, a shortage of equipment has prevented resumption of any similar service. Barge and boat builders have been unable to obtain sufficient quantities of steel. Although the situation has improved since August 1948, when the Steel Industrial Advisory Committee allotted 20,000 tons of steel a month to barge builders, the shortage has not been completely overcome.

If these two services, public-use terminals and regularly scheduled common carrier services, were available, traffic from small shippers located directly on the river would undoubtedly increase. The river will not fully serve the region, however, until waterway transportation can be utilized conveniently by shippers from inland points as well.

For example, in order to make a shipment from Atlanta by way of the Tennessee to Indianapolis conveniently, an Atlanta shipper should be able to turn his freight over to an inland shipper without further arrangements being necessary. The shipment could be sent by rail or truck to Guntersville where it would be transferred to an inland waterway carrier for shipment down the Tennessee to Paducah and up the Ohio to Evansville or Louisville. At either place it might be transferred to an inland carrier for further transportation to Indianapolis. Shipping by water is neither convenient nor efficient unless the shipper can confine his dealings to the carrier at the point of origin.

Because neither joint-barge-truck rates nor joint-barge-rail rates have been established on the Tennessee, inland shippers cannot make shipments in this simple manner. Such rates exist on part of the Mississippi River system and shippers in that area can benefit from lower water transportation rates even when only part of the shipments are made by barge. Shippers save from 10 to 20 percent in freight charges for that portion of the route between barge-line ports.

In a decision made in July 1948, the Interstate Commerce Commission directed the railroads to establish through joint-barge-rail rates, lower by certain differentials than all-rail rates, on a large number of commodities moving on inland waterways other than the Tennessee. In view of this decision, similar rates applying to the Tennessee may be forthcoming.

Prospects

The history of most inland waterways shows that the end of a rapid rate of traffic growth does not come until about 15 years after improvements are completed. In the interval, facilities are expanded, capital is invested, shippers become better acquainted with the most profitable uses of water transportation, and the necessary services are developed.

Although substantial navigation improvements were completed on the lower Tennessee by 1938, the river was not open to through navigation until 1945. Traffic volume on the upper river has, therefore, just begun. Despite the limitations that have, until now, confined most of the navigation to the lower river, traffic for the entire river has increased in terms of both tons and ton miles. The 353 million ton-mile traffic for 1947 was over five times that for 1935 and nine times that of 1926; the 1948 traffic exceeded 400 million ton miles. If the estimates made in 1940 of future traffic on the Tennessee are correct, the tonnage in 1960 will amount to over seven million tons. In terms of the average length of haul for 1947, this 1960 traffic will amount to almost three-quarters of a billion ton miles.

If this development meant only a several million dollar annual saving to certain shippers, it would have important effects on the economic life of the region. The extent to which these freight savings are passed on to the general public will, of course, depend upon general competitive conditions. Many persons interested in the economic development of the area believe an appraisal of the improved river only in terms of the dollar savings to shippers is too limited. The improved river, they believe, adds another economic resource to those with which nature has endowed the region. The proper use of this resource should result in economic benefits through increased productivity, greater capital investment, more profitable employment, and higher incomes. The way the people of the region use the river will determine its ultimate economic benefits to the area.

CHARLES T. TAYLOR

Sixth District Statistics

INSTALMENT CASH LOANS

Lenders	No. of Lenders Reporting	Volume: Percent Change January 1949 from December 1948	Volume: Percent Change January 1949 from January 1948	Outstandings: Percent Change January 1949 from December 1948	Outstandings: Percent Change January 1949 from January 1948
Federal credit unions	41	— 27	+ 18	+ 3	+ 43
State credit unions	24	— 14	+ 22	— 3	+ 37
Industrial banking companies	11	— 3	— 0	— 1	+ 7
Industrial loan companies	16	— 24	— 34	— 1	+ 13
Small loan companies	54	— 28	— 20	— 1	— 10
Commercial banks	32	— 7	+ 0	— 0	+ 28

RETAIL FURNITURE STORE OPERATIONS

Item	Number of Stores Reporting	Percent Change January 1949 from Dec. 1948	Percent Change January 1949 from Jan. 1948
Total sales	97	— 50	— 21
Cash sales	87	— 52	— 25
Instalment and other credit sales	87	— 50	— 20
Accounts receivable, end of month	96	— 7	+ 23
Collections during month	96	— 3	+ 6
Inventories, end of month	70	— 4	— 8

WHOLESALE SALES AND INVENTORIES*

Item	Sales: No. of Firms Reporting	Sales: Percent Change January 1949 from Dec. 1948	Sales: Percent Change January 1949 from Jan. 1948	Inventories: No. of Firms Reporting	Inventories: Percent Change Jan. 31, 1949, from Dec. 31 1948	Inventories: Percent Change Jan. 31, 1949, from Jan. 31 1948
Automotive supplies	6	— 7	— 17	5	— 3	+ 1
Electrical group						
Wiring supplies	3	+ 8	+ 7	3	+ 4	— 1
Appliances	5	— 30	+ 1	4	+ 7	+ 18
General hardware	10	+ 8	— 1	4	— 1	+ 22
Industrial hardware	4	— 12	+ 4	3	— 3	— 0
Jewelry	4	— 46	+ 9	..	..	..
Plumbing and heating supplies	4	0	— 25	3	+ 1	+ 51
Confectionery	4	+ 3	+ 6	..	..	..
Drugs and sundries	8	+ 17	+ 3	..	..	..
Dry goods	14	+ 20	— 26	9	+ 4	— 10
Farm supplies	3	+ 3	— 30	..	..	..
Groceries						
Full lines	32	— 4	— 11	18	+ 16	— 1
Specialty lines	6	+ 24	+ 22	4	— 7	— 17
Shoes and other footwear	3	+ 34	— 11	..	..	..
Tobacco products	9	+ 3	+ 1	4	+ 7	+ 11
Miscellaneous	12	— 12	— 3	13	+ 6	— 23
Total	127	— 1	— 7	70	+ 5	— 0

* Based on U. S. Department of Commerce figures.

DEPARTMENT STORE SALES AND INVENTORIES

Place	Sales: No. of Stores Reporting	Sales: Percent Change Jan. 1949 from Dec. 1948	Sales: Percent Change Jan. 1949 from Jan. 1948	Inventories: No. of Stores Reporting	Inventories: Percent Change Jan. 31, 1949 from Dec. 31 1948	Inventories: Percent Change Jan. 31, 1949 from Jan. 31 1948
ALABAMA						
Birmingham	4	— 54	+ 13	3	+ 19	+ 10
Mobile	5	— 62	— 26	..	..	..
Montgomery	3	— 58	— 2	3	+ 24	+ 19
FLORIDA						
Jacksonville	4	— 57	— 12	3	+ 9	— 23
Miami	4	— 50	— 12	3	+ 7	+ 18
Orlando	3	— 46	— 8	..	..	..
Tampa	5	— 56	— 14	3	+ 6	+ 6
GEORGIA						
Atlanta	6	— 57	— 4	5	+ 0	+ 2
Augusta	4	— 62	— 6	3	+ 6	+ 1
Columbus	3	— 60	— 5	..	..	..
Macon	4	— 66	— 14	4	+ 3	— 10
Rome	4	— 64	— 4	..	..	..
Savannah	4	— 62	— 2	..	..	..
LOUISIANA						
Baton Rouge	4	— 59	+ 7	4	— 8	— 4
New Orleans	5	— 51	+ 3	4	+ 1	+ 9
MISSISSIPPI						
Jackson	4	— 54	+ 16	4	— 4	+ 9
Meridian	3	— 63	— 11	..	..	..
TENNESSEE						
Bristol	3	— 65	— 4	3	— 4	— 0
Chattanooga	4	— 60	— 2	3	— 9	— 12
Knoxville	4	— 57	+ 24	..	..	..
Nashville	6	— 61	+ 3	5	— 7	+ 4
OTHER CITIES*	22	— 40	— 11	22	— 6	+ 7
DISTRICT	108	— 55	— 3	72	+ 1	+ 4

* When fewer than three stores report in a given city, the sales or stocks are grouped together under "other cities."

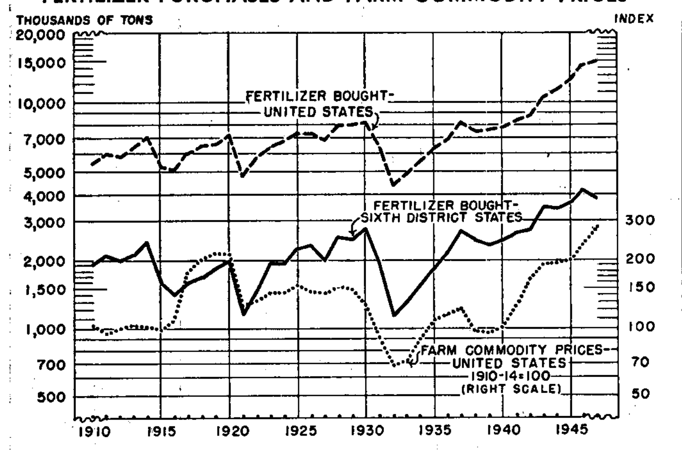
District Business Conditions

Fertilizer Requirements Are Changing

Farmers in the Sixth District states spent about 170 million dollars last year for commercial fertilizers. This expenditure amounted to approximately one-fifth of their total operating expenses, and except for hired labor, was the largest single expense item. Farm costs have increased steadily since the beginning of the war. But farmers realize that costs must be held down as much as possible in the next few years, because they are faced with acreage restrictions of their most widely grown cash crops. How they use fertilizer in this adjustment period may have an important bearing on their income prospects.

During the past decade, farmers in the Sixth District states have reduced their cropland acreage and have increased the rates of fertilization on nearly all crops. Their purchases of commercial fertilizer increased from 2.4 million tons in 1939 to 4.2 million tons in 1948. This increase in fertilizer consumption has been the most important single aid in keeping farm production up and, thereby, has enabled farmers to take advantage of rising farm product prices. Much of the increase in fertilizer usage is attributable, of course, to the incentive provided by high farm prices. A large part of the increase, however, is the result of new concepts in the use of fertilizer.

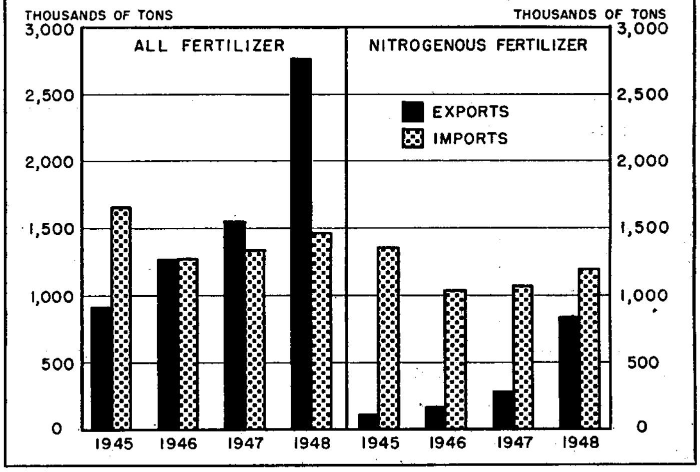
FERTILIZER PURCHASES AND FARM COMMODITY PRICES



Until the past few years, nearly all of the commercial fertilizer was applied to cash crops such as cotton and peanuts. As the new techniques of crop and pasture production become more widely adopted, however, more and more fertilizer is being used on feed crops and on pasture. This trend toward larger amounts of fertilizer per acre on all crops is part of an over-all trend toward larger applications of all production materials on each acre of land. The farmer's total production, therefore, depends more upon what he puts into each acre in the form of labor and materials than it does upon the inherent chemical composition of the soil. Most District farmers are in an excellent position to take advantage of this development in American agriculture. The District contains large areas of soil with good texture and low natural fertility. These soils have a large capacity to use fertilizers to an advantage.

As the acreage of cash crops is reduced, farmers probably will try to keep their total production up by increasing the per acre yields and by expanding their production of other crops. To do this successfully, they will require greater amounts of fertilizer than they have used in the past. In the last 30 years, changes in District fertilizer consumption have been closely associated with changes in farm prices. When farm prices fell and it became necessary for farmers to reduce costs, they bought less fertilizer. In the future, however, reductions in fertilizer usage as a means of reducing costs may prove to be false economy. The transition to farming systems that are less dependent upon cash crops cannot be accomplished without heavy mineral applications. Unless District farmers can make this transition, their incomes are almost certain to go down.

FERTILIZER EXPORTS AND IMPORTS



The immediate concern of District farmers is fertilizer supplies for the current crop year. According to tax tag sales for the past three seasons, over half of the fertilizer for the crop year is bought during the first four months of the calendar year. Although the fertilizer industry has expanded since the war, it has not been able to meet farmers' demands at current prices. Fertilizer prices have increased less since the end of the war than the prices of any other major item of farm expense. This may account for part of the apparent shortage of fertilizer. Exports of all fertilizer, particularly nitrogenous materials, have increased rapidly since the end of the war. Imports, on the other hand, have been smaller in each of the last three years than they were in 1945.

For the current crop year, the Department of Agriculture estimates that fertilizer supplies will exceed those of last season by 7.5 percent for nitrogen, 10.9 percent for potash, and 5 percent for phosphate. It warns, however, that the increase in fertilizer supplies will not be distributed uniformly over the whole country and that nitrogen, particularly, will again be scarce in the South.

The contribution of fertilizers to District agriculture this year will be determined largely by how much is available. Its contribution over a longer period, however, will depend upon whether farmers use it extensively to increase their production of pasture and feed crops. B.R.R.

Bank Lending and Interest Rates

Lending activity at Sixth District banks so far this year shows a changed trend. Total loans of all member banks declined 16 million dollars during January. Further declines were reported in February at the member banks in leading cities where practically all types of loans were lower in that month than they had been at the end of 1948. Lower commercial, industrial, and agricultural loans accounted for about half the decline, but one-third of it was because of lower consumer and all other loans.

A decline in loans has been characteristic of member bank operations during the first quarter of each year since the close of World War II. This year, however, the drop at the banks in leading cities was almost three times as great by the middle of February as it was during the comparable period of 1948. Moreover, total loans at those banks are barely above those reported at this time last year. In February last year, they were 18 percent greater than they had been in February 1947.

Banks in the leading cities of Alabama, Florida, and Georgia reported that total loans were lower in the middle of February this year than they were in mid-February last year; but those of Louisiana and Tennessee reported that loans were greater. In each of the 10 leading cities of the District, however, loans were less in mid-February than at the end of 1948. Because the loans of the banks in leading cities constitute about 40 percent of all bank loans in the District and 55 percent of all member bank loans, it is unlikely that there is a marked difference in the trend of total District member bank loans.

Evidence of slackened lending activity was apparent in the last months of 1948. The increase in total member bank loans in December amounted to only three million dollars. The slackening may account, in part, for the slightly lower average interest rate that was charged by reporting banks at Atlanta and New Orleans in December 1948. Business loans of $1,000 or more made during December and maturing in less than a year bore an average interest rate of 2.8 percent; in September, the rates averaged 2.94. The average interest rates on business loans made during the first half of September and December in these two cities are shown in the table. A similar decline was not experienced in other cities of the United States.

Size of Loan	*Average Interest Rate* *Sept.* 1948	*Dec.* 1948
Under $10,000	4.29	4.34
$10,000-$99,000	3.53	3.33
$100,000-$199,000	3.15	3.09
$200,000 and over	2.76	2.60
All sizes	2.94	2.80

Although these reporting banks loaned less to businesses in December than they had in September, their smaller loans—those of less than $10,000—were greater in the latter period. The average interest rate on these loans, which ordinarily is higher than on larger loans, advanced from 4.29 to 4.34 percent. On the other hand, the total amount of business loans which amounted to $100,000 or more declined from September to December, and the average interest rate declined from 2.76 to 2.60. There were, of course, wide variations in interest rates on loans in each size category, depending upon the degree of risk and other factors.

C.T.T.

Sixth District Indexes

DEPARTMENT STORE SALES*

Place	Adjusted** Jan. 1949	Dec. 1948	Jan. 1948	Unadjusted Jan. 1949	Dec. 1948	Jan. 1948
DISTRICT	359	405	355	287	635	284
Atlanta	382	470	381	298	668	297
Baton Rouge	468	475	419	309	727	277
Birmingham	389	413	334	303	636	261
Chattanooga	305	381	306	244	586	245
Jackson	388	409	322	287	597	238
Jacksonville	380	445	414	312	695	340
Knoxville	338	420	262	284	638	220
Macon	279	310	313	190	543	213
Miami	351	421	362	365	699	376
Montgomery	377	419	369	287	662	281
Nashville	360	484	335	288	716	268
New Orleans	363	378	340	290	575	272
Tampa	461	523	516	373	816	418

DEPARTMENT STORE STOCKS

Place	Adjusted** Jan. 1949	Dec. 1948	Jan. 1948	Unadjusted Jan. 1949	Dec. 1948	Jan. 1948
DISTRICT	360	381	345	324	320	311
Atlanta	417	450	409	367	366	359
Birmingham	344	285	314	297	249	272
Montgomery	420	355	353	374	300	314
Nashville	555	572	534	452	486	435
New Orleans	352	347	323	306	304	281

GASOLINE TAX COLLECTIONS***

Place	Adjusted** Jan. 1949	Dec. 1948	Jan. 1948	Unadjusted Jan. 1949	Dec. 1948	Jan. 1948
SIX STATES	207	194	189	207	198	189
Alabama	214	192	199	209	196	194
Florida	200	186	189	208	185	196
Georgia	180	180	169	184	179	172
Louisiana	236	220	189	234	223	187
Mississippi	209	184	191	196	188	180
Tennessee	224	204	211	213	220	201

COTTON CONSUMPTION*

Place	Jan. 1949	Dec. 1948	Jan. 1948
TOTAL	134	128	166
Alabama	141	140	173
Georgia	134	127	169
Mississippi	86	92	99
Tennessee	111	99	139

ELECTRIC POWER PRODUCTION*

	Dec. 1948	Nov. 1948	Dec. 1947
SIX STATES	366	347	315
Hydro-generated	346	261	252
Fuel-generated	392	461	397

MANUFACTURING EMPLOYMENT***

Place	Dec. 1948	Nov. 1948	Dec. 1947
SIX STATES	149	152	154
Alabama	155	158	159
Florida	146	142	143
Georgia	143	146	147
Louisiana	152	154	152
Mississippi	147	148r	163
Tennessee	151	155	157

CONSTRUCTION CONTRACTS

Place	Dec. 1948	Nov. 1948	Dec. 1947
DISTRICT	337	326	468
Residential	386	431r	451
Other	314	274r	476
Alabama	175	312	217
Florida	543	447	462
Georgia	196	225	507
Louisiana	280	249	854
Mississippi	248	126	228
Tennessee	339	399	220

CONSUMERS PRICE INDEX

Item	Jan. 1949	Dec. 1948	Jan. 1948
ALL ITEMS	174	175	174
Food	208	210	219
Clothing	203	204	201
Fuel, elec., and refrig	139	138	137
Home furnishings	195	196	190
Misc.	153	153	149
Purchasing power of dollar	.57	.57	.57

ANNUAL RATE OF TURNOVER OF DEMAND DEPOSITS

	Jan. 1949	Dec. 1948	Jan. 1948
Unadjusted	20.1	21.5	20.0
Adjusted**	19.0	19.0	18.9
Index**	77.0	77.1	76.5

CRUDE PETROLEUM PRODUCTION IN COASTAL LOUISIANA AND MISSISSIPPI*

	Jan. 1949	Dec. 1948	Jan. 1948
Unadjusted	299	302	279
Adjusted**	293	312	274

*Daily average basis
**Adjusted for seasonal variation
***1939 Monthly average=100
Other indexes, 1935-39=100

r Revised

Industry and Employment

January was the fourth consecutive month in which construction contract awards were less than they were in the corresponding month a year earlier. According to F. W. Dodge Corporation statistics, the Sixth District total for January of a little more than 60 million dollars was down 12 percent from December and slightly more than 12 percent below that of January 1948.

In view of the present high level of construction costs, however, the actual volume of construction represented by the January total was probably about 18 percent less than a year ago. The January index of the American Appraisal Company for 30 American cities indicates that construction costs were less than one-half of one percent below the August peak, but 6.4 percent above the January 1948 level. The wholesale price index of the Bureau of Labor Statistics shows a decrease of one percent since August in building material prices, and a decline of 4.5 percent in the wholesale price of lumber.

Residential construction contracts accounted for 38 percent of the District's total in January; and they were 21 percent less than they were a year ago when they accounted for 42 percent of the total. In January, 40 percent of the District's total awards and about 61 percent of the District's residential contracts were let in Florida, which percentages were larger than those in any of the other five District states.

Steel mill activity continued in January and the first half of February at slightly above rated capacity. Coal production, however, as indicated in weekly statements of the Bureau of Mines, averaged about 3 percent less than in December and 20 percent less than a year ago. The decline in Tennessee was proportionately much greater than in Alabama, although Tennessee mining employment was 11 percent greater in December than a year earlier, whereas in Alabama it was down 5 percent.

Textile mill activity was slightly higher in January than it was in December, but it was about 20 percent below the January 1948 level. District textile mills used only a few more bales of cotton in January than in December, but on a daily average basis, the increase was 4.3 percent. Tennessee mills used 12 percent more cotton; those in Georgia, 6 percent more; Alabama mills used seven-tenths of one percent more; and Mississippi mills used 7 percent less. The January increase this year is only about a fourth as large as the gains that have occurred in that month of the past two years, and the decrease of nearly 20 percent over January 1948 is about twice as large as the decrease shown in a corresponding comparison for December. Exports of cotton cloth declined in eight of the first nine months of 1948, but there was an increase in October. Mill margins declined in nine of the first 11 months of 1948; and in November they were 45 percent below the December 1947 peak.

There was a month-to-month decline in manufacturing employment in the District in December and, as in November, it was less than it had been a year earlier. The District employment index, published in round figures, had stood at 152 percent of the 1935-1939 average for three months, September, October, and November. The December index was 149, and reflects a decline of about 2 percent from November and a decrease of about 3 percent from December 1947. The index of 149 for December is the lowest since last April. Only in Florida did the manufacturing employment index show a monthly increase in December, and Florida also had the only increase over December 1947; the index for Louisiana was the same as for December 1947; and the indexes for the other four states were lower.

Citrus canning and related activities were largely responsible for the December increase in Florida manufacturing employment. In the food and kindred products industries, employment increased 9.7 percent in December over the preceding month, and canning activities increased 21 percent. Employment in the manufacture of wooden containers increased 2.2 percent; and in fabricated metal products, which includes tin cans used in canning citrus fruits and juices, employment was up more than 6 percent. Orders for ship repair were responsible for a large monthly percentage gain in the transportation equipment group in December, but employment in this group of industries was still 42 percent less than it was a year earlier. A decrease of 9.7 percent in the number of workers in tobacco manufacture partially reflects the semi-annual lay-offs by cigar factories in the Tampa area.

Alabama manufacturing employment reached the low point for the year in December. It was 1.7 percent below that of November, and was 2.6 percent less than in December 1947. There were small increases over November in the number of workers in textiles, in machinery, and in printing and publishing; but these gains were more than offset by losses of 4 percent in lumber and wood products, 11.8 percent in shipbuilding, 4.2 percent in fabricated metal products, and 6.2 percent in food. There were also decreases in chemicals and allied products, paper and paper products, and in rubber products. December employment in food industries was 6.9 percent less than a year ago, in lumber and wood products it was 8 percent less than in December 1947, and in shipbuilding establishments it was 43.2 percent less than it was a year earlier.

Seasonal contraction in the food industry was the major factor contributing to the decrease of 2.1 percent in manufacturing employment in Georgia in December. Food and kindred products employment declined 17.1 percent, and there were decreases in most of the other industry groups. In lumber and wood products, however, employment increased slightly; there was an increase of 3.3 percent in transportation equipment; and employment in leather and leather products increased 7.3 percent.

In Louisiana December increases in employment in printing and publishing, in petroleum and industrial organic chemicals, in paper and paper products, and in metals and metal products were more than offset by decreases in food industries, and in lumber and wood products. The latter decrease was attributed to reduced logging and sawmill operations because of weather conditions.

Declines in December employment in most Tennessee industries contributed to the over-all 2.2 percent loss for the month, and employment was 3.8 percent less than in December a year ago. There were, however, gains over November in tobacco manufacture, in leather, and in stone, clay, and glass plants. Compared with December 1947, there were increases of 9.8 percent in employment in chemicals, 6.4 percent in paper, 6 percent in machinery, 12.5 percent in professional and scientific instruments, and 30 percent in electrical machinery. These gains were more than offset by losses of 18.8 percent in textiles, 16.7 percent in petroleum, 11 percent in lumber, 16.8 percent in furniture, and smaller decreases in some other industries.

In most areas, employment in construction work declined but there were increases in trade, particularly in retail stores, and in Florida the hotels and service industries catering to the winter tourist trade increased their forces. In Georgia, Tennessee, and Louisiana, and possibly in other areas, the December increases in employment in trade, in government, and in some other non-manufacturing lines more than offset the decreases in manufacturing. D.E.M.

Sales, Outstanding Orders, and Inventories

In January this year, consumers throughout the District spent less at retail stores that report their sales to this bank than they spent in January 1948. Department store sales were down 3 percent from those for January 1948; furniture store sales were down 21 per cent; jewelry store sales, 10 percent; and household appliance store sales, 13 percent. On a seasonally adjusted basis, the January index of District department store sales was 11 percent below that of December 1948. During the first three weeks of February, sales of weekly reporting department stores were one percent below those of the corresponding period in 1948.

The sales experience of recent months has influenced department store inventory policies. November sales were down from those of a year ago and although December 1948 sales exceeded those of December 1947 by 3 percent, Sixth District department stores found their year-end inventories 14 percent greater than at the end of 1947.

A decline in forward commitments reflected these conditions. The value of orders outstanding at leading department stores in the District at the end of 1948 was 47 percent less than at the end of 1947. January sales reduced inventories so that they were only 6 percent greater than they were at the end of January 1948. Outstanding orders at the end of January, however, were still 28 percent below those of a year ago. As a group, the department stores received 16 percent less merchandise this January than they did in January last year.

Furniture stores, whose sales declines were evident before those of the department stores were, began to reduce their inventories earlier. At the end of October last year, inventories were 16 percent greater than on the corresponding date in 1947, and sales were down 20 percent for the same period. Inventories at the end of November had been reduced to a figure only 8 percent greater than 12 months earlier, and at the end of December inventories were smaller than they were on the corresponding date of the previous year for the first time since January 1948. January 1949 inventories were down 8 percent.

Sales cannot be made out of inventories indefinitely, of course, but during a period of readjustment in sales trends, the existence of substantial inventories may mean a greater reduction in demands by the retailers upon their suppliers than the reduction in demand by the customers upon the retailers. It is even possible that a reduction in demand of retailers may occur even when sales trends level off rather than decline. A prolonged policy of inventory reduction is inevitably reflected by declining employment and income in the industries affected. Fortunately, a number of retailers have exhibited cautious inventory policies even during the period of rapidly expanding sales and any necessary readjustments may, consequently, be minimized. Moreover, a revival in sales trends may halt inventory liquidation just as it has at other periods since the close of the war.

C.T.T.

Sixth District Statistics

CONDITION OF 28 MEMBER BANKS IN LEADING CITIES
(In Thousands of Dollars)

Item	Feb. 23 1949	Jan. 26 1949	Feb. 25 1948	Percent Change Feb. 23, 1949, from	
				Jan. 26 1949	Feb. 25 1948
Loans and investments—Total	2,289,507	2,289,226	2,341,956	+ 0	— 2
Loans—Net	841,536	851,307	833,941	— 1	+ 1
Loans—Gross	850,891	860,141	......	— 1	..
Commercial, industrial, and agricultural loans	541,196	541,903	519,569	— 0	+ 4
Loans to brokers and dealers in securities	5,044	5,202	8,695	— 3	— 42
Other loans for purchasing and carrying securities	47,983	50,833	58,684	— 6	— 18
Real estate loans	65,527	65,430	70,888	+ 0	— 8
Loans to banks	4,583	4,561	4,516	+ 0	+ 1
Other loans	186,558	192,212	171,589	— 3	+ 9
Investments—total	1,447,971	1,437,919	1,508,015	+ 1	— 4
Bills, certificates and notes	383,696	392,431	376,067	— 2	+ 2
U. S. bonds	881,231	862,752	948,629	+ 2	— 7
Other securities	183,044	182,736	183,319	+ 0	— 0
Reserve with F. R. Bank	512,692	499,560	451,650	+ 3	+ 14
Cash in vault	45,763	43,626	44,425	+ 5	+ 3
Balances with domestic banks	170,934	179,828	175,742	— 5	— 3
Demand deposits adjusted	1,764,754	1,756,625	1,760,482	+ 0	+ 0
Time deposits	526,898	531,159	546,544	— 1	— 4
U. S. Gov't deposits	49,116	31,882	26,646	+ 54	+ 84
Deposits of domestic banks	495,706	516,897	492,408	— 4	+ 1
Borrowings	5,000	......	16,500	..	— 70

DEBITS TO INDIVIDUAL BANK ACCOUNTS
(In Thousands of Dollars)

Place	No. of Banks Reporting	January 1949	December 1948	January 1948	Percent Change Jan. 1949 from	
					Dec. 1948	Jan. 1948
ALABAMA						
Anniston	3	23,840	25,243	21,411	— 6	+ 11
Birmingham	6	334,159	374,127	340,148	— 11	— 2
Dothan	2	14,633	14,939	13,812	— 2	+ 6
Gadsden	3	19,821	20,784	17,587	— 5	+ 13
Mobile	4	136,638	153,012	145,607	— 11	— 6
Montgomery	3	76,876	83,584	79,463	— 8	— 3
FLORIDA						
Jacksonville	4	270,562	293,726	277,599	— 8	— 3
Miami	7	268,963	281,618	273,534	— 4	— 2
Greater Miami*	13	390,852	397,807r	390,928	— 2	— 0
Orlando	3	54,887	57,007	54,112	— 4	+ 1
Pensacola	3	34,316	37,960	34,209	— 10	+ 0
St. Petersburg	3	62,585	59,527	58,946	+ 5	+ 6
Tampa	6	127,564	137,687	137,200	— 7	— 7
GEORGIA						
Albany	3	27,663	24,163	24,020	+ 14	+ 15
Atlanta	4	790,286	976,034	779,517	— 19	+ 1
Augusta	3	61,410	61,099	61,154	+ 0	+ 0
Brunswick	2	8,819	10,273	8,799	— 14	+ 0
Columbus	4	49,861	59,706	59,704	— 16	— 16
Elberton	2	3,742	4,344	3,887	— 14	— 4
Gainesville*	3	13,232	14,995	15,175	— 12	— 13
Griffin*	2	11,850	12,195	11,851	— 3	— 0
Macon	3	58,043	66,396	61,184	— 13	— 5
Newnan	2	9,662	9,726	9,584	— 1	+ 1
Rome*	3	20,502	24,073	21,944	— 15	— 7
Savannah	4	89,703	100,001	96,504	— 10	— 7
Valdosta	2	11,911	13,406	11,971	— 11	— 1
LOUISIANA						
Alexandria*	3	30,881	34,071	30,720	— 9	+ 1
Baton Rouge	3	109,530	112,652	85,197	— 3	+ 29
Lake Charles	3	37,430	38,910	31,707	— 4	+ 18
New Orleans	8	675,633	774,399	647,797	— 13	+ 4
MISSISSIPPI						
Hattiesburg	2	16,281	17,419	16,450	— 7	— 1
Jackson	4	165,516	133,789	152,774	+ 24	+ 8
Meridian	3	27,043	27,371	28,022	— 1	— 3
Vicksburg	2	26,388	30,498	24,227	— 13	+ 9
TENNESSEE						
Chattanooga	3	160,860	160,335	171,149	+ 0	— 6
Knoxville	4	120,900	148,442	127,521	— 19	— 5
Nashville	6	293,194	326,554	301,609	— 10	— 3
SIXTH DISTRICT 32 Cities	115	4,168,719	4,634,731	4,156,405	— 10	+ 3
UNITED STATES 333 Cities		105,204,000	122,277,000	105,193,000	— 14	+ 0

* Not included in Sixth District total

National Business Conditions

INDUSTRIAL production showed little change in January, continuing somewhat below the peak of last October and November. Employment in manufacturing showed a marked decline. The value of department store sales showed a larger decline than usual in January and the first three weeks of February. Prices of agricultural commodities decreased further but recovered part of their declines in mid-February. Prices of some industrial products were reduced further.

Industrial Production

The Board's seasonally adjusted index of industrial production was 191 percent of the 1935-39 average in January, as compared with 192 in December, 195 in November, and 193 in January 1948. Activity in durable manufacturing industries decreased slightly in January, while nondurable goods production was somewhat above the December rate. Output of minerals declined 3 percent.

Steel production rose 2 percent in January to capacity levels and was at the highest rate on record. Activity in the automobile industry also expanded, reflecting mainly increased production of trucks and of parts for new model passenger cars. Output in the steel and automobile industries has been maintained at the advanced January rate in February. Activity in machinery industries decreased about 4 percent in January, reflecting reductions in industrial equipment as well as household appliance lines. Lumber production showed a substantial decline, in part because of unfavorable weather conditions in the northwest, and activity in the furniture industry declined 6 percent. Output of most other durable goods was maintained at about the December level.

According to preliminary indications, output of nondurable goods showed a slight increase in January. Activity at cotton textile, paper, and paperboard mills was above the reduced December rate. Newsprint consumption showed less than the usual seasonal decline. Activity in the petroleum refining, chemicals, and rubber products industries, on the other hand, was reduced somewhat. Output of manufactured food products showed the usual large seasonal decline.

Crude petroleum production declined 3½ percent in January and was curtailed further in the early part of February, as stocks of crude and refined products continued to rise. Anthracite production was curtailed sharply in the latter part of January and early February, mainly because of unusually mild winter weather in the east. Output of bituminous coal and of metals was maintained in January at the reduced level of the preceding month.

Employment

Employment in nonagricultural establishments showed more than the usual large seasonal decline in January and was 250,000 less than in January 1948, reflecting mainly reduced employment in most manufacturing industries. The number of persons unemployed increased by 700,000 in January and was substantially above the level of a year ago.

Construction

Value of construction contract awards, according to reports of the F. W. Dodge Corporation, dropped sharply in January, with marked declines in most classes of construction. The number of new dwelling units started in January, as estimated by the Bureau of Labor Statistics, was 50,000 units as compared with 56,000 in December and 53,000 in January 1948.

Distribution

Value of merchandise sold at department stores, despite a large number of special sales, showed more than the usual seasonal decline in January. The Board's adjusted index was 290 percent of the 1935-39 average, as compared with 309 in December and 286 in January 1948. Sales during the first three weeks of February were 4 percent smaller than in the corresponding period last year.

Carloadings of railroad freight generally declined further in January and the early part of February and were about 10 percent below a year ago. Declines in rail freight from the levels of a year ago have resulted in part from diversion of shipments to other forms of transportation.

Commodity Prices

Following marked declines in January, prices of farm products and foods dropped further in the early part of February but in mid-February returned to the levels prevailing at the beginning of the month. Prices of some industrial commodities including scrap metals, alcohol, and rayon and petroleum products, were reduced further in February, while prices of most other industrial items continued to show little change.

Retail food prices continued to decline from mid-January to mid-February, reflecting mainly further sharp decreases in meat prices. In the latter part of February wholesale prices of meats showed some advance from the earlier low points which were one-fourth below the record levels prevailing last summer.

Bank Credit

Seasonally large Treasury tax receipts increased Treasury deposits at the Reserve banks in the latter part of January and the first half of February. This reduced deposits and reserves of commercial banks, and banks sold short-term Government securities and drew down their excess reserves. Reserve Bank holdings of Government securities increased as purchases of short-term securities exceeded further sales of bonds.

Business loans at banks in leading cities declined somewhat during the last half of January and the first half of February. Holdings of Government securities were reduced, reflecting sales of short-term securities. Banks outside New York City increased considerably their portfolios of Treasury bonds.

THE BOARD OF GOVERNORS