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AN OVERVIEW OF AMERICAN TRANSPORTATION POLICY, 1789 TO 1956

The American transportation system plays a central role in the American economy. It connects the country spatially, allowing people and commerce to move from place to place, through a network of over 5.5 million miles of public roads, railroads, waterways, and oil and gas pipelines and 18,770 public and private airports. More than 240 million vehicles, railcars, aircraft, ships, and recreational boats use the network. It supports over 4.5 trillion miles of passenger travel, and 4 trillion ton-miles of goods movement annually. In addition, consumer and government transportation-related expenditures (\$1 trillion annually) account for over 11 percent of the nation's gross domestic product, ranking it the fourth highest activity in the economy, behind housing, health care, and food. The typical American family spends nearly \$7,000 annually on transportation-related expenses, about one-fifth of total household spending. Moreover, almost 4.5 million people are employed by transportation industries, including 1.8 million by trucking and warehousing companies, 1.2 million by air transportation companies, 485,000 by public transit operators, 435,000 by transportation service companies, 223,000 by rail transportation companies, 205,000 by water transportation companies, and 14,000 by pipeline companies. Several million more are employed in industries that supply transportation-related goods and services. Overall, transportation accounts for approximately 13 percent of all jobs in the United States.¹

The American transportation system has an enormous effect on both the national economy and American society. The sociological effects resulting from increased mobility are immense. Age-old customs and family traditions have been shattered by improvements in the nation's transportation system. Individual family members are more likely than ever before to be separated geographically and are less likely to be rooted in any one community or way of life. The interstate highway

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system's completion during the early 1990s, coupled with the airline industry's dramatic growth since World War II, has enabled millions of Americans to visit the far corners of the United States and the world. Combined with satellite broadcasts, the development of the nation's transportation system has changed the way that Americans perceive themselves and their place in the world. As one author put it: "In this day and age, all ends of the earth are in immediate touch with one another.... The fact that we can and do come face to face with other members of society in other parts of the world certainly modifies our values and our actions much more than if we had merely read or heard about a way of life or a problem in a distant land."²

Transportation policy's importance to the nation's economic future and American society is indisputable, but there has been considerable debate concerning the public and private sector's role in determining the scope and nature of the national transportation system and whether current policies and institutional arrangements are appropriate. For example, some have argued that most transportation decisions should be left to the private sector and that government intervention has created an inefficient transportation system that is both costly and not very good at moving either people or goods. Others argue that government intervention is a good idea but that government transportation policies should take into account their effect on society as well as traffic. They contend that government policies have historically favored highways over mass transit and intercity passenger rail service and that this has caused irreparable harm to the nation's cities. They argue that highways have encouraged the suburbanization of American society and contributed to the spread of unsightly suburban sprawl. They advocate smart growth strategies that integrate the various transportation modes into a single, comprehensive transportation system; make greater use of metropolitan planning organizations and regional planning councils to create a more seamless, less fragmented transportation system for the nation's metropolitan regions; increase funding for mass transit and intercity passenger rail; impose higher fuel taxes and other pricing strategies to encourage people to travel less, carpool more, and use mass transit and other alternatives to the automobile when traveling; and enact zoning ordinances and other laws to preserve open space, combat sprawl, and encourage people to live closer to their places of employment.

Others want transportation policies to focus solely on the efficient movement of people and goods. They note that government spends approximately \$180 billion annually on transportation projects, and the private sector spends at least \$20 billion annually, yet traffic congestion, both on land and in the air, especially in and over the nation's largest cities, is at record levels. Moreover, automobile congestion is worsening, especially in the wake of the September 11, 2001, terrorist attacks on the World Trade Center and Pentagon. In their view, worrying about nontraffic-related issues diverts scarce resources, making it more difficult to deal with traffic congestion. They note that the average American spends 36 hours each year stuck in traffic, up from 11 hours in 1982; highway traffic congestion in the nation's 68 largest cities alone results in over \$78 billion annually in wasted fuel

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and lost wages; and rush “hour” is now a misnomer in most of America’s larger cities, where city streets and highways are congested for up to seven hours each weekday.³

Others agree with David Schultz, county executive in Milwaukee, Wisconsin, who noted that debates over public policies and institutional arrangements are important but, that, as a practical matter, the influence of public preferences and behavior on the success or failure of public policies and institutional arrangements should never be underestimated:

[T]hose of us concerned with transportation in urban America can no longer wait for people to start to behave as we would like them to: living in compact, high density residential development patterns; traveling short distances to work along well-defined corridors to destinations in orderly, compact business districts; using public transit in large numbers because they want to and not because they have to; and being very socially conscious in their selection and very limited personal use of an automobile. We have to recognize the reality that people are very unlikely to accept, and are in fact likely to strongly resist, significant changes of this sort, especially if they perceive that such changes are limiting their personal freedom of choice.⁴

This book examines these and other debates affecting the formation and implementation of transportation policy in the United States and concludes with several recommendations for improving the American transportation system and the policy-making process. It begins by describing the evolution of government’s increasingly dominant role in determining the scope and nature of the nation’s transportation system from the nation’s birth in 1789 to the enactment of the landmark *Federal Aid to Highways Act of 1956*, which authorized the construction of the interstate highway system. Because the national government has focused most of its transportation resources on highways, the next two chapters examine the creation and implementation of the nation’s highway and mass transit policies. Chapter 2 examines developments from 1956 to 1990 (the construction of the interstate highway system), and Chapter 3 examines developments since 1990 (the postinterstate era). Chapter 4 describes the formation and implementation of the national government’s policy on intercity passenger rail service, focusing on Amtrak’s creation in 1970 and its subsequent effort to become operationally self-sufficient. Chapter 5 analyzes the formation and implementation of the national government’s policy on civilian air transportation. As will be shown, political expediency, coupled with the decentralization of the congressional policy-making process, led the national government to enhance transportation capacity in all of these transportation modes indiscriminately, rather than develop an integrated, coordinated, intermodal strategy to improve the nation’s mobility. While this served Congress’s short-term political interests well, it resulted in a fragmented transportation system that by most accounts is not only less than optimal but inferior to those in several European nations that compete with the United States in an increasingly global economic marketplace. Given America’s global economic dominance during the late twentieth century, the inefficiencies evident in the American transportation system were not considered a

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major concern. Now that America's economic dominance is less than it once was, these inefficiencies are being called into question.

TRANSPORTATION POLICY: PRIVATE OR PUBLIC SOLUTIONS

According to economic theory there are four types of goods and services (private, common-pool, toll, and public), and the manner in which they are consumed (either individually or collectively) and the relative ease or difficulty of preventing their free use should determine government's role in supplying and regulating them.⁵ Private goods and services, such as clothes and household appliances, are consumed individually, and it is relatively easy to prevent their free use by arresting and prosecuting thieves. Common-pool goods and services, such as drinking water, are also consumed individually (each person breathes air and drinks water, and may hunt a wild animal), but it is relatively difficult to prevent their free use. Toll goods and services, such as education and transportation, are consumed collectively (e.g., hundreds and, in some cases, thousands of people can travel on a highway simultaneously), and their free use can be prevented relatively easily by imposing a fee or toll to allow entrance or exit. Public goods and services, such as the provision of police and fire protection and national defense, are also consumed collectively (all residents of the community benefit from the provision of public safety services), but it is relatively difficult to prevent their free use.

Economic theory suggests that government should intervene in the private marketplace to prevent cheating (by outlawing false advertising, the stealing of trade secrets, etc.) and when the economic law of supply and demand for goods and services fails. One of the most common causes of market failure is the presence of free riders (people who consume goods and services but refuse to pay for them). Individuals and companies are reluctant to supply goods and services subject to free riders because no one is willing to put time and effort into economic endeavors that do not have a reasonable expectation of turning a profit. Because public goods and services are subject to free riders, individuals and companies are, understandably, reluctant to provide them. This creates a market imperfection, where the supply of public goods and services is expected to fall short of demand. Economic theory suggests that government should perfect the marketplace by assuring that public goods and services are supplied in appropriate amounts (either by supplying them directly or, preferably, indirectly by contracting out their provision to the private sector).⁶ The opposite problem exists for common-pool goods and services. They are prone to overconsumption (air and water supplies will be polluted, and animals will be hunted to extinction) because the private marketplace cannot prevent their free consumption easily. In this instance, government should perfect the private marketplace by regulating (restricting) the consumption of common-pool goods.

These market imperfections do not exist for private goods and services and for toll goods and services. Individuals and companies supply them because, in the absence of free riders, they have a reasonable expectation of making a profit. More-

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over, the economic law of supply and demand ensures that there are enough of these goods and services to meet demand and that they are supplied at a reasonable (competitive) price. In a truly competitive market, suppliers also have an incentive to continually improve their product or service to remain competitive. As a result, government's role in private goods and services and toll goods and services should be restricted to preventing cheating (punishing suppliers who make false claims or use misleading advertising, etc.).

Nevertheless, as the remainder of this chapter demonstrates, the public sector's role in determining the scope and nature of the American transportation system has increased over time to the point where it now plays the leading role in those decisions. Governments at all levels currently finance transportation projects; establish safety standards; plan and promote "better" transportation systems; regulate many aspects of transportation operations; research and develop new transportation technologies; subsidize various transportation modes, either directly with cash assistance or indirectly with in-kind services; and operate public transportation systems. Moreover, governmental policies—such as environmental regulations, energy conservation measures, labor laws, nondiscrimination statutes, relocation assistance provisions, the imposition of user fees and various transportation trust funds, and even the compilation of transportation statistics—all affect the structure and operation of America's transportation system.⁷

PRIVATE OR PUBLIC SOLUTIONS: 1789–1850

From the nation's formation in 1789 through the early 1800s, the national government's role in transportation policy was minimal. State and local governments, on the other hand, were very active, providing financial subsidies to private companies that built and maintained a somewhat haphazard system of wagon roads, canals, and ferries to move people and goods from place to place. The settlement of the western frontier states received a large boost in 1807 from Robert Fulton's introduction of the first steam-powered boat, the *Claremont*. The steamboat ushered in a new era in American transportation. Its ability to overcome constraints of prevailing winds and currents opened up trading routes throughout the United States and expedited the nation's expansion into the interior. Over the next 50 years, over 4,000 miles of canals were built, providing the nation with its first extensive transportation network. By 1860, steamboats were carrying over \$300 million in cargo annually along the Mississippi River alone, and New Orleans had grown into the fourth largest port in the world, processing less cargo than only London, Liverpool, and New York.⁸

Local governments often subsidized canal construction because water transportation was vital to a community's economic survival, especially for those located along the western frontier. State governments were also active. They often subsidized canal construction by selling bonds and using the proceeds to purchase stock in companies building and operating canals and, occasionally, provided canal companies low interest loans and, less frequently, cash. State governments pro-

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vided about 70 percent of the \$125 million invested in canal construction during the 1800s.⁹

At first, the national government did not offer financial assistance for transportation projects because transportation, other than postal roads, was considered either a private endeavor outside the scope of governmental authority or a state and local government responsibility. However, postal roads were specifically mentioned in the U.S. Constitution as a national government responsibility. As a result, there was little opposition to Colonel Ebenezer Zane's offer in 1796 to build a postal road from Wheeling, Virginia (now West Virginia), to the river port at Limestone (now Maysville), Kentucky, in exchange for a national government land warrant totaling three square miles where the road crossed the Muskingum, Hackhocking, and Scioto Rivers. The road was 100 miles shorter and less expensive to operate than the postal route over the winding Ohio River. The road, known as Zane's Trace, became an important route for settlers headed into southeastern Ohio. It was the national government's first road subsidy. In 1802, the *Ohio Statehood Enabling Act* set aside 5 percent of the proceeds from the sale of nationally owned land in that state for road construction. Similar laws were subsequently adopted for Louisiana, Indiana, Mississippi, Illinois, Alabama, and Missouri, except that the proceeds could also be used for canals, levees, river improvements, and schools.¹⁰ In 1803, President Thomas Jefferson (D/R, 1801–1809) ordered improvements to the Natchez Trace, an Indian trail through the Allegheny Mountains, to promote interstate commerce. In 1806, national government funds were appropriated to construct the Cumberland Road from Cumberland, Maryland, to Wheeling and the Ohio River. The road was completed in 1817 and became known as the National Road. In 1808, President Jefferson's secretary of the treasury, Albert Gallatin, proposed the construction of a publicly owned turnpike extending from Maine to Georgia, with four major east-west roads through the Allegheny Mountains. Congress rejected the plan, claiming that its \$20 million cost over 10 years was excessive.¹¹

There were numerous congressional efforts throughout the early 1800s, especially from representatives from western states, to provide direct cash assistance for transportation projects. Representative, and later Senator, Henry Clay's famous program of internal improvements, for example, provided subsidies for canal construction and port improvements, but the expenditures were relatively modest, and very little was provided for governmentally owed projects. In 1823, the national government spent funds to remove navigational obstructions from the Mississippi River and, following the British practice, also purchased, from time to time, corporate stock in private companies building canals and roads. These companies, in turn, charged customers a toll to use the canal or road. However, most bills authorizing the expenditure of national government funds for transportation projects were vetoed by presidents convinced that the bills were unconstitutional infringements on states' rights. For example, just before leaving office, President James Madison (R, 1809–1817) vetoed a bill that would have funded road construction from dividends earned on the national government's stock in

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the National Bank. He argued that the bill's sponsors were incorrect in their assertion that the bill was allowable under the national government's constitutional powers to regulate commerce and provide for the national defense. Later that year, his successor, President James Monroe (R, 1817–1825), announced in his first inaugural address that he personally advocated direct expenditures for roads and canals as a means to assist economic development but would support legislation to that effect only if the national government was provided that power by constitutional amendment.¹² In 1822, he vetoed legislation authorizing tolls on the National Road because he believed that a national toll unconstitutionally violated state sovereignty over the use of state-owned land. The following year, he signed legislation appropriating \$498,000 for improvements to the National Road and its extension to Zanesville, Ohio, declaring that road improvements were welcomed by states and did not infringe on their sovereign rights.¹³

President Andrew Jackson's (D, 1829–1837) election and the ascendancy of the Democratic Party and its advocacy of states' rights slowed the national government's increased involvement in transportation policy for nearly a generation. President Jackson's veto of the Maysville Road project on May 27, 1830, is considered by some as a turning point in the history of American internal improvements during the nineteenth century. The 64-mile road project from Maysville to Lexington was located entirely within Kentucky. The bill would have provided \$150,000 to purchase 1,500 shares of stock in the Maysville Turnpike Road Company. The road would have extended the existing overland postal road that followed the National Road at Zanesville, Ohio, and Zane's Trace to the Ohio River. Its sponsors argued that funding postal roads was constitutional. President Jackson vetoed the bill anyway, declaring that it was wholly local in nature and, therefore, unconstitutional. He also argued that internal improvement projects were less important than reducing taxes and paying off the national debt. The veto forestalled pending legislation providing funds for other internal improvement projects, including the Baltimore and Ohio Railroad, the nation's first commercial railroad company chartered in 1827.¹⁴ Still, congressional members, intent on securing politically popular internal improvement projects for their home districts, secured over \$10 million for internal improvements during President Jackson's eight years in office by attaching specific improvement projects into general appropriation bills. This forced President Jackson to choose between his constitutional scruples and signing appropriation bills needed to keep the government operating. The practice of attaching internal improvement projects to appropriation bills continued throughout the pre-Civil War era. As a result, the national government funded internal improvement projects throughout this period but left most of the responsibility for funding internal improvement projects to state and local governments and the private sector.¹⁵ The national government's acquiescence to states in transportation policy was, perhaps, best symbolized by its turning over the National Road to them in 1834.

Although political factors prevented the national government from spending large sums of money on transportation projects, it did donate to states over 3 mil-

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lion acres of nationally owned land that was subsequently auctioned to raise revenue for wagon road construction. It also gave states another 4.5 million acres for canal construction, 2.25 million acres for river navigation, and 64 million acres for flood control.¹⁶ Despite this, prior to 1850, the national government's involvement in transportation policy is best characterized as indirect and limited.

State governments, on the other hand, were much more active. In addition to financing canals, they routinely purchased stock in private companies or provided companies tax exemptions to build turnpikes. Originally, a "turnpike" was a long pole or pike that barred the traveler's way at each toll gate. After paying the required fee, the pike was turned or swung out, allowing the traveler to pass. The term turnpike became synonymous with any stone-surfaced road. Pennsylvania, for example, chartered over 80 turnpike companies that constructed over 3,110 miles of roads by the mid-1830s, and New York chartered 278 companies that built over 4,000 miles of roads by 1830.¹⁷

Local government officials, especially city government officials, constructed publicly owned and maintained roads and bridges, but there was little or no coordinated road building by government entities over long distances. As a result, there were few publicly owned thoroughfares in the United States during this period. Nearly all long-distance land travel was done on privately held turnpikes. For example, the private Philadelphia-Lancaster Turnpike, chartered in 1792, was considered the finest long-distance road in the United States for many years.

PRIVATE OR PUBLIC SOLUTIONS: 1850–1900

From just before the middle of the nineteenth century until its end, railroads surpassed highway and water transportation as the primary means to move goods and people over long distances. Except for relatively short runs, horse-drawn carriages and wagons could not compete with the steam-driven railroads' speed and passengers' comfort.¹⁸

At first, railroads were not developed to compete with steamboats as the primary means of moving people and goods over long distances. They were built, often with state government assistance, to serve as an all-weather route to adjacent towns and nearby canals. Prior to 1850, most railroads used different track gauges, making it impossible to develop through traffic over long distances. But, as steam engines became more reliable, the number of railroad companies and the miles of trackage increased. In 1838, the national government gave the fledgling railroad industry a financial boost by designating them all postal routes, a pattern of government subsidy that would later repeat itself as technological breakthroughs created new transportation modes. At that time, there were about 3,000 miles of railroad track in the United States. By 1850, that figure had tripled to 9,000 miles, thanks, at least in part, to the revenue provided by the national government's postal contracts.

The national government subsidized railroad expansion across the continent, primarily because railroads were seen as a means to promote interstate commerce.

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However, given constitutional constraints, the national government did not fund railroads directly. Instead, it donated nationally owned land to the states. They, in turn, sold that land at auction and gave the proceeds to railroads. In 1850, the first land grant for railroad construction sent 3.7 million acres of nationally owned land to Illinois, Mississippi, and Alabama. The proceeds from the land sales were given to the Illinois Central Railroad and Mobile and Ohio Railroad companies to subsidize their expansion in those states. By 1860, there was more than 30,000 miles of railroad track in the United States. Most of the shorter rail lines at that time had linked up into larger systems, made possible by the industry's adoption of the 56.5-inch standard gauge for tracks. The agreement on a standard track gauge, coupled with the financial assistance provided by the national government's land grants and postal contracts, helped the railroads become the dominant means of long-distance transportation in the United States during the latter half of the nineteenth century.¹⁹

The number of railroad companies and the miles of railroad track continued to expand, largely because of government subsidies. By 1871, the national government had given away 36 million acres of land to assist over 50 railroads expand their operations across the continent. By the end of the century, the national government had provided 130.3 million acres for railroad improvements, and states had contributed another 48.9 million acres of state-owned land.²⁰

Despite numerous attempts to attach steam engines to wagons, early efforts to build an overland steam-powered vehicle failed miserably. These early "automobiles" were not reliable, their axles could not handle the rough cobblestone streets in most American cities, and they could not escape the mud on the unimproved roads outside the nation's cities. The bulk and weight of the early steam engines made it easier to apply them to railroad locomotives than to highway vehicles. The absence of motor-driven automobiles meant that the steamboat remained the railroad industry's primary competition for long-distance travel.

The competition for rail lines among local communities, especially those located in the western frontier states, was intense. Wherever the railroads went, towns followed. For topographical reasons, rail lines often ran parallel or close to established turnpikes and canals. Unable to compete with the railroad's speed and freight-hauling capabilities, the freight wagon and stagecoach companies that operated on the nation's turnpikes disappeared. Without their revenue, the turnpike companies also disappeared, leaving their roadways to the elements or donating them to the nearest local government. One of the last holdouts was the famous Lancaster Turnpike Road Company. It lasted until February 1902.²¹

By the late 1800s, Chicago had become the rail center of the United States, serving as the go-between for the West's natural resources and East Coast consumers. By 1890, there were 163,597 miles of rail track in the United States, including several transcontinental lines connecting California, Oregon, and Washington to the rest of the nation.²²

Because railroads provided a convenient and relatively cost-effective means of traveling long distances, there was relatively little pressure on public officials dur-

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ing the 1800s to improve roads outside the nation's cities. In 1903, the United States had more than 2 million miles of roads, but more than 90 percent of them were almost impassable during inclement weather.²³ At that time, the main sources of revenue for local road construction in rural areas were the property tax and poll (head) tax. In 1904, these taxes raised \$53.8 million nationally, barely enough to keep existing roads from being overgrown by brush and other plant life. Many southern states did not set aside any tax revenue for road construction. They relied on statute labor (convicts) to build and maintain roads. The situation was better in the nation's cities. They also relied on property taxes, often supplemented by special assessments, to fund road construction, but their larger tax bases provided sufficient revenue to construct most of their main streets out of granite block or hard paving bricks. These all-weather roads were strong enough to handle horse-drawn trucks and drays hauling up to 18 tons of cargo. Most city side streets were built with macadam or gravel. By the 1890s, many of these side streets were made mud-free by asphalt surfacing. Also, by that time, electric streetcars were operating in over 100 American cities, ending the reliance on horse-drawn carriages for most city travel.²⁴

When one spoke of transportation policy in the United States during the late-1800s, the conversation would have included steamboats and wagons, but it would have centered on railroads. This was especially true in the West, where the absence of a natural river waterway system made water travel relatively difficult. As the rail lines continued to expand, offering shippers and passengers ready access to multiple service areas and destinations, water transportation's role in the American transportation system began to diminish. New canal construction was almost nonexistent by the late 1800s as the industry's focus shifted to serving the Great Lakes region and, later, international cargo.²⁵ Also, pipelines transporting crude oil to refiners appeared during the late 1800s but were mostly confined to western Pennsylvania and surrounding states.

The private sector was particularly important in the development of the water and railroad industries. For example, in 1890, there were more than 1,000 private railroad companies operating in the nation. Largely unregulated by local, state, or national government officials, most of the important decisions concerning the nation's transportation system (routing, pricing, etc.) were made by these companies.

The private sector's dominant role in determining the scope and nature of the American transportation system began to change following the establishment of the five-member Interstate Commerce Commission in 1887. It was created in the wake of allegations, most of them true, that railroads behaved in a monopolistic manner by setting prices artificially high and used bribes and other means (including free and reduced price tickets) to ensure that state and local government officials did nothing to interfere with their activities. They also routinely provided large suppliers with secret rebates, undercutting the ability of smaller suppliers to compete.

The Interstate Commerce Commission's establishment marked the beginning of a new era. The national government was now an active participant in determining both the physical development and use of the American transportation system.

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It was authorized to prescribe just, reasonable, and nondiscriminatory rates; grant or deny operating authority to common carriers; approve or deny proposed consolidations and mergers of carriers and forwarders; and investigate alleged violations of antitrust laws and transmit its findings to the U.S. attorney general.

In 1890, the national government attempted to prevent monopolies and encourage price competition in the railroad industry by passing the *Sherman Anti-Trust Act*. It made it nearly impossible for railroads to merge. In 1906, the national government attempted to prevent John D. Rockefeller's Standard Oil Company, which owned nearly 90 percent of the nation's 7,000 miles of pipeline, from creating a monopoly in the emerging crude oil pipeline business by passing the *Hepburn Act*. It gave the Interstate Commerce Commission jurisdiction over the pipeline industry. In 1911, the U.S. Supreme Court ruled unanimously that the Standard Oil Company was a monopoly and broke it into 10 common carriers and three holding companies. Soon afterward, additional pipeline companies appeared in Illinois, Kansas, Oklahoma, and Texas to transport crude oil to Gulf of Mexico tankers serving the Eastern seaboard.²⁶

PRIVATE OR PUBLIC SOLUTIONS: 1900–1956

At the turn of the century, automobile ownership was still largely limited to the wealthy and upper middle class. There were only 8,000 motor vehicles registered in the entire country in 1900.²⁷ There was, however, a growing awareness that better roads might benefit farmers who, for the most part, relied on horse-drawn wagons to transport their goods to market. There was a large disparity in quality between city roads and country roads, but city residents taxed themselves to build roads and objected to any proposal that required them to contribute to the construction and maintenance of roads used primarily by farmers. Residents of rural areas, on the other hand, lacked the population density and commercial and industrial development necessary to create a tax base large enough to finance roads without government subsidies. Farm-to-market roads also lacked the volume of traffic necessary to pay for themselves through tolls. This led the National Grange and other farm organizations to lobby during the early 1900s for publicly financed farm-to-market roads. They were joined by numerous bicycle clubs across America that had earlier started what had become known as the Good Roads Movement. Initially, their lobbying efforts were not very successful, but, in 1902, two events took place that would have a significant affect on the policy-making process. First, the American Automobile Association was founded. It provided a strong voice for those desiring public investment in roads and bridges. Second, Henry Ford's Model T appeared. The Model T was initially designed as a large, heavy touring car capable of handling the hard pounding of country roads. Then, in 1906, Ford used vanadium alloy steel, developed in Europe, to redesign the Model T into a much lighter and smaller vehicle. At the same time, Ford adopted the moving assembly line process, used in the munitions industry, to standardize and shorten the automotive production process. The introduction of the assembly line enabled Ford to

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increase production from 1,599 units in 1905 to 8,729 units in 1906 and 14,887 units in 1907. It also reduced expenses, enabling Ford to lower the Model T's price. As sales increased, further economies of scale were realized, and Ford was able to continually lower the Model T's price until, by 1917, it sold for less than \$300.²⁸ Thanks to the Model T and competitor companies, including General Motors and Chrysler, that copied Ford's assembly line production process, automobile prices decreased, and automobile sales increased dramatically. By 1915, over 2 million motor vehicles were on America's roads. Importantly, trucks replaced horsedrawn wagons as the primary means of transporting goods over short distances. As automobile and truck ownership increased, the public began to drive out into the countryside. Often finding themselves stuck in mud or with a flat or broken tire from the rough ride, the public's demand for improved roads, in both cities and rural areas, intensified.²⁹

Despite the growing demand for publicly financed roads and bridges, the national government continued to appropriate token amounts for internal improvements during the early 1900s. As mentioned previously, due to constitutional considerations, the national government relied primarily on land grants to states to subsidize railroad expansion and canal and road construction. However, by the early 1900s much of the national government's land had been given away and auctioned off. The new emphasis was on land preservation. For example, President Benjamin Harrison (R, 1889–1893) set aside millions of acres of national land in 1891 by declaring them forest preserves. In 1906, President Theodore Roosevelt (R, 1901–1908) started the National Park System. It looked as if the national government's role in providing subsidies for transportation projects was about to wane just as the public's demand for subsidies was on the rise. Then, in 1913, the 16th Amendment, establishing the national income tax, was ratified.

The national income tax was not broadly applied and did not, at least initially, generate significant amounts of additional revenue. In 1915, the income tax generated only \$125 million, or 24 percent of the \$513 million generated by national taxes. However, the income tax's legalization provided the national government with an elastic revenue generator that gave it an unprecedented opportunity to expand its role in domestic policy. One of the first things that national government officials did with the added revenue was to fund highway construction projects.

The *Federal Road Act of 1916* created, by far, the national government's most significant intergovernmental grant program prior to the New Deal era. It authorized the expenditure of \$75 million over five years to improve rural postal roads. The funds were provided to states on a 50–50 matching basis.³⁰ States did not object to this intrusion into one of their domestic policy areas because funds were directed to rural areas. At that time, state apportionment rules allocated most of the seats in state Houses and Senates to representatives and senators from rural districts. In addition, rural roads were the primary means for farmers to get their produce to market. It would have been politically foolish for state politicians to turn down a national subsidy for agriculture when most constituents at the time were farmers.³¹

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The *Federal Road Act of 1916* had administrative requirements that foreshadowed conditions routinely attached to many contemporary grants-in-aid programs. For example, expenditures were prohibited in communities with populations exceeding 2,500, and states had to establish a highway department or commission to oversee program operations and set priorities and detailed plans. At that time, only 39 of the 48 states had a state road department. Advanced examination of projects, detailed progress reports, audits of expenditures, and examination of finished work were also required.³²

By 1917, all 48 states had a state road agency. This marked the beginning of the centralization and professionalization of highway policy in the United States. Prior to this time most road construction planning was left to local government officials, many of whom had relatively little professional training and often let political and economic considerations influence where roads and bridges were located and how they were designed. By the mid-1920s, national and state road engineers communicated with each other regularly and devised strategies to centralize their authority over the construction of highways and bridges. In 1925, the national government's Bureau of Public Roads had worked out arrangements with all of the state road agencies for uniform route markings with roads running east-west having even numbers and roads running north-south having odd numbers. Although the collaboration between national and state road engineers was not viewed as a power grab by local government officials, it was systematic of a fundamental shift in power from local government officials to state and national government officials. By the mid-1950s, national and state engineers increasingly wrote project specifications, supervised the work of local transportation officials, and limited their transportation initiatives. State road engineers, for example, developed sophisticated rationales for maintaining or extending highway systems and routinely imposed those standards on local government officials. These standards were typically based on the premise that highways were financed by users and, consequently, should serve traffic, not bolster local property values.³³

The United States' entry into World War I temporarily interrupted the expansion of national government funding for road construction and improvement. At that time, railroads dominated the transportation of goods and people over long distances, carrying 84 percent of intercity freight and 85 percent of all passenger miles traveled by public carriers. Intercity automobile and air travel was negligible.³⁴ World War I, however, made it abundantly clear that the country needed an integrated network of roads, not just a piecemeal improvement in local roads. The railroads, especially in the Northeast, were overwhelmed as freight cars shipping war goods became mired in monumental traffic jams. The railroad's difficulties in accommodating a wartime economy highlighted the need to create an alternative system of transportation for national defense purposes. The situation became so severe that the national government temporarily took over the railroad system on December 26, 1917, in an attempt to unsnarl the threatened paralysis of the national economy.³⁵

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By 1920, World War I was over, but memories of the railroads' troubles were still vivid in the minds of the nation's political leaders. The congressional reauthorization of the *Federal Highway Act* focused on the need to create a more integrated, national system of roads and bridges capable of moving both troops and goods over long distances during a national emergency. The *Federal Highway Act of 1921* did precisely that by mandating that the program's funds be concentrated on roads that were interstate in character and expedited the completion of "an adequate and connected system of highways."³⁶ In addition, each state was required to designate 7 percent of its road mileage as primary, and only that mileage (about 200,000 miles) was eligible for funding, still on a 50–50 cost share basis. National funding was increased to \$75 million annually, and the U.S. Bureau of Public Roads, under the leadership of Thomas H. MacDonald, used the funds to begin the nation's first genuine national highway system.

By the end of the decade, funding for the *Federal Highway Act* was increased to nearly \$200 million annually, accounting for more than three-quarters of national intergovernmental expenditures. Farmers and agricultural distributors interested in promoting the nascent trucking industry lobbied hard for additional highway funding. Although railroads were the primary means to transport agricultural products to market, trucks provided a competitive alternative, especially for perishable items, that helped keep railroad freight rates in check.³⁷

The 1920s were called the "golden age" for road building, with most of the projects providing gravel surfaces. By the end of the 1920s, there were 23 million cars and 3.5 million trucks on the roads (about 60 percent of American families owned a car), and their owners were increasingly anxious about road conditions. Also at this time the American love affair with cars became apparent.³⁸ As one author put it, automobile ownership became a powerful social symbol, a cultural icon, and an emotional outlet for millions of Americans. Part of automobile ownership's appeal, he argued, was that it empowers people, allowing them to make

a vastly wider range of choices relating to personal mobility than he or she would have without a car. Auto drivers are freed from the constraints of the fixed routes and rigid schedules of train or bus riders. They can choose many more destinations; select the companions, if any, traveling in their vehicle; carry much more luggage than they could on a bus; never have to stand because all the seats are taken; stop for refreshment when they want to; listen to their favorite music or news; and not worry (too much) about being mugged while waiting at the bus stop or subway station.³⁹

By the 1930s, getting "your" driver's license had become a major life event, signifying for the nation's population of 16-year-olds the beginning of their transition from youth to adulthood and, for others, the means to participate more fully in American society. Not having a driver's license was tantamount to being un-American. However, despite the automobile's emergence as a central part of American society, national government funding for highways and bridges remained at the \$150–\$180 million level throughout the 1930s, primarily because

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the Great Depression reduced business activity, which, in turn, caused the national government's revenue to decline. In 1932, the national government imposed a one cent per gallon tax on gasoline to address an escalating annual budget deficit approaching \$1 billion. The gasoline tax generated \$125 million in 1933 and averaged about \$200 million annually through the rest of the decade. The funds were deposited into the national government's general revenue account and were not set aside for transportation projects.

The nation's massive unemployment, peaking at over one-third of the workforce, altered the way that elected officials viewed highway construction. They continued to view it as a means to address constituents' demand for relief from traffic congestion, foster long-term economic development opportunities, and appease the politically active highway lobby (oil and gasoline companies, automobile manufacturers, concrete and asphalt suppliers, etc.). However, they now also saw highway construction as a vital component of an overall effort to combat short-term unemployment. As always, elected officials could point to highway construction projects in their districts as a visible signal to their constituents that they were doing something about the nation's unemployment problem.⁴⁰

Congress purposively targeted most of its transportation assistance during this era to smaller, district-level projects. By "spreading the wealth," Congress enabled its members to claim credit for doing something about unemployment. As part of the movement to spread funding to as many districts as possible, urban segments of the primary road system were made eligible for national funding in 1934. Two years later, secondary "feeder" roads were also made eligible. Unlike Germany, which built the autobahn, the world's first freeway system, the United States focused its highway construction resources on local and state road systems, where traffic congestion was an increasing problem.

Although the nation's road system was still fragmented and in relatively poor condition, by the 1930s automobiles were displacing streetcars as the primary means of travel within cities, and trucks were challenging railroads for moving goods, especially perishable produce, over short and medium distances. However, many national government officials were worried that the trucking industry might collapse from cutthroat price competition as truckers competed for dwindling business during the Great Depression. They also worried that price competition between the trucking industry and the regulated railroad industry would lead to bankruptcies in both industries. In an effort to promote the trucking industry's growth and protect railroads, the national government regulated the trucking industry in 1935.

The *Motor Carrier Act of 1935* empowered the Interstate Commerce Commission to establish regulations governing which trucking routes were available for service, the discontinuation of services, mergers within the industry, and shipping rates. Trucking companies that operated entirely within one state, carried only unprocessed agricultural products, operated within designated concentrated commercial areas, or were owned by a company and used to ship only its own goods were exempt from the regulations (about 60 percent of all trucking companies).

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were exempt). The 18,000 trucking firms in business in 1935 that were now under the Interstate Commerce Commission's jurisdiction were granted grandfather rights to maintain their routes and services. The Interstate Commerce Commission subsequently restricted the entry of new trucking firms to reduce price competition in the industry. New applicants, for example, had to prove that existing firms were not already providing the service and that they would not cause economic damage to an existing firm. The Interstate Commerce Commission also tended to approve rates based on what the market could bear rather than on the actual cost of transporting goods. Because entry was tightly restricted, the only way that most new trucking companies got started was by buying hauling rights from an existing carrier. The Interstate Commerce Commission's operating certificates became many trucking companies most valuable asset, and banks routinely accepted them as loan collateral.⁴¹

The Interstate Commerce Commission typically refused to allow trucking firms to eliminate nonprofitable routes if it had lucrative ones to offset the losses. This practice protected smaller communities from becoming isolated from the economic mainstream. Consumer advocates and the trucking industry complained that cross-subsidization of non-profitable routes with profitable ones often resulted in empty or nearly empty backhauls and the retention of unnecessary trucking capacity. This, in turn, resulted in artificially high costs for haulers and higher prices for consumers.⁴² A similar circumstance existed for both the railroad industry and, starting in 1938, airlines. For example, the Interstate Commerce Commission routinely required railroads to provide intercity passenger rail service, regardless of its profitability, to protect smaller communities from becoming economically isolated from the rest of the nation. In exchange, the entry of new railroads was restricted, and freight rates were set at levels based on what the market could bear rather than on the actual cost of transporting goods. The national government, through the Civil Aeronautics Board, regulated the airline industry in a similar fashion.

In anticipation of its entry into World War II, the national government increased its gasoline tax to one and a half cents per gallon in 1940. The funds, averaging about \$300 million annually during the early 1940s, went into the general revenue account and were not set aside for highway projects. Although defense expenditures became the national government's top priority during World War II, the national government continued to spend \$180 million to \$200 million annually on highways and bridges until the war's conclusion in 1945.

After the war, national funding for highway and bridge construction increased incrementally, reaching \$498 million in 1950. This was approximately the same amount generated by the gasoline tax. Although no state refused funding, the National Governors' Conference (now called the National Governors' Association) repeatedly asked the national government to give states the national tax dollars used to fund the program and allow them to build highways and bridges without national interference. Also, although the national government was not legally required to spend the funds on highways, the highway lobby strongly opposed the

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diversion of those funds to other uses and routinely publicized comparisons between the amount raised by the national government's gasoline tax and the amount appropriated for highways.⁴³

State and local governments continued to outspend the national government on highway projects during the 1930s, 1940s, and early 1950s. For example, in 1940 the national government spent \$392 million on highways and bridges, and the states and localities spent \$854 million. In 1950, the national government spent \$967 million on highways and bridges, and the states and localities spent \$2.4 billion. Instead of using general revenue to fund road construction and repair, by 1929 every state had imposed a tax on gasoline sales, ranging from two to six cents per gallon. The revenue financed road and bridge construction, primarily main trunk roads and, to a lesser extent, secondary roads. Between 1930 and 1940, state gasoline tax revenue soared from \$494 million to \$870 million annually. Motorist and trucking organizations disagreed over specific gasoline and diesel fuel tax rates, with motorist organizations, like the American Automobile Association, advocating higher fees on truckers to compensate for their heavy rigs' extra wear and tear on roadways. However, they both supported the imposition of state gasoline taxes as the primary means of generating highway revenue so long as the funds were spent on highways. At that time, many states diverted motor fuel tax revenue to other uses. For example, 19 percent of state gasoline tax revenue in 1936 was diverted to schools. Motorist and trucking organizations also strongly objected to using tolls to finance highway projects. In their view, not only did tolls restrict traffic flow, but the combination of imposing a toll as well as motor fuel taxes on motorists and truckers was a form of double taxation. At that time, tolls were used by some states, primarily in the Northeast, to fund unusually costly highway projects, typically bridges and tunnels. Tolls, at that time, were prohibited on nearly all nationally financed road projects (exceptions were granted for several high-cost bridges and tunnels) in large part due to opposition from the trucking industry and the American Automobile Association.⁴⁴

Between 1921 and 1940, the number of paved miles in the United States increased to 3 million, and limited-access highways were opened in Chicago, Los Angeles, New York City, and Pittsburgh. In 1939, Thomas H. MacDonald, chief of the U.S. Agriculture Department's Bureau of Public Roads, promoted the idea of constructing a 30,000-mile national expressway system to improve rural and urban traffic flow, eliminate urban and rural decay, and create thousands of jobs.⁴⁵ Two years later, President Franklin D. Roosevelt (D, 1933–1945) appointed a National Interregional Highway Committee, headed by MacDonald, to further evaluate the need for a national expressway system. The committee's January 1944 report, *Interregional Highways*, recommended the construction of a 33,900-mile national highway system, plus an additional 5,000 miles of auxiliary urban routes. Congress later authorized \$20 billion for a 40,000-mile National System of Interstate Highways in the *Federal-Aid Highway Act of 1944*. However, World War II precluded spending billions on highways, and only token amounts were appropriated for their construction.

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Although there was little opposition to the construction of publicly owned and maintained highways and bridges, there was little consensus about how to go about it. City planners and local government officials saw highway and road construction as a means to address and revitalize decaying urban centers. State highway engineers, whose views were articulated by the American Association of State Highway Officials and defended by the National Highway Users Conference (composed of trucking, manufacturing, and oil companies), viewed highways as a means to move traffic. These differences created much debate over highway design standards, the location of highways, and the diversion of gasoline tax revenue.⁴⁶

State highway engineers favored limited-access highways and expressways because they were the most efficient means to move traffic over fairly long distances. City planners and local government officials favored roads with multiple access points because they encouraged construction of homes and businesses along the highway's rights-of-way, which, in turn, generated additional tax revenue for localities.

State highway engineers also clashed with city planners and local government officials over the location of highways. City planners and local government officials often recommended using highway construction projects to eliminate residential slums and decaying industrial areas. State highway engineers were less interested in slum clearance and urban renewal than in locating highways in places that moved the most traffic at the least cost, regardless of the economic, social, and/or political status of affected neighborhoods.

State highway engineers also objected to the tendency of both state and local government officials to divert gasoline tax revenue to other uses. In their view, using gasoline tax revenue for urban renewal, schools, and other social causes was tantamount to theft from the pockets of highway users. Many government officials saw nothing wrong with diverting state gasoline tax dollars to nontransportation uses. They considered transportation users' fees as one of several revenue sources available to assist them in their effort to improve their community.

PRIVATE OR PUBLIC SOLUTIONS: *THE FEDERAL HIGHWAY ACT OF 1956*

The nation's economic expansion following World War II led to a virtual explosion in both car and truck ownership. Motor vehicle registration jumped from 31 million vehicles in 1945 to 49 million in 1950. The phenomenal growth in automobile and truck ownership led to increased traffic congestion throughout the nation. State and local governments reacted to angry motorists' demands for traffic relief (and opposition to increases in user fees) by issuing hundreds of millions of dollars in bonds for road and bridge construction (over \$650 million in bonds were issued in 1950 alone). Most states also stopped, or dramatically curtailed, the diversion of highway user fees to nonhighway uses. By 1950, 21 states had adopted legislation outlawing the diversion of highway user fees for nonhighway purposes. Yet, despite the increased expenditures, it was becoming increasingly clear that state and

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local government officials lacked the fiscal resources necessary to meet the growing demand for highways and other surface transportation projects. As traffic congestion became a salient political issue for local, state, and national government officials alike, it became increasingly clear that the national government was going to have to play an increasingly important role in what had traditionally been primarily a state and local government responsibility.

As mentioned earlier, Congress authorized the construction of a \$20 billion, 40,000-mile interstate highway system in 1944 but subsequently appropriated relatively token amounts for the system. When President Dwight Eisenhower (R, 1953–1961) was first elected to the White House, the national government was spending around \$ 100 million annually on interstate highways. At that time, there was consensus within Congress that an interstate highway system would boost the national economy and was needed to move military equipment and personnel during a national emergency. It also had President Eisenhower's strong support. As a result, several members of Congress expressed interest in reexamining the question of how to find the resources to fund a complete, national interstate highway system.

President Eisenhower was a fiscal conservative who, as a general rule, did not support national intrusion into areas typically viewed as state and local government responsibilities. However, as the commander in chief of the Allied forces, he experienced first hand the advantages that Germany enjoyed during World War II because of their autobahn network of highways. Also, as a young man, he participated in the U.S. Army's first transcontinental motor convoy in 1919. During the 62-day trip from Washington, D.C., to San Francisco, California, then-Lieutenant Colonel Eisenhower experienced all of the woes known to motorists at the time: a seemingly endless series of mechanical breakdowns, vehicles stuck in mud and sand, and trucks crashing through wooden bridges. Given his experiences, President Eisenhower was a strong advocate for road-building projects. However, the nation's involvement in the Korean conflict from June 25, 1950, to July 27, 1953, precluded major increases in funding for domestic projects. Once the cease-fire was in place, President Eisenhower focused, once again, on the interstate highway system by naming General Lucius D. Clay chair of the President's Committee on a National Highway Program.⁴⁷

To no one's surprise, the Clay Committee recommended that the national government go forward with plans to construct an interstate highway system. General Clay summed up the arguments of those favoring the creation of an interstate highway system in his testimony before the House Committee on Public Works on April 20, 1955:

[T]he automobile has become a very vital part of our economy.... It has become more than a means of transportation. It has become a very vital part of our family life, both for recreation and for the movement of children to schools, for the movement of the housewife to shopping, and for the movement of the worker to work. Loss of lives in accidents due to inadequate highways is very real. Moreover,...the...interstate system is a system designated by the

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Defense Department as essential to national defense for the movement of troops in the event of war, more important for the movement of industrial products and, with civil defense now a more important factor, for the dispersal of population in the event of atomic attack.⁴⁸

The military's support for the interstate highway system, coupled with support from the National Governors' Conference, National Association of Counties, American Municipal League, U.S. Conference of Mayors, and other state and local government organizations, was critical in garnering support of conservative congressional Democrats who normally opposed national expenditures in areas traditionally seen as a state and/or local government responsibility. However, there was little consensus on how to raise the necessary funds. The U.S. Bureau of Public Roads had reported in 1939 that most roads outside of the Northeast, southern California, and Florida did not have traffic volumes necessary to cover costs through tolls.⁴⁹ Moreover, the American Automobile Association, other organizations representing motorists, and the trucking industry vehemently opposed the use of tolls to finance the system. All interested parties were also reluctant to raise motor fuel taxes to pay for it. Clay's committee recommended the creation of a Federal Highway Corporation that would float 30-year bonds to finance the system. The bonds would be paid by the national government's two cents a gallon tax on gasoline, which, at that time, generated over \$800 million annually. However, state highway officials viewed the Federal Highway Corporation as a threat to their autonomy, and Senator Harry Byrd (D-VA), chair of the Senate Finance Committee, opposed borrowing money to finance the system. He wanted a pay-as-you-go plan that avoided interest charges. The disagreement over financing prevented any final action during the 1955 legislative session. The following year, the logjam was broken when it was decided to follow the National Governors' Conference's suggestion to create a Highway Trust Fund, similar to state highway trust funds. The Highway Trust Fund's revenue would be generated from national fuel taxes and taxes on tires and motor oil. The elimination of the Federal Highway Corporation and the offer to pay for 90 percent of the interstate highway system's cost appeased state highway officials. Prohibiting tolls on nationally financed interstate highways, with an exception granted for the 2,447 miles of toll expressways already in operation, and a relatively small increase in motor fuel taxes from two to three cents per gallon appeased motorist and trucking organizations. The funding compromise solved the problem of how to fund what President Eisenhower later called the "greatest public works program in history."⁵⁰ Specifically, the *Federal Aid to Highway Act of 1956* created a 41,000-mile national system of interstate and defense highways with a target completion date of 1972. To help finance the national government's share of the cost (\$23.6 billion of an anticipated \$27 billion), the Highway Trust Fund was expected to collect an estimated \$14.8 billion over the program's 16-year construction period from a three cents per gallon excise tax on gasoline, diesel, and special motor fuels; a nine cents per pound excise tax on inner tubes; an eight cents per pound excise tax on automobile tubes; a three cents per pound excise tax on tire retreads; half of the 10 percent manufacturer's tax on

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trucks, buses, and truck trailers; and a \$1.50 per pound weight fee on trucks and buses, excluding local transit vehicles weighing over 26,000 pounds. The weight fee was imposed to account for the extra wear and tear that heavy trucks caused to the nation's roadways. The intent was to target the interstate highway system's cost onto those who used it without resorting to tolls that would impede traffic. Congress planned to appropriate money from the general treasury to make up the difference between the program's anticipated cost and the revenue generated in the Highway Trust Fund.⁵¹

The *Federal Aid to Highway Act of 1956* was a defining moment in the development of the nation's transportation policy. In theoretical terms introduced by James Wilson, it transformed highway policy from a primary focus on client politics to a blend of both client and majoritarian politics.⁵² This blend was an important factor in helping to explain why the nation's highway policy remained relatively the same for a generation. Unlike client politics, where benefits are targeted to specific groups, and costs are spread relatively widely, majoritarian politics have benefits and costs that are widely dispersed. The *Federal Aid to Highway Act of 1956* continued the client politics focus by providing subsidies to the highway lobby. At the same time, the public perceived the program in majoritarian terms because it promised to make the entire nation accessible by automobile and truck through the construction of toll-free roads; ensure economic growth throughout the nation, without adversely affecting one region at the expense of the other; and disperse costs relatively widely through the program's user fees.⁵³ As one author explained: "As long as the trust fund principle was broadly accepted, its client politics operated smoothly and unobtrusively behind the majoritarian elements, like a road project being built behind a large 'Your Highway Tax Dollars at Work' sign."⁵⁴

For the next 35 years, the national government focused most of its surface transportation resources on the construction of interstate highways. Moreover, the *Federal Aid to Highway Act of 1956* centralized highway policy-making authority in the United States by elevating the role of national and state highway department officials in determining the scope and nature of the nation's highway system. Local government officials and urban planners still played a role, but the overall design and location of the interstate system and, increasingly, primary and secondary highways as well were decided by national and state government officials whose goals often conflicted with those held by local government officials. As mentioned previously, local government officials were interested in fostering local economic growth as well as improving traffic flow. They were also more interested than state or national government officials in using interstate highway construction to clear slums and other blighted areas, a difference in outlook that led to many conflicts with state and national government officials over route locations. In addition, national and state highway engineers imposed professional, uniform road construction and design standards throughout the nation. Local government officials resented the imposition of these standards because they increased construction costs and impinged on their autonomy.⁵⁵

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CONCLUSION: FOLLOWING THE PATH OF LEAST POLITICAL RESISTANCE

From 1956 to 1991, five issues dominated American surface transportation policy: the escalating cost of completing the interstate highway system, using Highway Trust Fund revenue for nonhighway uses, crossover sanctions, suburban sprawl, and the use of highways to clear slums and blighted areas and that practice's effect on minority neighborhoods and the urban poor. There was also considerable debate over the national government's regulation of the trucking industry. These debates and their resolution are examined in the next chapter. It is important to note that each of these issues was debated and decided by Congress, signifying the public sector's growing hegemony in surface transportation decision making, and the national government's increasingly dominant role in that decision-making process. It is also important to note that up until this point the national government acted on each transportation mode separately, reacted to issues as they arose, rarely anticipating issues or taking a long-term, proactive approach. It also did not attempt to develop an integrated, intermodal strategy to address traffic congestion. Instead, it expanded transportation capacity in all available transportation modes, with an added emphasis on expanding highway capacity. There was little interest in coordinating transportation modes to maximize transportation efficiencies or to address transportation inadequacies.⁵⁶ This was the path of least political resistance. By focusing on enhanced capacity, national, state, and local government officials garnered political support from all affected industries. Coordination and integration of the various transportation modes would have required them to make choices according to hard-to-agree-upon principles and then prioritize and allocate resources accordingly. These decisions were certain to upset one organization or another and turn highway policy into a zero-sum game, with winners and losers. When presented with a choice, elected officials avoid making enemies. The developmental system in place appeased many politically active organizations whose support on Election Day was greatly appreciated.

As mentioned earlier, the participants in surface transportation policy making during the 1940s and early 1950s were engaging in what James Q. Wilson described as client politics. This occurs when the program's benefits (in this case, government subsidies) are targeted to specific groups (construction companies, engineering firms, automotive manufacturers and dealers, oil refiners, gasoline retailers, etc.), and the program's costs are dispersed widely to all taxpayers. Because costs are dispersed, taxpayers do not organize in opposition, and conflict in the policy-making process is relatively low.⁵⁷ However, the economic regulation of the trucking industry was a different matter. It had elements of what Wilson called interest group politics. It occurs when specific groups try to grab all of a program's benefits and shift all of the costs onto other groups. Interest group politics often pits one interest group against the other and is marked by relatively high levels of conflict.⁵⁸ In this case, the railroad industry wanted to use the national government's regulatory powers to prevent cutthroat price competition

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from the trucking industry, its main competitor for long-distance freight hauling. However, the trucking industry welcomed economic regulation because it guaranteed profits in an era of very great economic uncertainty. From their perspective, the imposition of economic regulations was an extension of the Federal Aid to Highways program's client politics because the program's benefits (restricted entry of new trucking companies and price regulations based on what the market will bear) were targeted to their industry, and costs (higher prices) were dispersed relatively widely to consumers.

Although national policymakers did not attempt to create a comprehensive, systemwide solution to the nation's traffic congestion problems during their deliberations on the Federal Aid to Highways program, the regulation of the railroad, trucking, and aviation industries had systemwide effects. For example, the cross-subsidization of nonprofitable routes, typically in rural areas, with profitable ones, typically in urban areas, in all transportation modes had a systemwide effect. Instead of pitting one type of transportation industry against the other, cross-subsidization pitted one type of area (rural) against another (urban). Without these regulations, transportation costs in the nation's rural areas would have been higher, and service would have been lower. Conversely, without these regulations, transportation costs in the nation's urban areas would have been lower, and service would have been higher. Cross-subsidization was popular in the U.S. Senate, where each state, regardless of its population, has two senators. The two senators per state rule augmented the rural states' political clout in the U.S. Senate, enabling this policy to survive the congressional policy-making process for many years.

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