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# The Importance of Transportation Infrastructure Investments to the Nation's Future

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# Testimony to the

# **Subcommittee on Surface Transportation**

Committee on Transportation and Infrastructure U. S. House of Representatives

on

# The Importance of Transportation Infrastructure Investments to the Nation's Future

by

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### Summary

Mr. Chairman, I am pleased to be given the opportunity to appear before this Committee to testify on the importance of transportation infrastructure to the nation's future economic prosperity. There should be no doubt in anyone's mind that transportation infrastructure is the backbone of our market economy. Therefore, in considering reauthorizing the Intermodal Surface Transportation Efficiency Act, the question is not whether the existing highway system is important, but rather what is the best strategy for additional investment in transportation infrastructure.

Five years ago, when Congress began to deliberate on what eventually became the ISTEA, policy makers were told of a large deficit in infrastructure investment and how this deficit was linked to the general slowdown in U.S. productivity growth. Estimates were offered that showed high returns to the economy from infrastructure investment. Such extraordinary returns to public capital implied considerable under investment in the nation's public capital stock. The prospect of high returns to government capital stock suggested that infrastructure investment plays a central role in economic development and future prosperity.

Today, we benefit from more research on the linkage between highway infrastructure and economic performance. These results point to two important considerations for infrastructure policy. First, public capital shares the stage with private capital investment, research and development, and education and training as the most important factors contributing to U.S. productivity growth. Second, significant regional and sectoral imbalances in meeting transportation needs exist and must be addressed. The nation benefits from a system of highways that appears to meet the current needs of the economy. However, the system is maturing and considerable investment is needed to maintain and enhance the system to meet future needs.

The nation depends upon its extensive highway system. Highways are the primary means by which businesses transport their products and markets are linked together. More than 70 percent of the nation's manufactured goods are transported by trucks. A recent survey that we conducted of midwest manufacturers underscores their dependence upon trucks to deliver their products within 24 hours to customers located up to 500 miles away. Well-maintained highways are critical for cities and states to retain and attract business. CEOs list access to major highways as a key factor in their location decisions. My research shows that highway investment generates additional jobs from new business startups, primarily from small businesses.

In addition to providing a direct service to businesses and households, highways affect economic performance by enhancing the productivity of other factors of production, such as labor or private capital, and by creating an attractive economic climate. In addition, highway construction contemporaneously stimulates local economies.

The United States must continue to invest in highways. The needs vary widely across regions and across industries. There are many regions that experience bottlenecks and could benefit considerably from additional highway investment. There are other regions that appear to have more than adequate infrastructure, considering their current levels of economic activity.

Studies also show that additional highway infrastructure would benefit specific industries. For example, there is evidence that regions with heavy concentration of primary metals plants, motor vehicle assembly plants, or printing and publishing facilities would benefit from additional highway investment. On the other hand, areas with high concentration of service and retail establishments appear to have more than adequate highways.

Therefore, it is my view that government must remain committed to improving its comprehensive transportation system, and that infrastructure investment decisions must be assessed on a region-by-region, project-by-project basis, using sound benefit-cost analysis to determine the project's effect on local economic development.

One of the important innovations of ISTEA is to give those governments that are best suited to make infrastructure decisions the responsibility, flexibility, and means to do so. This empowerment and partnership is critical for the strategic planning necessary to make optimal use of increasingly scarce government funds. Reauthorization of ISTEA should continue to extend greater responsibility to state and local governments. However, it is also important to strike a balance between allowing local jurisdictions to pursue their own interests and ensuring that the federal government retains the means and expertise to maintain and improve the network that links the regional markets that comprise our complex national economy.

In closing, an efficient transportation system is the foundation of our nation's commerce, and highways is an integral part of this system. We must ensure that our highway system is properly maintained and strategically enhanced. The allocation issue comes into focus at the regional level, and wise investment calls for all levels of government to come together and identify, assess, and undertake highway infrastructure investment that will pay the greatest dividends for the nation now and in the future.

#### I. Introduction

Five years ago, when hearings began on what eventually became the Intermodal Surface Transportation Efficiency Act of 1991, public infrastructure received considerable attention as a key factor in the performance of the U.S. economy. Researchers at that time linked assessments of a severe deficit in public infrastructure investment to a period of sluggish productivity growth. A few studies found extraordinary returns to public capital investment, which indicated significant under funding of public capital stock. These estimates also promised almost immediate payback in terms of higher output growth from investment in public capital. The returns were so large that it appeared that a broad-based investment strategy was warranted. The nation appeared to be so under invested in public infrastructure, that an additional dollar invested in any project located anywhere in the United States would reap huge returns.

Since that time, these estimates have been subjected to considerable scrutiny. More recent studies, which addressed many of the criticisms leveled against the previous studies, found more modest results. Still, the emerging consensus is that transportation infrastructure contributes to economic productivity. However, there is little evidence of a broad under provision of transportation infrastructure throughout the nation. Therefore, the call for a massive infusion of investment dollars into the nation's transportation infrastructure, along the same magnitude of replicating the current interstate highway system, is not supported by the more recent research.

What did emerge from the research was strong evidence that infrastructure needs varied widely across regions and industries. Furthermore, research emphasized the need for pursuing prudent investment strategy. Since the returns to infrastructure investment are more modest than previously estimated, it becomes apparent that the nation can benefit most from infrastructure investment if projects are carefully selected using sound benefit-cost analysis. However, measuring benefits is difficult. Infrastructure capital lasts a long time, and it has the potential to affect a broad spectrum of economic activities within regional economies.

Consequently, the purpose of my remarks is to identify the various channels through which transportation infrastructure can affect regional economic development. Assessing the importance of transportation infrastructure on regional economies is useful for three related reasons. First, most of the transportation infrastructure is put in place by state and local governments. Second, it is at the regional level that most of the effects of infrastructure investment will be observed. Third, in order to accurately assess the merits of investing in particularly projects, the benefits and costs must be measured within the context of a regional economy.

I will address two broad issues. First, I will highlight various features of transportation infrastructure that are different from other forms of infrastructure and other factors in the regional economic growth process. Second, I will summarize the evidence from current research about the various ways in which transportation infrastructure affects the regional growth process.

# II. Transportation Capital Stock

Before considering the effect of transportation infrastructure on economic output, it is instructive to understand the capital stock estimates used in linking infrastructure to productivity growth. In most of the literature, transportation infrastructure is measured as highway capital stock. The value of highway capital stock is estimated using a perpetual inventory technique in which highway investments (minus depreciation) are summed over time. Since the average life of a highway is around 40 years, using assumptions of the U.S. Department of Transportation, more than 50 years of annual expenditure data are needed to construct capital stock estimates.

A study sponsored by the National Cooperative Highway Research Program estimated state and local highway capital stock, which includes the interstate highway system and national roads, in 1989 to be \$508 billion in 1987 constant dollars.<sup>1</sup> These investment figures include expenditures by state and local governments. In contrast, the private capital stock of the U.S. manufacturing sector totaled \$998 billion in constant 1987 dollars.

According to the depreciation assumptions, \$18.5 billion (in 1987 dollars) was needed in 1989 to simply maintain this stock of highways and roads at its current level of service. This investment amounts to about 3.6 percent of total infrastructure investment. According to the estimates, \$30.4 billion of constant 1987 dollars were invested in 1992. Subtracting out the \$18.5 billion leaves about \$12 billion for additional investment.

Therefore, when studies consider a 10 percent increase in public capital stock, they mean 10 percent over the amount required to maintain a constant level of public infrastructure. In 1989, the net addition to the state and local highway and street capital stock totaled \$12 billion, or 2.4 percent of the capital stock. A 10 percent increase would amount to \$50.8 billion above the \$18.5 billion needed to cover depreciation. As will be shown later, current studies show that such an increase would bring about only a half a percentage point in the productivity of the manufacturing sector.

I should caution that these numbers are presented here only to provide a perspective on the analysis that is reported later in this document. These estimates do not indicate the amount needed to maintain or improve the U.S. highway system.

#### III. Transportation Infrastructure as a Productive Input

When considered as a determinant of local economic development, transportation infrastructure possesses several characteristics that are unique from other factors of production. First, public capital is site-specific. Once highways and bridges are put in place, their use and thus their economic value depends on the economic activities that utilize them,

<sup>&</sup>lt;sup>1</sup>Michael Bell and Therese McGuire, "Macroeconomic Analysis of the Linkages Between Transportation Investments and Economic Performance," NCHRP 2-17(3), 1993.

and this depends largely on the level and type of activity located immediately around these facilities.

Second, public infrastructure is typically an unpaid factor of production. Although firms pay taxes to finance the construction and maintenance of highways, for example, the payments by firms are not on a per unit basis and are less than the cost of constructing an additional mile of highway around that particular facility.

Third, public infrastructure is more a necessary condition than a sufficient condition for economic development. While public infrastructure construction can provide local jobs, unless the project is of considerable size and ongoing, sufficient demand to sustain local economic development must come from other sources.

Fourth, while the cost of constructing additional highways within a region is shared by all taxpayers, taxpayers typically use only a small portion of the infrastructure they help finance. Consequently, the distribution of benefits of highway (or other transportation facility) construction are not uniformly distributed among taxpayers nor are they distributed according to their share of the costs.

Fifth, infrastructure, particularly transportation infrastructure, has the greatest economic value as a network. Withing a region, streets and roads link households to other households, firms to other firms, and households to places of work. On a broader scale, highways connect regional markets to other regional markets.

Sixth, in assessing the effect of transportation on economic development on a regional basis, it must also be asked whether the development was a new activity or was it really a shift in activity from prior location to new sites served by the highway construction.

# IV. Transportation and Regional Economic Development

Transportation infrastructure affects both the supply and demand factors of regional growth. Supply factors expand the production capabilities of the area either by increasing the amount of resources in the region or by enhancing the productivity of existing resources and consequently lowering production costs. Demand factors utilize existing resources, without necessarily expanding the region's production capabilities. The primary role of transportation infrastructure is to add to a region's resource base and provide the foundation for economic growth. Transportation infrastructure does not directly stimulate a local economy. Obviously, infrastructure construction creates jobs, but this effect is shown to be short-lived and to be small relative to the combined supply-side impact. Therefore, the discussion will focus primarily on transportation infrastructure as a stock of physical capital providing essential services to businesses and households over an extended period of time.

#### Direct Service to Businesses

Transportation services are fundamental to a firm's production process. Without transportation, the flow of inputs into a plant and the shipment of products out of a plant would not be possible. Moreover, markets could not exist without the physical means of bringing producers and consumers together. An increase in the stock of highways and streets would then increase the quantity of transportation services available to firms and potentially reduce their costs of producing a given level of output.

However, the proportion by which transportation services increase with expansion of the stock of highways and streets depends on the specific conditions of the individual regions, particularly the utilization of the present transportation system and the geographic location of economic activity. For example, if the present system of highways and streets in a region is generally underutilized, then adding to the stock of highways should have little effect on the amount of transportation services available to a firm. On the other hand, if the location of firms changes within a region, adding highways to link these firms with others in the area increases aggregate transportation services within a region, even though the other arteries may still be underutilized. In either case, if the present highway system is over utilized to the extent that congestion commonly occurs, increasing highway stock will expand transportation services within the region and lower the cost of transportation services to individual firms.

Studies by Aschauer linked public infrastructure to macroeconomic performance.<sup>2</sup> His results showed that the slowdown in the growth in public infrastructure, primarily after most of the interstate highway system was completed, coincided with the protracted slowdown in U.S. productivity. His estimates of extraordinary returns to public infrastructure indicated a severe shortfall in the provision of public infrastructure and called for a large infusion in infrastructure investment. According to his estimates, a dollar invested in public infrastructure would be five times more stimulative to the national economy than a dollar invested in private capital.

Several studies criticized the magnitude of Aschauer's estimates, pointing out several statistical problems.<sup>3</sup> Aaron (1990), in discussing Aschauer's work, argued that time series data do not vary enough to be given serious consideration, leading to spurious correlation. Tatom (1990) has further pointed out that there are many confounding factors that occur over time, such as oil rice shocks and demographic changes, that are not accounted for in these two

<sup>&</sup>lt;sup>2</sup>David A. Aschauer, "Is Public Expenditure Productive?" Journal of Monetary Economics, 23, March 1989, 177-200.

<sup>&</sup>lt;sup>3</sup>These studies include Douglas Holtz-Eakin, "Public Sector Capital and the Productivity Puzzle," Review of Economics and Statistics, 76, February 1994, 12-21, and Henry Aaron, "Discussion" in *Is there a Shortfall in Public Capital Investment?*, Federal Reserve Bank of Boston, 1990.

studies.<sup>4</sup> Tatom found that by including energy prices and first-differencing the time series the effect of public infrastructure on output was not longer statistically significant.

Further analysis reveals that the impact of public infrastructure is much lower. For example, Nadiri and Mamuneas's recent analysis of the effect of highway infrastructure on production shows that a 10 percent increase in highway infrastructure would reduce the cost to manufacturing of 0.5 percent.<sup>5</sup> Furthermore, this study shows no evidence of over or under investment in highway capital stock.

Estimates at the state and metropolitan are in line with the results of Nadiri and Mamuneas. Results from several studies support the notion that public infrastructure, and more specifically transportation, is a productive input in the production of goods and services, but the magnitudes of these effects are modest. I looked at the effect of local public capital stock in the manufacturing production process for 40 metropolitan areas between 1958 to 1978.<sup>6</sup> I found that public capital stock makes a positive and statistically significant contribution to manufacturing output, supporting the concept of public capital stock as a factor of production. In my study, public capital stock includes all components of public infrastructure put in place by state and local governments within the region. The magnitude of the effect of public infrastructure on output is relatively small when compared with the contribution of labor and of private capital to output. A one percent increase in public capital stock increases manufacturing output by 0.03 percent. In contrast, a one percent increase in labor (hours worked) increases output by 0.66 percent, and a one percent increase in private capital stock increases output by 0.32 percent.

The effect of public infrastructure on output varies widely among regions, and in some cases the effect is negative. I found a wide variation in the contribution of total public capital to manufacturing output among the 38 metropolitan areas I analyzed.<sup>7</sup> Eleven of the 38 cities experienced negative relationships between public capital stock and manufacturing output. All but one of the negative elasticities was found in older northern cities, where the infrastructure is likely to be more developed ad perhaps underutilized as evidenced by the large stock of public capital relative to other factors of production. Another interpretations is that public infrastructure in the northern cities is less effective because it is less well maintained or out-of-date, or because it does not serve the changing spatial arrangement of cities.

<sup>&</sup>lt;sup>4</sup>Jack Tatom, "Should Government Spending on Capital Goods be Raised?" Federal Reserve Bank of St. Louis, Mimeo, December 1990.

<sup>&</sup>lt;sup>5</sup>M. Ishaq Nadiri and Theofanis P. Mamuneas, "Highway Capital Infrastructure and Industry Productivity Growth," studied prepared for the Federal Highway Administration Office of Policy Development BAT-94-008, 1995.

<sup>&</sup>lt;sup>6</sup>Randall W. Eberts, "Estimating the Contribution of Urban Public Infrastructure to Regional Growth," Working paper 8610, Federal Reserve Bank of Cleveland, December 1986.

<sup>&</sup>lt;sup>7</sup>Randall W. Eberts, "Regional Differences in the Effect of Public Capital Stock Manufacturing Output," Federal Reserve Bank of Cleveland, Research Department, Mimeo, July 1990.

Other studies have also reported differential regional effects. Costa and others estimated a negative correlation between several states' public capital output elasticities and their per capital stock of public capital. They find negative effects of public infrastructure on manufacturing in ten states, generally those with high per capita public capital. With respect to transportation, there is some evidence that investment in highways may help stimulate lagging areas. Deno observed that highway capital stock made a significantly larger contribution to manufacturing output in declining regions than in growth regions.

Nadiri and Mamuneas also show considerable variation across industries in the effect of highway infrastructure investment on productivity. They find the greatest productivity effects for the tobacco manufacturers industry and primary metals industry. They also find that highway investment reduced productivity for agricultural services and crude petroleum refining.

#### Infrastructure and Structural Changes

The role of transportation varies not only across regions, but also over time. Within manufacturing, for example, innovations in inventory management, such as the adoption of "just-in-time" techniques and the shift to more customized products, make efficient transportation systems that place a premium on the timeliness of the shipment essential to the productivity of firms and to the comparative advantage of regions. Evidence of this change has been the intermodal switch from water and rail transportation to air and truck shipments.

These innovations have also changed the relative demand for intraregional transportation versus interregional transportation. A study by the U.S. Department of Commerce (1987) argued that with the widespread adoption of computer-integrated flexible manufacturing systems, production will become much more of a local matter. Plants will be able to make a batch of differentiated products almost on demand. These manufacturing centers will have the capability of manufacturing nearly an infinite variety of classes of products. Major cities will tend to become ringed by companies operating these systems, instead of importing the products from other regions. The same study also cites evidence supporting the notion that future economic growth will require less in the way of transportation of heavy industrial raw material per unit of output. This shift from heavier inputs and outputs to lighter high-value products have important implications for the relative use of competing transportation modes. The relentless rise of the service sector will undoubtedly reinforce these trends.

# Enhancing the productivity of other inputs

<sup>&</sup>lt;sup>8</sup>Costa, Jose da Silva, Richard Ellson, and Randolph C. Martin. "Public Capital, Regional Output, and Development: Some Empirical Evidence," <u>Journal of Regional Science</u>, vol. 27, (August 1987), pp.419-37.

<sup>&</sup>lt;sup>9</sup>U.S. Department of Commerce, <u>Effects of Structural Change in the U.S. Economy on the Use of Public Works</u>, prepared for the National Council on Public Works Improvement, Washington, D.C. 1987.

Transportation services may have indirect effects on a firm's productivity by enhancing the productivity of other inputs. For example, the accessibility of workers to their workplace is a growing problem in urbanized areas. As workers spend more time commuting, they may be inclined to work fewer hours and the hours actually spent on the job may be less productive because of the energy and aggravation spent getting to and from work. In addition, highway (and mass transit) congestion coupled with poor transportation systems to accommodate commuting patterns limits the pool of workers for some business establishments. For example, several studies have documented the problem faced by poorer households in urban areas in finding convenient public transportation to the service and manufacturing jobs that increasingly locate in suburbs.

The semiconductor industry in the Silicon Valley is a graphic example of the effects of an inefficient transportation system.<sup>10</sup> As housing prices in the northern part of the valley escalated, production workers in the industry, who were typically lower paid than engineers, were forced to find homes further away from the production facilities, commuting longer distances which led in part to greater traffic congestion. The reduction in the labor pool immediately around the plants increased labor costs, and eventually forced much of the production side of the semi-conductor industry to leave the area. An efficient transportation network would probably have helped to hold down labor costs and keep facilities in the region.

# Creating an attractive environment

The previous two channels have considered the effect of public infrastructure on a region's output, holding other inputs constant. However, a region's infrastructure may also be attractive to firms and households, and it consequently may induce additional resources to move into a region. In this case, public infrastructure has its effect on output indirectly through increases in the quantity of labor and private capital, and not because it is directly productive. As additional labor and private capital move into an area, the per unit cost of these inputs falls, giving these firms a competitive advantage over firms outside the region.

Firms find a region with an ample and high quality infrastructure attractive for two reasons. The first is for the reasons noted in the first two sections: public capital is a productive input, and it enhances the productivity of other inputs. The second reason is that in most cases a firm does not pay the full price of using the public capital stock. For example, highways are typically financed by taxes that are levied on households, as well as on firms. Furthermore, the use of highways by households and by firms varies depending upon their location and the type of economic activity they engage in. To the extent that the tax system does not charge the full value they place on the use of the public facility, an individual is subsidized through the shared nature of public infrastructure. Owners of firms, then, extract rents by locating in an area that provides infrastructure at a cost below their valuation of the use of the infrastructure. The same can be said of households. However, as more firms and households move into an area, causing congestion on highways and on other infrastructure

<sup>&</sup>lt;sup>10</sup>Saxenian, A. "The urban Contradictions of Silicon Valley: Regional Growth and the Restructuring of the Semiconductor Industry," in L. Sawer and W. Tabb, <u>Sunbelt/Snowbelt</u>, Oxford University Press, Oxford, 1984.

facilities, extractable rents are diminished, and existing infrastructure becomes less attractive to firms and households.

The free movement of firms and households within and between regions raises another issue with respect to the effectiveness of infrastructure. While infrastructure may be attractive to firms and households and to some extent it may determine their location, it is also possible that public infrastructure may become underutilized because spatial patterns of firms and households have changed. Consequently, it may appear that an area has sufficient transportation infrastructure when viewed in the aggregate by looking at miles per person or dollars of investment. However, chronic congestion and costly bottlenecks may exist and be observed, when attention is given to smaller geographical grids within a region.

Firm location studies that have included various measures of public infrastructure have found that certain forms of infrastructure are attractive to firms. Some of the strongest results were reported by Fox and Murray, who found that the presence of interstate highway systems had a positive and highly significant effect on the location of individual establishments in the State of Tennessee. Bartik, using a national sample, also found that the number of new branch plants was higher within states with more miles of roads. Some of my work offers evidence that public infrastructure positively affects the number of firm openings in metropolitan areas. <sup>11</sup>

Public infrastructure may also affect the migration decisions of households by enhancing an area's amenities. However, the existing literature related to household location decisions does not focus much on public infrastructure. Labor migration studies tend to concentrate primarily on demographic characteristics and wage differentials to explain migration flows. Urban quality-of-life comparisons, which deal with the same underlying decision process, come closer to addressing this issue, but their major focus is on attributes such as air quality, climate, and so forth.

When considering the movement of businesses and households among regions in response to infrastructure investment, one must question whether the ultimate effect is simply to rearrange a fixed pool of resources. Individual regions gain or lose, but the nation realizes little net gain. To the extent that infrastructure investment makes resources more efficient by reducing bottlenecks and congestion in various locations, the overall economy can benefit. Still, the net effects will be mitigated by the fact that bottlenecks could also be reduced by simply moving firms or households to less congested areas, assuming all other factors are the same.

<sup>&</sup>lt;sup>11</sup>Fox, William F., and Matthew N. Murray. "Local Public Policies and Interregional Business Development," mimeo, Knoxville, Tenn.: University of Tennessee, June 1988; Bartik, Timothy J. "Business Location Decisions in the United States: Estimates of the Effects of Unionization, Taxes, and Other Characteristics of States," <u>Journal of Business and Economic Statistics</u> vol. 3, no. 1 (January 1985), pp. 14-22; Eberts, Randall W. "Some Empirical Evidence on the Linkage between Public Infrastructure and Local Economic Development," in Henry W. Herzog, Jr. and Alan Schlottmann, eds., <u>Industry Location and Public Policy</u>, Knoxville, Tenn.: University of Tennessee Press, forthcoming 1991.

# Stimulative Effect of Infrastructure Construction

The construction of transportation infrastructure, particularly when the financing comes from outside the region, directly stimulates the local economy. A recent study sponsored by the Federal Highway Administration found that 8.95 full time jobs are created for each \$1 million of investment in highway construction projects. The effect of construction activity on area residents depends on a variety of factors related to the local economy. For example, the FHWA-sponsored study found variation in the employment impacts across regions, ranging from a high of 11.4 jobs per \$1 million of investment in the South Central region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) to a low of 6.28 jobs per \$1 million in the West (Arizona, California, Hawaii, and Nevada).

The demand-side effects of additional public infrastructure investment are still small relative to the cumulative supply-side effects over the life of the capital stock. A recent study I conducted with Duffy-Deno found that a 10 percent increase in public expenditures for infrastructure construction expands personal income by 11 percent.<sup>13</sup> However, the effect of construction on the local economy is short lived, lasting less than a year after the construction is completed. The study also compared the "construction" effect of public infrastructure with the supply-side productive effects, as described earlier, and found that the effect of public capital as an input has nearly twice the effect on personal income as does public capital as a construction activity. Although highways were not examined separately, there is little reason to expect the qualitative results to be much different.

#### V. Assessment and Conclusion

The United States Congress once again has the opportunity to examine the way transportation infrastructure decisions are made and projects are financed. The challenge is more than simply maintaining or replacing existing structure. Rather it is to meet the future infrastructure needs of a U.S. economy that is undergoing dramatic changes with the restructuring of both manufacturing and service industries and the spatial redistribution of these activities. Results from growing a body of research on infrastructure and economic development reported in this paper underline the importance of maintaining, improving, and expanding public capital stock in order to support future economic growth. Nonetheless, the different circumstances of each region will dictate the types of investment that will be most effective in supporting future economic development.

One of the innovations of ISTEA is to give state and local transportation planning organizations more responsibility and thus more flexibility in determining the levels and types of

<sup>&</sup>lt;sup>12</sup>"FHWA Direct Employment Impacts: A Quantitative Analysis," prepared by Apogee Research, Inc., 1995.

<sup>&</sup>lt;sup>13</sup>Duffy-Deno, Kevin T., and Randall W. Eberts. "Public infrastructure and Regional Economic Development: A Simultaneous Equations Approach," <u>Journal of Urban Economic</u>, forthcoming 1991.

transportation projects for their jurisdictions. This move to extend greater responsibility to states and local governments has intensified during the past five years. However, a balance should be struck between allowing local jurisdictions to enhance their nodes on the nation's integrated transportation networks and ensuring that the federal government retains the means and expertise to maintain and improve the network that links together the regional markets that comprise the complex national economy.

In reauthorizing ISTEA, I encourage you to continue to strengthen the partnership between local, state and federal planning organizations and give each the means to make the decisions they are best suited to make. Transportation infrastructure is the foundation for this nation's commerce. The allocation issue comes into focus at the regional level, and wise investment calls for all levels of government to come together and identify, assess, and undertake infrastructure investment that will pay the greatest dividends for the nation now and in the future.