

FEDERAL RESERVE BANK OF ST. LOUIS

1989 ANNUAL REPORT



*The River Cities
of the
Eighth District*

Yesterday & Today

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Federal Reserve Bank
of St. Louis

MAR 16 1990

Transportation is an essential component of a region's prosperity. Nearly all forms of human endeavor, especially those involving economic transactions, use transportation services. Transportation eases communication and links urban population centers with rural communities. It encourages manufacturing by permitting firms to locate and produce in regions where they can minimize their production costs. What's more, it allows firms to specialize, producing final goods for sale or intermediate goods that can be finished elsewhere.

An area with a comparative advantage in transportation services will attract industries that are highly dependent on trade. In addition, a well-developed transportation infrastructure will invite firms to specialize in distribution services. Although St. Louis, Memphis, Louisville and Little Rock developed their own diverse economic, social and political cultures, they share a common thread that weaves the past to the present: an inherent advantage in providing transportation services.

The Federal Reserve Bank of St. Louis, one of 12 regional Reserve Banks in the United States, serves the Eighth Federal Reserve District. The Eighth District comprises the state of Arkansas and parts of Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee. In addition to the head office in St. Louis, there are three branch offices located in Little Rock, Louisville and Memphis.

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On the cover: The confluence of the Ohio and Mississippi rivers.

Inside covers: St. Louis riverfront, circa 1875

President's Message

T

he emergence of a city is rarely a happenstance. It is no accident that the four major cities of the Eighth Federal Reserve District—St. Louis, Memphis, Louisville, and Little Rock—owe their existence and much of their development to the rivers which these cities adjoin. Local histories are full of colorful tales of the harnessing of these Midwestern rivers, as well as the changing role they played in the region's economic health.

It would be difficult to overstate the historical importance of the Mississippi, Ohio and Arkansas rivers to the cities of this District. The men and women who settled the American frontier did so by successfully navigating the waterways that joined

east and west. Initially settled as trading posts for fur trappers and others, these growing river cities provided transportation and communication links for the young nation as the population spread westward. The river provided the least expensive and, in the early years, the only mode of transportation for people and goods. This cheap and accessible transportation spurred the industrialization of the Midwest, as merchants began to process and manufacture goods from the primary products that flowed through the cities' ports.

Over the years, the rivers have faced fierce competition from railways, highways and airlines for a share of transportation services and have probably lost more battles than they have won. Yet river transportation today is still vital to many industries and is the primary carrier of crude oil and petroleum products, coal, grains, chemicals, lumber and many bulky manufactured goods. The role of the rivers in particular and transportation in general in shaping the District economies has varied from city to city, and today both the relative importance and composition of transportation services serve to differentiate these economies from one another.

I want to note two important additions to our official staff at the Bank in 1989: Dennis W. Blase, who was promoted to vice president in our Banking Supervision and Regulation Division, and Michael D. Renfro, who joined the Bank as general auditor.

In addition, I would like to express my personal gratitude to Robert L. Virgil for his seven years of thoughtful leadership on the board of directors, two of them as chairman, and to two other retiring directors who have served us so capably: David W. Kemper II, St. Louis; and Thomas A. Alvey, Louisville. Finally, my sincere thanks go to Donald N. Brandin, who completed his service as our Federal Advisory Council Member at the end of the year.



Robert L. Virgil (left), chairman of the board, and Thomas C. Melzer, president and chief executive officer.

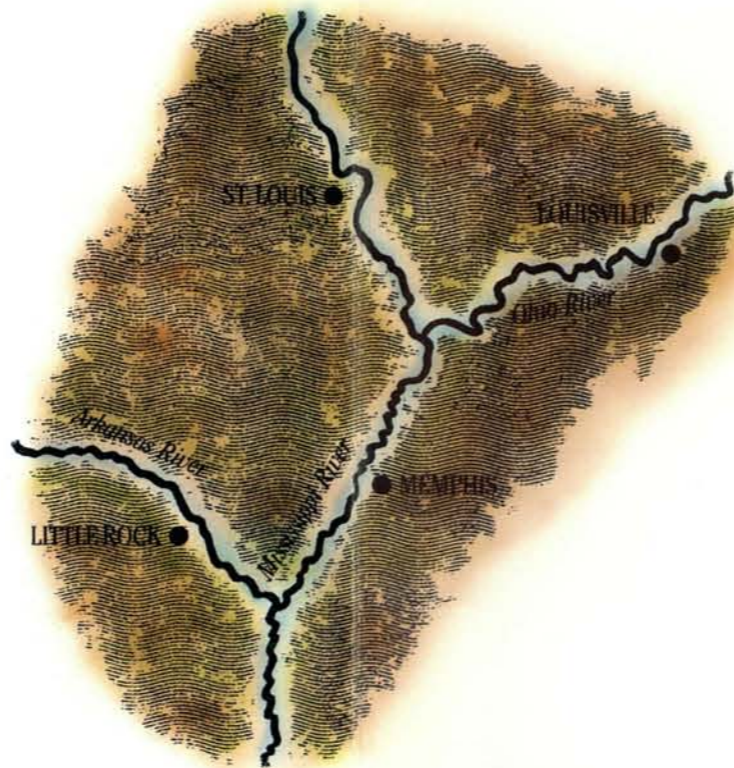
Thomas C. Melzer
President and Chief Executive Officer

The Early Years

The vast network of Midwestern rivers eased the settlement of the United States west of the Appalachian Mountains and altered the pace of migration and economic development. The rivers, therefore, were catalysts to development, though they did not create the underlying motivation for expansion. The Mississippi Basin, stretching from the headwaters of the Mississippi River in Minnesota to the Gulf of Mexico and from the Allegheny to the Rocky Mountains, encompasses some 1.2 million square miles, second in size only to the Amazon Basin. The discovery of the valley's rich, fertile farmland and its abundant natural resources led to continuing struggles for control of the Mississippi and its tributaries by the British, French and Spanish. Known as Louisiana, the territory became part of the United States in 1803, when America purchased it from France for \$15 million, or approximately four cents an acre. The purchase increased the U.S. land mass by 140 percent. Permanent settlements had been established in St. Louis and Louisville before the Louisiana Purchase; Memphis and Little Rock were settled shortly thereafter, in 1819 and 1821, respectively.

In 1673, two Frenchmen, Louis Joliet and Jacques Marquette, made the first recorded journey down the Mississippi, getting as far as the mouth of the Arkansas River before turning back. Their journey prompted the Algonquian tribes residing east of the river to name the area "Missouri," meaning "people of the wooden canoes." Almost a century later, in 1764, French fur trader Pierre Laclède founded St. Louis, approximately 10 miles downstream from the confluence of the Mississippi and Missouri rivers. St. Louis effectively divided the Mississippi River into upper and lower sections, and its central location in the heart of the Mississippi Valley led to its becoming the commercial center of the Midwest through the Civil War and, some would argue, through the rest of the century.

As with the Mississippi, the Ohio River was first explored by the French, who named her "La Belle Riviere" (the beautiful river). The Ohio flows southwesterly from Pittsburgh to Cairo, Illinois, where it joins the Mississippi. It took nearly 100 years—till 1773—for the first permanent settlement to be attempted at the Falls of the Ohio, later renamed Louisville as a gesture of gratitude to King Louis XVI for French assistance during the American Revolution. Though this first settlement didn't survive, another, five years later, did. In 1778, George Rogers Clark, together with 150 volunteer soldiers and approximately 20 families, made the journey from Pennsylvania to the falls to establish a military base before beginning a campaign to defend American interests in the Northwest.



Geography played a central role in Louisville's establishment, as the American population began to move west of the Appalachians. Three miles of rapids (or falls) on the Ohio River forced passengers to disembark and cargo to be unloaded at the impass, ported around the rapids, and then reloaded onto boats waiting on the other side. This business of "portage" supported the establishment of the city and, as river traffic increased, encouraged related industries such as warehousing and boat repair to develop.

The initial settlement of Memphis was determined by military as well as geographic concerns. Memphis is located on the southernmost of four bluffs, called the Chickasaw Bluffs, one of the few areas on the lower Mississippi where safety from flooding is ensured and movement of goods and people can be monitored. Located near the confluence of the Mississippi and Wolf rivers, Memphis, like St. Louis and Louisville, was settled at a narrow point on the river, which would later ease the building of bridges. The Spanish established a fort at the bluff in 1795 in an attempt to secure a river route to St. Louis and stave off threats from hostile Indians and American explorers. The Spanish abandoned the bluff in 1797 and, over the next 22 years, there was little activity in the area. The American army established a small frontier post and a few traders settled there, but conditions were hard and residents frequently died of fever. Significant settlement in the area surrounding the bluff did not occur until the Chickasaw Indians ceded the northern portion of their lands in 1818, opening up all of western Tennessee to American settlement.

As with St. Louis and Louisville, almost a century passed between the founding and settling of Little Rock. Early explorers on the Arkansas River had noted a moss-grown rock protruding from the south bank of the river approximately 150 miles north of Arkansas Post, which had been established in 1686. This rock marked the transition from a massive alluvial plain to rough highlands. In 1722, explorer Bernard de la Harpe, on a journey from New Orleans to extend French trade with the Indians, named this landmark "Little Rock," in contrast to the "Big Rock" or huge bluff on the river's north bank. La Harpe noted one feature at the rock that was crucial to the establishment of Little Rock as a commercial center in later years: the possibility of fording the river at that point, an achievement rarely possible at points further south. In the ensuing years, a number of white settlers laid claim to the territory at Little Rock, but a permanent settlement was not negotiated until 1821.

1541
deSoto discovers the Mississippi River, giving Spain a claim to the region



1673
Marquette and Joliet descend the Mississippi, stopping at what would later become St. Louis and Memphis

1705
First recorded carriage of cargo on Mississippi River: 15,000 bear and deer hides

1722
French explorer Bernard de la Harpe discovers the "Little Rock" while exploring the Arkansas River

1773
First permanent settlement attempted at Louisville




“7

t is with rivers as it is
with people—the greatest
are not always the most
agreeable nor the best to
live with.”

Henry Van Dyke



Primitive River Transportation



Tn the early years, the dugout canoe or "pirogue" was the only practical way to transport people or goods. Transporting significant quantities of goods by pirogue, however, was difficult, and once settlements were established, local traders began building newer, larger types of boats. This second generation of river-going vessels were huge, flat-bottomed and box-like crafts, variously called "flatboats," "Kentucky flats" or "broadhorns." Because of their crude and often flimsy design, flatboats could be used only for downstream travel and were broken up into timber upon reaching their destination. In 1802, a flatboat trip from St. Louis to New Orleans took 25 to 30 days. Despite the advances made in inland travel, flatboats today are still the vessel of choice for moving many bulky goods, though they are more commonly known as barges.

Keelboats followed flatboats as the primary movers of people and goods at the start of the 19th century. Keelboats were shallow, sturdy freight boats made of heavy timber, like oak or pine, built to the same dimensions as flatboats, but with better navigability and built-in cabins for shelter. The hull or keel facilitated sailing into the wind and made two-way trade possible, as keelboats could be propelled upstream by iron-tipped poles or pulled by ropes from men on shore. The keelboat initiated the settlement of the lower Mississippi Valley, bringing many early settlers down the Ohio, Tennessee and Mississippi rivers to Arkansas.

The Steamboat Era

Despite the tremendous gains in population and commerce in the first third of the 19th century, it was Robert Fulton's invention of the steamboat that established the river as the basis for the prosperity of the four cities. Steamboats could travel faster than flatboats or keelboats and could carry more cargo as well. In addition, improvements in design allowed these crafts to ride higher in the water, which expanded their ability to move upstream in shallow water. This was especially important to Memphis, Louisville and Little Rock, where geographic impediments such as rapids frequently caused delays in trade.

1782

Captain Jacob Yoder commandeers the first flatboat down the Ohio and Mississippi rivers to New Orleans



1802

Flatboat trip from St. Louis to New Orleans takes 25-30 days

1803

The Louisiana Purchase

1811

The "New Orleans" becomes the first steamboat to travel down the Mississippi to New Orleans; New Madrid Earthquake

1812

War of 1812

The first steamboat to traverse the Ohio and Mississippi rivers was christened the "New Orleans." She left Pittsburgh for New Orleans in October 1811, arriving in Louisville in a record eight days. The rest of her journey was not so easy, as low water at the falls necessitated a three-month stopover in Louisville. She was also slowed by the New Madrid earthquake in mid-December, a tremor so severe it temporarily reversed the Mississippi River's current. The "New Orleans" completed her journey in early January and, from then on, limited service from her namesake city to Natchez. The "Zebulon M. Pike" was the first steamboat to ascend the river beyond the mouth of the Ohio, arriving in St. Louis from New Orleans on August 9, 1817, in one-fifth the usual time.

The development of the steamboat was critical to the growth of Little Rock, indeed to all of Arkansas. Upstream travel in Arkansas was particularly difficult because of snags and sandbars and the backbreaking work of hauling keelboats by towrope. Tales of river pirates and hungry panthers in the dense woods and swamps further discouraged immigration. The relative luxury and speed of steamboat travel, however, encouraged planters from Southern states to settle along Arkansas' rivers, paving the way for an agricultural and natural-resource-based economy.

Early entrepreneurs recognized the enormous profit potential in controlling commerce on the region's waterways. During the first quarter of the 19th century, many attempted to purchase and control passage on the rivers. Battles over the rights to river access prompted the U.S. Supreme Court in 1824 to place all navigable waters in the country under federal control, effectively eliminating regional monopolies on river trade. That same year, the U.S. Army Corps of Engineers assumed responsibility for developing, improving and maintaining these waters. In concert with harbor development initiated by the cities, these actions effectively opened the steamboat era in the Mississippi Basin.



The golden era of the steamboat lasted from 1825 to the start of the Civil War. Powerful, luxurious vessels with colorful names such as "Belle of the Bends" and "Chickasaw Princess" inspired the loyalty of merchants and settlers alike, frequently paying for themselves within a year. The steamboats of the 1830s took 12 to 14 days to make the trip from New Orleans to St. Louis, depending on the river's stage. The same trip by keelboat took 90 to 100 days. This dramatic decrease in travel time made it cost-effective to ship agricultural produce for the first time.

The steamboat propelled St. Louis into becoming a major wholesale distribution center for dry goods such as textiles. Retailers to the north and west of Missouri found it advantageous to



purchase goods in St. Louis instead of Eastern ports: insurance costs were lower, buying expeditions were shorter and delivery times were cut.

In 1831, the Portland Canal was completed in Louisville, allowing ships to bypass the falls, thus ending much of the city's portage business. The canal opened up the Ohio River, however, which expanded steamboat traffic through Louisville. Louisville thus remained the nation's largest market center for tobacco and began to export wood products from its abundant timber resources.

Memphis was the last of the four cities to experience the steamboat boom, launching its first voyage to New Orleans in 1834. The development of Memphis, which lagged behind that of the other cities, picked up during the steamboat era, with riverfront activity increasing to 2,300 arrivals and departures just before the Civil War. The processing of cotton and hardwood together with agricultural commodities formed the basis of the Memphis economy in the first half of the century. As the volume of shipping accelerated in the 1850s, the population of Memphis increased more than fivefold.

Despite frequent improvements in engineering and navigation technology, the life of a steamboat built for use on the Mississippi in 1850 averaged five years. Though the steamboat business could yield tidy profits, it could also lead to substantial losses, both financial and human. Snags and sandbars were continuous problems, as was the danger of fire, leading many doom-sayers to refer to steamboats as "fancy fire traps." Much credence was lent to that label when the "Great Fire of 1849" destroyed 15 business blocks of downtown St. Louis. The fire started on the steamboat "White Cloud" and spread to 23 other steamers before engulfing huge piles of freight on the levee and the buildings nearby. This area, formerly the heart of the St. Louis commercial district, is today a national park and the site of the Gateway Arch.

More than 4,000 people were killed or injured in steamboat disasters from 1810 to 1850. An 1848 statement of what became of 684 steamboats built for use on the Mississippi revealed the following: worn out in service, 344; sunk, 238; burned, 68; lost in collision or explosion, 34.



1817
The "Zebulon M. Pike" arrives in St. Louis from New Orleans, the first steamboat to ascend river beyond the mouth of the Ohio

1819
Memphis established

1822
The "Eagle" arrives in Little Rock, the first steamboat to reach the city via the Arkansas River

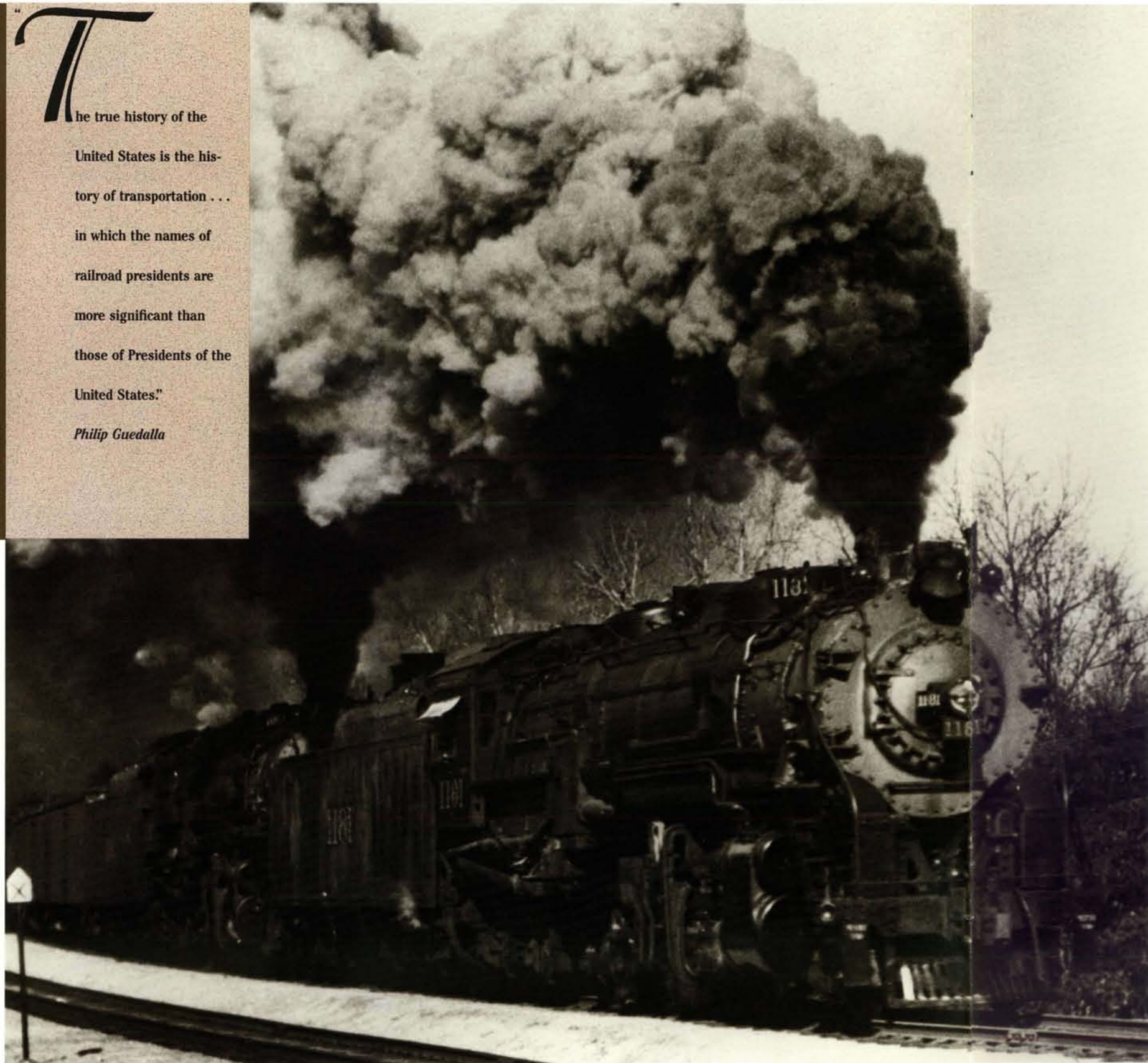
1824
Supreme Court establishes federal control of navigable waters in the U.S., effectively opening the steamboat era on the Mississippi River

1831
Louisville's Portland Canal completed



The true history of the United States is the history of transportation . . . in which the names of railroad presidents are more significant than those of Presidents of the United States."

Philip Guedalla



The Iron Horse

The development of railroads and tow-barges, coupled with the Civil War, effectively brought an end to the steamboat era in the Mississippi Basin. The blockading of the South during the war interrupted steamboat traffic just as it was reaching its peak. In addition, railroad building contributed to the downturn in river traffic, opening new routes to the East for the provision of supplies and munitions. In 1850, there were 9,000 miles of railtrack laid in the United States; by 1890, more than 164,000 miles had been laid. Merchants often preferred railways because they were faster, easier to load and did not require insurance. More important, railroads could overcome geography and weather. River traffic, of course, depended crucially on water levels. To maintain and expand water routes required a stable, navigable channel—not easy to achieve on Midwestern rivers because of severe ups and downs in water level and changes in course due to the region's loose alluvial soil. To this day, waterway regulators struggle to keep these channels open.

Both the volume of primary products transported and the dependence on railways increased dramatically after the Civil War. Of the 55,427 bales of cotton received in St. Louis in 1866, for example, almost 97 percent were transported by water; just 14 years later, 496,570 bales of cotton were delivered, with 94 percent arriving by rail. St. Louis adapted smoothly to the changing environment, recognizing the need for additions to its infrastructure if it were to maintain its long-term position as a transportation crossroads. In 1874, two symbols of the city's growing industrial status were completed: the Eads Bridge and the Union Depot. The Eads Bridge was by far the more significant. This four-pier, triple-span structure featured the world's largest center span and was the world's first steel-truss bridge. The Eads Bridge made Illinois coal and cheap building sites accessible to St. Louis' growing industries and spurred the development of the Metro East area. After the flood plain was secured on the Illinois side of the river, large industries moved to the area. The diversification of transportation facilities, combined with the region's wealth of agricultural and mineral resources, spurred immigration and industrialization in St. Louis; beginning in 1850, industry became the dominant force in the economy, surpassing commerce. From 1870 to 1910, St. Louis was the nation's fourth-largest city.

Railroads did not become a major factor in Louisville's transportation network until the 1860s. During the 1850s, Louisville started laying track toward Nashville, prompted in part by the threat of a competing line from Nashville and a desire to expand its marketing base by connecting to Tennessee's rail route to Atlanta. Louisville's rail promoters were concerned about the short-

1841
St. Louis is second only to New Orleans in river traffic, with 186 steamboats discharging almost 263,000 tons of goods

1842
LaGrange and Memphis Railroad sends Memphis' first train on a 10-mile exhibition run. The company soon failed for lack of financing



1849
The "Great Fire of 1849" begins on the steamboat "White Cloud" and destroys 15 business blocks in St. Louis; the fire is followed by a cholera epidemic

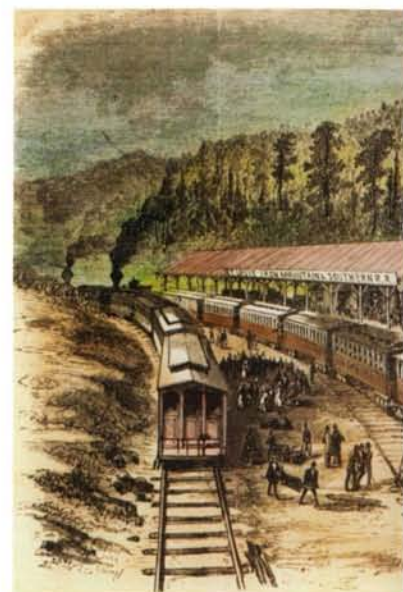


1851
"The Pacific" becomes the first railroad in Missouri

1852
As a Mississippi River port, Memphis is surpassed only by New Orleans and St. Louis



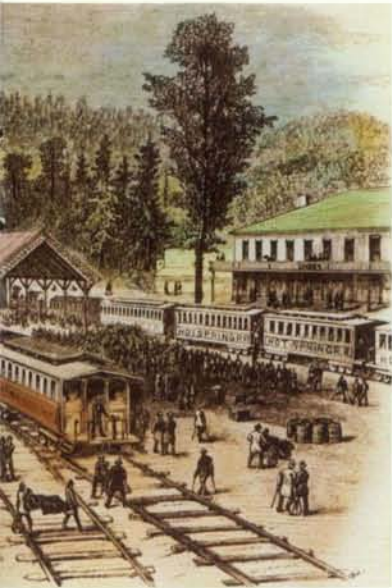
comings of the river, which periodically brought a halt to trade throughout the Ohio Valley. Low water in the summer and ice in the winter forced businessmen to operate on a two-season cycle, spring and fall, when water levels were high enough to transport goods. The Civil War shattered the South's traditional plantation economy, forcing Louisville merchants to adjust to a new environment. Shrewd merchants were able to promote themselves as "Confederates," while referring to their merchant rivals in Cincinnati as "evil Yankees." This tactic, in conjunction with new rail connections to Memphis, New Orleans, Mobile and Atlanta, enabled Louisville to expand its trade orbit southward after the war. Unfortunately for the city's shipping merchants, the building of a bridge across the Ohio to Clarksville, Indiana, and the extension of railways northward to Cincinnati lessened the need for Louisville's port services. Another blow was the completion of the first transcontinental railroad in 1869, which bypassed the Ohio and lower Mississippi River valleys, leaving only the South with which Louisville could expand its trade. These developments signaled the end of the transportation industry's preeminence in the city, as manufacturing began to dominate thereafter.



Before the 1850s, the Mississippi River provided the only commercial link between Memphis and the rest of the world. Railways in the area were virtually nonexistent, and roads were often impassable because of flooding. Several rail lines linking Memphis to South Carolina, Mississippi, Kentucky and Arkansas were completed in the late 1850s. These lines carried bales of cotton, lumber and agricultural commodities to and from Memphis as well as transporting goods produced in the city. Surprisingly, little manufacturing was established in Memphis before the Civil War, despite the abundance of raw cotton shipped through the city, a natural inducement to a textile or apparel plant. After the Civil War, Memphis, unlike St. Louis and Louisville, leaned toward wholesale distribution services instead of manufacturing.

As in St. Louis and Louisville, the importance of the river declined rapidly in Memphis in the 1880s as competition from the railroads increased. In that decade, less than one-fifth of cotton shipments went by river. Unlike most of the Mississippi Valley, railroad freight rates in Memphis were competitive with water rates because of the costs of dredging and maintaining Southern water channels. The only major impediment to rail transportation in Memphis in the latter half of the century was the lack of a bridge over the Mississippi. In 1892, the Frisco Bridge at Memphis was completed, the first bridge spanning the Mississippi south of St. Louis and the third-longest bridge in the world at that time. In subsequent years, the improvement in freight and passenger services supported the industrial development of the city. Furniture, apparel, pharmaceutical and wood product factories were established in Memphis.

In contrast to the other three cities, Little Rock experienced its greatest increase in water transportation at a time



when railroad tracks were being laid all over the state. Bigger, faster and more luxurious steamboats compensated in many cases for poor road conditions. At the same time, railroads were being developed in Arkansas, spurred on by the state's huge timber resources: the use of rail was the only practical way to successfully harvest timber, as swamps in the eastern portion of the state made land transportation difficult. With the railroads encouraging the deforestation of the state, serious erosion problems cropped up, with silt and sand often making waterways impassable. The state's population gradually began to move away from the river towns and toward those areas with tracks. Except for Little Rock, most of Arkansas' major cities date the beginning of their growth from the building of the railroads, and few cities have prospered without a major interstate rail route. The expansion of railroads throughout the state led to a population and construction boom in Little Rock. In 1880, with 800 miles of track laid throughout the state, the city had a population of just over 13,000; by 1890, the city's population almost doubled as the amount of track jumped to 2,000 miles.

From the Civil War through the turn of the 20th century, intense competition erupted between the rivers and the rails for a share of the transportation services pie. At times, the two peacefully coexisted, although usually more out of necessity than good will. For example, in Arkansas especially, businesses often were forced to use steamboats because flooding made railroads unusable. At other times, railroad companies engaged in unfair competitive practices to force their river competitors out of business. One such tactic, known as the "Chinese Wall," had railroads charging customers one rate for hauling freight from a river terminal to an inland destination, but a cheaper rate for hauling the same freight directly from the source. Some American railroad companies bought up terminals, canals and barge lines, often just to close them down. The Panama Canal Act of 1912 halted these "purchase and destroy" practices by prohibiting railroad ownership of competing water carriers. Combined with slow improvements in the waterways themselves, these practices took their toll on inland water transportation. Since the turn of the century, water freight operators have faced a continuing struggle against nature as well as increased competition from rail, road and air transportation.

1861
Civil War erupts



1870
The "Robert E. Lee" breaks all previous records by making the 1,210 mile run from New Orleans to St. Louis in 3 days, 18 hours, and 14 minutes



1874
The Eads Bridge and the St. Louis Union Depot are completed

1892
Memphis' Frisco Bridge completed, the first bridge across the Mississippi south of St. Louis

The airplane has no obstacles to overcome. Mountains, rivers, impenetrable jungles present no difficulty to it. It simply chooses its objective and flies to it, practically in a straight line."

Laurence Yard Smith



The Twentieth Century

The development of automotive and air transportation in the first third of this century diversified the transportation sectors of the river cities further, but lessened the importance of these cities as national linking points. If one thinks of the U.S. economy as a wheel, the river cities were the hub, and the rivers provided the earliest spokes that enabled the wheel to turn. The emergence of railroads, highways and airlines added an almost infinite number of spokes to the wheel. Partially out of necessity but also because of American ingenuity and entrepreneurship, the growth of this nation's infrastructure became as important as its natural resources in making the United States the world's largest economy in this century. The emergence of diversified transportation services opened up competition to the river cities in controlling the nation's commercial activities from cities to the north and west, like Chicago, Kansas City, Denver and Omaha and cities to the east, like Cincinnati, Pittsburgh and Indianapolis. That competition forced the river cities to turn inward, focusing on internal as well as external growth to augment economic development.

The highly diversified infrastructure of the river cities and their central location fostered the movement of key durable goods industries into the area, such as automobile, aircraft and home appliance manufacturers. All four cities benefited from the massive military production effort required during the two world wars. Louisville's wartime employment received a boost from the conversion of the Ford Motor plant to truck and jeep production as well as the U.S. Navy's purchase of a closed ship plant to produce a variety of military vessels. General Electric moved into Louisville shortly after World War II and remains the city's largest employer. The McDonnell Aircraft Corporation (renamed McDonnell-Douglas in 1967) opened in St. Louis in 1939, foreshadowing the area's dependence on defense spending in the decades that followed. In the early 1940s, St. Louis' economy was dominated by both durable and nondurable goods manufacturing, especially the home appliance, processing equipment, brewing and shoe industries. The latter two industries were so associated with St. Louis that it adopted the label: "First in booze, first in shoes, and last in the American League." Only the first of those descriptions would apply today.

The transportation sector, though less dominant, continued to flourish during the industrialization of the first half of the century, and the cities' comparative advantage in commerce was further enhanced by the passage in 1934 of the Foreign Trade Zones Act. This legislation was designed to foster

1904
St. Louis hosts the Louisiana Purchase Exposition (World's Fair)

1912
Panama Canal Act passed

1934
Foreign Trade Zones Act passed

1937
Ohio River experiences greatest flood ever



1939
McDonnell Aircraft Corporation established in St. Louis

1949
Memphis Harbor project begins

1951
General Electric's Appliance Park, the largest home appliance plant in the world, opens in Louisville

1965
Gateway Arch completed in St. Louis

1971
The Great Arkansas River Navigation Project, consisting of 13 locks and dams, completed



international trade for industries operating near ports with easy access to domestic and international transportation. The establishment of a foreign trade zone allows manufacturers to import and process foreign goods duty-free. A duty is paid only when these goods—either finished or unfinished—are purchased in the U.S. market. Exports or reexports, however, emerge from the zone entirely duty free. The use of foreign trade zones affects the selling price of finished goods by reducing transportation and insurance costs, among other advantages, thereby encouraging exports. Little Rock, Louisville, Memphis and St. Louis all feature foreign trade zones, a development that has made international commerce an additional contributor to each city's economy. The southern part of the Mississippi, from St. Louis to New Orleans, contains no locks and therefore no restrictions on the size of barges or their loads, making barge transport from St. Louis or Memphis the most efficient method of transporting large quantities of commodities to New Orleans and on to foreign markets.

Local, state and federal officials have completed a number of construction projects throughout this century, including the building of locks and dams, in a continuing attempt to keep the rivers open for business. In addition to fighting Mother Nature and the rail, truck and airline industries, the barge industry has had to contend with the Soviet grain embargo of 1980 and a rising dollar, both of which hurt exports. The recession of 1982 led to the closing of a number of older industrial plants, especially in St. Louis, and, with fewer manufactured goods passing through the area, the importance of the transportation industry declined. Deregulation of the airline and trucking industries has had varying effects on these cities, helping the airline industry in St. Louis while hurting the trucking industry. The rail industry has had its ups and downs in this century as well.

The economic rebound in the second half of the 1980s had a positive effect on transportation. The barge and towing industry particularly benefited, both from increased demand for its services domestically and from rising exports. Even when economic conditions are good, however, river transportation can be stifled when rain and snowfall provide too little run-off to keep adequate water levels in the shipping channels. The drought of 1988 caused barge traffic on the Mississippi to stop temporarily, and low water levels this past year, in conjunction with a damaged lock and dam at Alton, Illinois, led to the biggest barge jam in the river's history. A new lock and dam system, scheduled for completion by the end of 1992, will replace the damaged one, enabling more barges to pass through at any given time. Other locks and dams above Alton, however, face similar problems. Until new and larger locks and dams can be built throughout the inland waterway system, the barge industry will be forced to operate at less than peak efficiency.





1972
Federal Express established in Memphis

1978
Airline Deregulation Act passed

1980
Soviet grain embargo

1980
Motor Carrier Act of 1980 passed, partially deregulating the trucking industry

1981
United Postal Service (UPS) locates its national air freight hub in Louisville

1985
Congress approves \$196 million to rebuild Alton Lock and Dam System, expected to be completed in 1992



1989
Low water, ice and a damaged lock and dam at Alton, Illinois, lead to the biggest barge jam ever on the Mississippi River



LITTLE ROCK

(1988 annual averages)

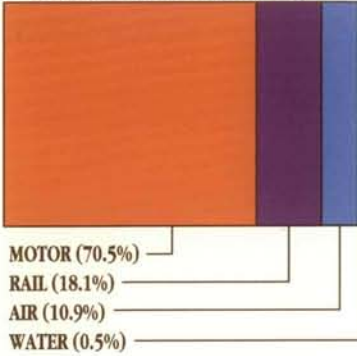
Population: 511,818

Non-agricultural employment: 236,867

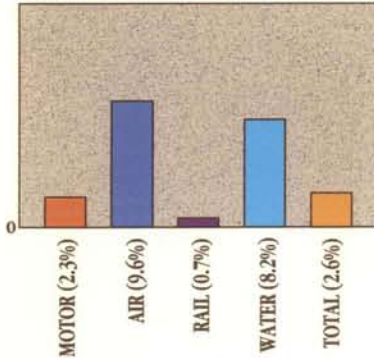
Transportation employment: 10,639

Transportation share of employment: 4.5%

Employment in Transportation: 1988



Growth in Transportation Employment: 1979-88 (compounded annual rates)



Although obviously vulnerable to domestic and international economic conditions and an infrastructure that is deteriorating from weather and age, the transportation sectors of the river cities today continue to play an important role in the region's economic health. St. Louis, Louisville, Little Rock and Memphis owe their establishment largely to water transportation, but their economies have long since diversified away from exclusive dependence on any single sector. Each city's central location and highly developed infrastructure, however, still determine to a large extent its economic performance. Little Rock is the economic, financial and distribution hub of Arkansas and, as the state capital, has a large government sector, which provides a stable source of employment. The economy is fairly diversified, with wholesale and retail trade the city's largest source of employment, accounting for almost 20 percent of total employment. The city is vigorously promoting its port as well as its complementary infrastructure to companies interested in expanding their facilities. In 1988, Little Rock employed approximately 10,700 workers in transportation.

St. Louis leads the areas in the size of its transportation workforce. Crisscrossed by four major interstate highways, the city is the home of many motor freight companies, which employed almost 24,000 workers in 1988. St. Louis is the nation's second-largest inland port, and it employs more than 3,000 workers in water transportation. The rail and air transportation sectors are also relatively large. The size of the air transportation workforce is expected to grow over the next decade because of the city's proposal to expand Lambert-St. Louis International Airport at a cost of \$1 billion.

Despite a total workforce of 38,540, transportation workers represented less than 4 percent of the total St. Louis workforce in 1988, reflecting the area's increasing economic diversity, as well as its continued dependence on manufacturing. St. Louis' health, educational, business and other services have expanded rapidly in recent decades and now employ most of the area's workers.

Although Louisville has shifted away from a predominantly transportation-oriented economy, the sector still plays an important role in the area's economic health. In 1988, almost 12,000 workers, representing approximately 3 percent of the Louisville workforce, were employed in the transportation sector. The sector has grown throughout the 1980s and is likely to continue to grow because of several major transportation projects scheduled over the next few years. United Postal Service (UPS) is a major presence in Louisville. In 1981, when the company began moving its air cargo operations to the city, UPS employed 500 workers in the metropolitan area. Today, UPS employs more than 7,200 workers in Louisville, and its success is one of the driving forces behind the proposed \$250 million expansion of Standiford Field Airport. The building of two parallel runways is expected to create 6,000 construction jobs as well as 10,000 new jobs after its completion. In addition, the Army Corps of Engineers has proposed spending

ST. LOUIS

(1988 annual averages)

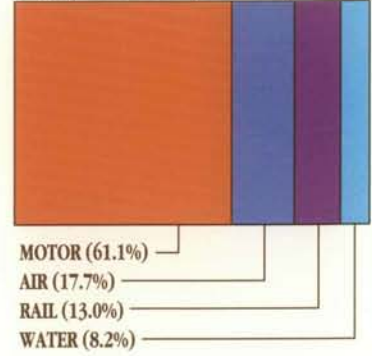
Population: 2,462,053

Non-agricultural employment: 1,139,580

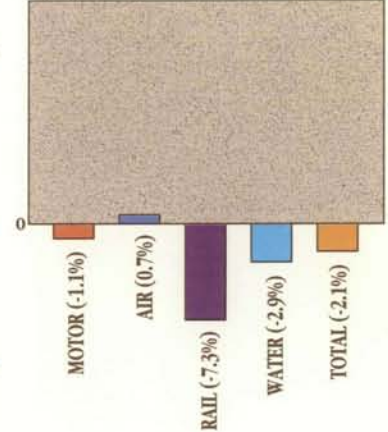
Transportation employment: 38,540

Transportation share of employment: 3.4%

Employment in Transportation: 1988



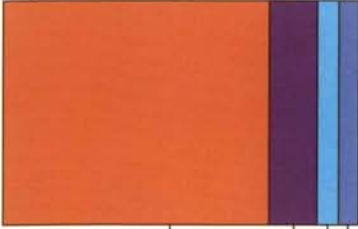
Growth in Transportation Employment: 1979-88 (compounded annual rates)



LOUISVILLE

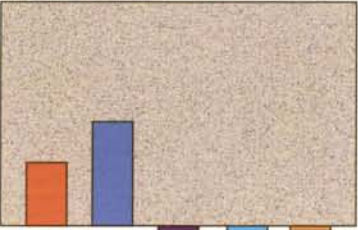
(1988 annual averages)
 Population: 969,797
 Non-agricultural employment: 450,825
 Transportation employment: 11,843
 Transportation share of employment: 2.6%

Employment in Transportation: 1988



MOTOR (74.8%)
 RAIL (13.5%)
 WATER (6.0%)
 AIR (5.7%)

Growth in Transportation Employment: 1979-88 (compounded annual rates)



MOTOR (4.8%)
 AIR (7.9%)
 WATER (-2.2%)
 RAIL (-12.4%)
 TOTAL (-0.4%)

\$214 million over the next decade to renovate locks and dams in the Louisville area so that current shipping delays can be shortened and demand for barge traffic can be met through the year 2050. This project has yet to receive final approval.

The region's most dynamic transportation sector belongs to Memphis. Memphis currently bills itself as "America's Distribution Center" and was recently touted by a national newsweekly as one of America's 16 boom towns, because of the important role distributional industries play in the city's economy. The four major transportation sectors (rail, truck, air and water) directly account for about 8 percent of the area's jobs.

Air transportation services have grown rapidly in Memphis. Federal Express, with its world headquarters in Memphis, is the world's largest air courier and cargo carrier and the city's largest employer. Federal Express grew rapidly in the late 1980s and recently acquired the Flying Tiger Line, a cargo carrier serving the South Pacific. The company's dramatic growth, along with the increasing presence of Northwest Airlines, has spurred a recent proposal to build a third parallel runway at Memphis International Airport. Final authorization of the \$110 million project is expected in 1991. Memphis today has a relatively small manufacturing sector and a comparatively large government sector in addition to a heavy concentration in distributional firms.

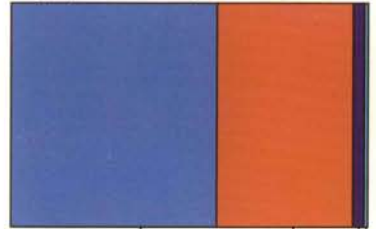
Whatever the coming decades hold for St. Louis, Louisville, Memphis and Little Rock, the rivers that have brought prosperity to these cities will undoubtedly continue to play a part. As they have tied together past and present, so too will the rivers add diversity and depth to the Eighth District's economic tapestry well into the next century.



MEMPHIS

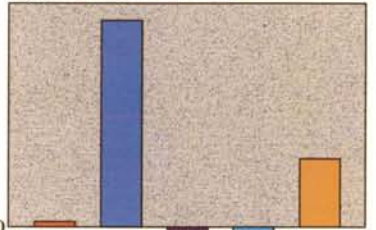
(1988 annual averages)
 Population: 984,742
 Non-agricultural employment: 433,383
 Transportation employment: 33,418
 Transportation share of employment: 7.7%

Employment in Transportation: 1988



AIR (57.8%)
 MOTOR (38.2%)
 RAIL (3.2%)
 WATER (0.8%)

Growth in Transportation Employment: 1979-88 (compounded annual rates)



MOTOR (0.4%)
 AIR (15.7%)
 RAIL (-10.3%)
 WATER (-9.7%)
 TOTAL (5.2%)

The remainder of this report summarizes the financial status and certain operating statistics of the Federal Reserve Bank of St. Louis and its three branches. In addition, it highlights the Bank's boards of directors and the officers who will guide us through the coming year.

Statement of Condition

(thousands of dollars)

	December 31, 1989	December 31, 1988
ASSETS		
Gold certificate account	\$ 370,000	\$ 368,000
Special Drawing Rights certificate account	291,000	160,000
Coin	29,979	29,129
Loans to depository institutions	52,525	94,595
Securities:		
Federal agency obligations	200,880	204,979
U.S. government securities	6,981,979	6,875,187
Total securities	\$7,182,859	\$7,080,166
Cash items in process of collection	386,646	422,413
Bank premises (net)	22,878	20,918
Other assets	1,030,018	411,898
Interdistrict settlement account	0	742,106
TOTAL ASSETS	\$9,365,905	\$9,329,225
LIABILITIES		
Federal Reserve notes	\$7,419,660	\$7,846,924
Deposits:		
Depository institutions	1,200,594	874,470
Foreign	4,200	4,200
Other	31,352	7,101
Total deposits	\$1,236,146	\$ 885,771
Deferred availability cash items	359,979	388,504
Other liabilities	86,948	91,106
Interdistrict settlement account	140,008	0
TOTAL LIABILITIES	9,242,741	\$9,212,305
CAPITAL ACCOUNTS		
Capital paid in	\$ 61,582	\$ 58,460
Surplus	61,582	58,460
TOTAL CAPITAL ACCOUNTS	\$ 123,164	\$ 116,920
TOTAL LIABILITIES AND CAPITAL ACCOUNTS	\$9,365,905	\$9,329,225

Income and Expenses

(thousands of dollars)

	December 31, 1989	December 31, 1988
CURRENT INCOME		
Interest on loans to depository institutions	\$ 7,013	\$ 7,101
Interest on government securities	606,577	529,482
Earnings on foreign currency	29,049	8,464
Revenue from priced services	31,105	28,725
All other income	495	461
Total current income	<u>\$ 674,239</u>	<u>\$ 574,233</u>
CURRENT EXPENSES		
Current operating expenses	\$ 63,698	\$ 62,392
Less expenses reimbursed	(7,052)	(7,269)
Current net operating expenses	<u>\$ 56,646</u>	<u>\$ 55,123</u>
Cost of earnings credits	6,109	4,598
Current net expenses	<u>\$ 62,755</u>	<u>\$ 59,721</u>
CURRENT NET INCOME	<u>\$ 611,484</u>	<u>\$ 514,512</u>
PROFIT AND LOSS		
Additions to current net income:		
Profit on sales of government securities (net)	\$ 429	\$ 655
Profit on foreign exchange transactions (net)	35,613	1
All other additions	5	0
Total additions	<u>\$ 36,047</u>	<u>\$ 656</u>
Deductions from current net income:		
Loss on foreign exchange transactions (net)	\$ 0	\$ 14,305
All other deductions	1	7
Total deductions	<u>\$ 1</u>	<u>\$ 14,312</u>
Net additions or deductions	<u>\$ 36,046</u>	<u>\$ (13,656)</u>
Cost of Unreimbursed Treasury Service	(2,369)	(1,217)
Assessment by Board of Governors:		
Expenditures	\$ (2,480)	\$ (2,376)
Federal Reserve currency costs	(5,957)	(5,379)
NET INCOME AVAILABLE FOR DISTRIBUTION	<u>\$ 636,724</u>	<u>\$ 491,884</u>
DISTRIBUTION OF NET INCOME		
Dividends paid	\$ (3,612)	\$ (3,495)
Payments to the U.S. Treasury (interest on Federal Reserve notes)	<u>(629,990)</u>	<u>(487,949)</u>
Transferred to surplus	3,122	440
Surplus, January 1	58,460	58,020
Surplus, December 31	<u>\$ 61,582</u>	<u>\$ 58,460</u>

Operating Statistics

Operations	Number of Pieces Handled		Dollar Amount (thousands)	
	1989	1988	1989	1988
Services to Depository Institutions				
Cash Services:				
Currency Received and Counted.....	606,572,000	614,080,000	6,766,000	6,841,600
Coin Received and Counted...	819,010,000	695,858,000	65,775	66,936
Check Services:				
U.S. Government Checks.....	33,105,000	34,125,000	29,233,000	30,091,300
Postal Money Orders.....	147,335,000	144,166,000	14,284,000	13,188,800
All Other	602,927,000	576,846,000	385,086,000	354,686,000
ACH Services:				
Commercial.....	73,780,000	42,087,000	288,272,600	256,839,300
U.S. Government	21,194,000	18,916,000	16,202,500	14,070,300
Collection Services:				
U.S. Government Coupons				
Paid	45,500	71,000	20,400	28,400
All Other	187,657	220,554	417,700	465,900
Wire Transfer of Funds:	2,899,969	2,787,319	3,597,000,000	3,457,700,000
Loans to Depository Institutions:	2,218	2,313	4,161,000	4,565,700
Services to U.S. Treasury				
Transfer of Government Securities:	132,829	131,396	207,695,000	164,202,000
Food Stamps Redeemed:	163,937,000	166,057,000	841,400	796,500

*Board of Directors
St. Louis*



Chairman
H. Edwin Trusheim
Chairman and Chief
Executive Officer
General American Life
Insurance Company
St. Louis, Missouri



Henry G. River
President
First National Bank in
Pinckneyville
Pinckneyville, Illinois



Deputy Chairman
Robert H. Quenon
President and Chief
Executive Officer
Peabody Holding Com-
pany, Inc.
St. Louis, Missouri



Roger W. Schipke
Senior Vice President
General Electric Company
Louisville, Kentucky



W. E. Ayres
Chairman of the Board
Simmons First National
Bank of Pine Bluff
Pine Bluff, Arkansas



Janet M. Weakley
President
Janet McAfee Inc.
Clayton, Missouri



H. L. Hembree, III
Chairman of the Execu-
tive Committee
The Merchants National
Bank
Fort Smith, Arkansas

Executive Committee

H. Edwin Trusheim,
Chairman
H. L. Hembree, III
Roger W. Schipke
Janet M. Weakley



Thomas F. McLarty, III
Chairman and Chief
Executive Officer
Arkla, Inc.
Little Rock, Arkansas

Audit Committee

Roger W. Schipke,
Chairman
W. E. Ayres
Thomas F. McLarty, III
Robert H. Quenon



Frank M. Mitchener, Jr.
President
Mitchener Farms, Inc.
Sumner, Mississippi

**Human Resources
Committee**

Janet M. Weakley,
Chairman
H. L. Hembree, III
Frank M. Mitchener, Jr.
Henry G. River

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Council**

Small Business
Lynn Broeder
Executive Director
Ecumenical Housing
Production Corporation
St. Louis, Missouri

Jess F. Helsel
President
Helsel, Inc.
Campbelsburg, Indiana

Samuel B. Hollis
President
Federal Compress &
Warehouse Co., Inc.
Memphis, Tennessee

Carl S. Rosenbaum
President
Arkansas Glass Container
Corporation
Jonesboro, Arkansas

William A. Stone
President
Louisville Plate Glass
Company
Louisville, Kentucky

Agricultural

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President
Eckert's, Inc.
Belleville, Illinois

Jeffrey W. Gain
Chief Executive Officer
National Corn Growers
Association
St. Louis, Missouri

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Fulton, Kentucky

M. Carter Stovall
General Manager
Stovall Farms
Stovall, Mississippi

David M. Yocum, IV
Managing Partner
Alice-Sidney Seed
Company
Jerome, Arkansas



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Chairman
Old National Bank in
Evansville
Evansville, Indiana

Little Rock



Chairman
L. Dickson Flake
President
Barnes, Quinn, Flake &
Anderson, Inc.
Little Rock, Arkansas



David Armbruster
President
First America Federal
Savings Bank
Fort Smith, Arkansas



Barnett Grace
President and Chief
Executive Officer
First Commercial Bank,
N.A.
Little Rock, Arkansas



Wayne Hartsfield
President and Chief
Executive Officer
First National Bank
Searcy, Arkansas



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Sound-Craft Systems,
Inc.
Morrilton, Arkansas



James R. Rodgers
Airport Manager
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Airport
Little Rock, Arkansas



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President
Townsend Company
Stuttgart, Arkansas

Louisville



Chairman
Raymond M. Burse
Attorney
Wyatt, Tarrant & Combs
Louisville, Kentucky



Irving W. Bailey, II
Chairman, President and
CEO
Capital Holding Corpora-
tion
Louisville, Kentucky



Morton Boyd
Chairman and Chief
Executive Officer
First Kentucky National
Corporation
Louisville, Kentucky



Lois H. Gray
Chairman of the Board
James N. Gray Construc-
tion Co., Inc.
Glasgow, Kentucky



Douglas M. Lester
Chairman, President and
CEO
The Citizens National
Bank
Bowling Green, Kentucky



Wayne G. Overall, Jr.
President
First Federal Savings
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Elizabethtown, Kentucky

Memphis



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Katherine Hinds Smythe
President
Memorial Park, Inc.
Memphis, Tennessee



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Operating Officer
National Bank of
Commerce
Memphis, Tennessee



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Inc.
Addison Shoe Company
Wynne, Arkansas



Seymour B. Johnson
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Indianola, Mississippi



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Executive Officer
Sanderson Plumbing
Products, Inc.
Columbus, Mississippi



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CEO
Jackson National Bank
Jackson, Tennessee



Larry A. Watson
Chairman of the Board
and President
Liberty Federal Savings
Bank
Paris, Tennessee

Officers

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Executive Officer

James R. Bowen
First Vice President
and Chief Operating
Officer

Anatol B. Balbach
Senior Vice President
Research and Public
Information

Henry H. Bourgaux
Senior Vice President
Operations

Harold E. Uthoff
Senior Vice President
Banking Supervision
and Regulation

Ben C. Wade
Senior Vice President
Administration

Vice Presidents

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Bank Holding Companies

Ruth A. Bryant
Public Information

Joan P. Cronin
Legal

Charles R. Halbrook
Member Banks

Richard E. Kay
Valuables Processing

James R. Kennedy
Information Systems

Jean M. Lovati
Payments

Martha L. Perine
Human Resources and
Financial Services

Kristi D. Short
Electronic Services and
Customer Support

William J. Sneed
Support Services

Randall C. Sumner
Credit and Community
Affairs

Assistant Vice Presidents

Michael T. Belongia
Keith M. Carlson
Judie A. Courtney
Hillary B. Debenport
R. Alton Gilbert
Walter W. Jacobs
Jerome J. McGunnigle
John P. Merker
Jerome R. Rodgers
Frances E. Sibley
John A. Tatom
Robert J. Taylor
Daniel L. Thornton

Other Officers

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John W. Block
Timothy A. Bosch
Martin J. Coleman
Cletus C. Coughlin
Gregory S. Puszczek
Harold H. Rieker
Harold E. Slingerland
Roger D. Smith
Courtenay C. Stone

Audit

Michael D. Renfro
General Auditor

Jeffrey M. Dale
Assistant General Auditor

Little Rock Branch

John F. Breen
Senior Vice President
and Manager

Thomas R. Callaway
Assistant Vice President

David T. Rennie
Assistant Vice President

Louisville Branch

W. Howard Wells
Vice President and
Manager

Thomas O. Short
Operations Officer

Memphis Branch

Raymond Laurence
Vice President and
Manager

Anthony C. Cremerius, Jr.
Assistant Vice President

John P. Baumgartner
Assistant Vice President

Research

This report was researched and written by Federal Reserve Bank of St. Louis economists Michelle A. Clark, Jeffrey D. Karrenbrock and Thomas B. Mandelbaum. The authors would like to thank the staffs of the Federal Reserve Bank Library and St. Louis Mercantile Library for their research assistance.

Data Sources

Railroad data are from Missouri, Kentucky and Tennessee state employment offices and Little Rock industry sources. All other data were provided by DRI/McGraw-Hill.

Illustrations

Page 2 (Indian lookout);
page 3 (Joliet); *page 5* (flatboat);
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Louisville, Kentucky 40232
502-568-9200

Memphis Branch
Post Office Box 407
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901-523-7171