The Economic Impacts of Local Public Infrastructure Investments: Literature Search
July 6, 2017

Prepared for: Mitch Bartelt
Prepared by: Karen Neinstadt
Resources searched: Transport database, TRB Research in Progress, MnDOT Library catalog, web

Summary: The results of this literature search reflect “infrastructure investments” (specifically public), and the economic impacts and/or benefits. Transportation-related infrastructure investments were the preferred subject. There were no least relevant results included.

Most Relevant Results

Title: Operational and Economic Analysis of Access Management.
URL: http://rip.trb.org/view/1346854
Abstract: The objectives of this research are to: (1) quantify operational impacts of different access management strategies along selected corridors in South Carolina; (2) quantify economic impacts of different access management strategies along selected corridors in South Carolina; (3) compare operational, and economic benefits of different access management strategies along selected corridors in South Carolina; and (4) develop policy recommendations and potential changes to the next editions of the South Carolina Department of Transportation (SCDOT) Access and Roadside Management Strategies (ARMS) and Highway Design Manuals to improve access management strategies based on the findings of this research.

Title: Optimum Fund Allocation to Rehabilitate Transportation Infrastructure.
URL: http://rip.trb.org/view/1259862
Abstract: Over a trillion dollars is invested in the nation’s mostly aging infrastructure through various bonds and public funds. Most of that is spent on new construction and replacement of old infrastructure. It can be convincingly argued that it would be more cost effective over the long term to spend a good portion of these investments in taking a proactive course in managing the maintenance processes of the infrastructure rather than waiting and being forced to merely reacting to disruptive incidences. The importance of a proactive maintenance management policy becomes more pronounced when considering a vital transportation system such as that of highways networks and bridges. This importance emanates from the fact that an unexpected failure of a component of one of these complex systems usually creates disruptions which could have cascading effects leading not only to havoc and its consequences of inconveniences, but also to major economic effects requiring colossal expenditure to contain the damages incurred from such premature failures. Various maintenance treatments are employed by transportation agencies to slow deterioration and restore condition of pavements, bridges, culverts, signs and other physical assets. However, budget constraints and other factors have often led to delaying or eliminating the application of these treatments. Such actions are expected to adversely influence the condition and performance and lead to a reduced level of service, to early deterioration, and eventually to the need for costly rehabilitation or replacement. Analytical tools are currently available to quantify the consequences of delayed application of maintenance treatments for highway pavements, bridges, and other assets. However, processes for using these tools to demonstrate the potential savings and performance enhancement resulting from applying maintenance treatments at the right time and also optimum allocation of funds are not readily available. Hence research is needed to develop such process. This information will help highway agencies better assess the economic benefits of maintenance actions and their role in enhancing the level of service of transportation infrastructure. In addition, incorporating these processes in asset management systems would provide a means for optimizing the allocation of resources.
Title: Economic Productivity and Transportation Investment Priorities.
URL: http://rip.trb.org/view/1231478
Abstract: State departments of transportation (DOTs) and other agencies generally must consider many more opportunities for improving the transportation system for which they are responsible than they have funding to implement. Agency staff must evaluate the relative merits of investment options in an effort to determine which will produce the greatest benefit for taxpayers and citizens who are the system's owners. DOTs typically use a variety of methods in making these evaluations, reflecting the various objectives to be met—for example, greater safety and environmental protection, and cost savings. One widely used method is cost-benefit analysis (BCA), which undertakes to assess—usually in monetary terms—the relationship between an investment's costs and the measurable economic benefits to be received over the lifetime of that investment. BCA typically makes its assessments at a very aggregated level and is substantially influenced by roadway-user travel-time savings. These savings certainly are benefits for the population that enjoys them, but have only a general relationship with the productivity of the region's specific businesses and labor force. These productivity gains are an important consequence of transportation system improvements. Fast and reliable delivery of goods and services, for example, can reduce the need for delivery vehicles, warehouse space, and investment in equipment and facilities; and increase the rate at which workers can complete their tasks. The cumulative effect of multifactor productivity gains can influence the competitiveness of firms in a region and the attractiveness of the region for companies and workers considering relocation from other areas. Research presented in NCHRP Report 342: Primer on Transportation, Productivity, and Economic Development, published in 1991, considered the relationship between transportation investments and economic growth. The report, intended to assist DOTs and other decision makers to ensure that transportation policies and investments promote enhanced growth as well as regional gains, relies substantially on a BCA framework and notes the difficulty of measuring productivity gains within this framework. That report and more recent literature suggest that typically used BCA methods generally neglect, miscalculate, or misinterpret the increased productivity attributable to transportation system improvements. Research is needed to develop guidance on consistent and defensible methods DOTs and other agencies can use to forecast and value productivity gains attributable to transportation system improvements in a region. The research should address estimation and valuation of labor and capital productivity gains associated, for example, with enhanced access and mobility, congestion relief, improved safety, and reduced vehicle operating costs and emissions. The research should consider how measures of productivity improvement may be used in combination with other types of analysis—for example, benefit-cost analyses, safety assessments, and environmental impact reviews—to establish investment priorities. The objective of this research is to develop a methodology and guide for incorporating productivity gains in analysis and prioritization of transportation investments. The methodology and guide will encourage DOTs and other agencies to apply consistent analysis methods and produce results that facilitate public decision making about transportation improvement priorities within a state or other large region.

Title: Research Program Design---Administration of Highway and Transportation Agencies. Assessing the Economic Benefit of Transportation Infrastructure Investment in a Mature Surface Transportation System.
URL: http://rip.trb.org/view/1339723
Abstract: Continuing discussions regarding Federal surface transportation legislation face tough funding decisions in generally difficult fiscal climate. With personal access and mobility for many people now ubiquitous, Middle America seems to take for granted that highway and transit services will be similarly available in the future. Past consensus as to the important role that government at all levels should play in putting and keeping in place well-performing systems is weakening in the face of concerns about long term debt and immediate deficits. The prospect for maintaining a predictable stream of Federal funding at levels many consider necessary to ensure the quality of our surface transportation system is unclear. Owners and operators of the surface transportation system ultimately need to consider, implement and manage a portfolio of strategies to deliver system performance that serves their constituents' economy and population. Information for those who represent the users and beneficiaries of the system from an economic perspective will be critical to the debate. Up-to-date analyses are needed to strengthen public understanding of the contribution of the
nation's surface transportation to national and regional economic well-being. Research is needed to
demonstrate the relationship of modern transportation and economic vitality. At the core of such research is the
critical distinction between strategic investment in transportation infrastructure (including features that improve
operational efficiency) and short term expenditures. The former represent the creation of capital goods that in
turn yield future returns through economic growth. The latter bring value but represent immediate consumption
and have more limited direct long-term benefit. Typical assessments of the investment contributions of
transportation have been undertaken in the context of the original creation of a highway or transit system, for
example. The continuing investment necessary to protect enduring yields (i.e., to meet classic engineering
"needs") have been studied in terms of "outputs" but not articulated in terms of the impacts on the economy of
various levels of transportation services or "outcomes." The research should help decision makers and other
stakeholders understand the national economic benefits of investments (or conversely, the opportunity costs of
failing to make investments), particularly when these investments may preserve asset value, selectively
enhance capacity, or introduce new technology to improve safety and relieve congestion, rather than create
major new facilities. The objectives of this project were to (a) conduct an exploratory review of current
understanding of the links between transportation and the health of the economy, taking into consideration
recent international and domestic trends, (b) assess gaps in current understanding, and (c) outline a proposed
design for a multi-phase program of economic research to clarify the importance of continuing transportation
system investment in the United States economy. The ultimate goal of this larger program will be to inform
decision makers at national, regional, state, and metropolitan levels as to the synergies and tradeoffs with
regard to economic growth embodied in funding and financing surface transportation systems.

Title: Research Program Design---Administration of Highway and Transportation Agencies. Economic and
URL: http://rip.trb.org/view/1339737
Abstract: The objective of this project is to develop an approach for estimating the economic and employment
benefits of highway investments during economic downturns and recoveries. The project will entail (a) review
of the literature and expert opinion on the economic impact of spending for transportation and other
infrastructure projects, (b) consideration of data being reported or that might be collected on employment and
other economic consequences of projects developed with American Recovery and Reinvestment Act (ARRA)
of 2009 funds, (c) specification of analysis methodology that may be used to analyze these data and the
uncertainties associated with the analysis, and (d) assessment of the degree to which analysis will yield robust
and reliable results to inform public policy discussions.

Title: Hennepin County Community Works Program.
URL: http://rip.trb.org/view/1227552
Abstract: Hennepin County, the City of Minneapolis, the Minneapolis Park and Recreation Board, the
Suburban Hennepin Regional Park District, and the Minneapolis School District have developed an
intergovernmental planning framework for infrastructure investment called Hennepin Community Works
Program (HCWP). HCWP is a comprehensive planning tool designed to assist in the coordination, planning,
and effective use of multi-jurisdictional infrastructure and economic investments. Research projects are
selected that will increase overall mobility and access to employment opportunities, encourage creation of new
jobs through business development, and improve the residential and commercial tax base by enhancing
property values. Several research studies are currently underway, such as: (1) examining how roadway design
standards can be modified to better accommodate transit infrastructure, (2) examining potential economic
impact of transit alternatives within and urban corridor, (3) examining the cost/benefit of transit oriented
development, and (4) examining the application of bus rapid transit and Diesel Motor Unit technologies to new
transit corridors. This amendment will assist Hennepin County's continuing effort to develop and apply the
information generated through the HCWP projects to the development of a model for transit-oriented
infrastructure improvements. The model will serve as a guide for other communities in developing solutions to
the growing problem of economic deterioration in urban neighborhoods and suburban municipalities. This is a
congressionally directed project.
Title: Recognising the complementary contributions of cost benefit analysis and economic impact analysis to an understanding of the worth of public transport investment: A case study of bus rapid transit in Sydney, Australia.

Author: Weisbrod Glen; Mulley Corinne; Hensher David

Citation: Conference Title: 14th International Conference on Competition and Ownership in Land Passenger Transport (Thredbo14). Location: Santiago. Held: 20151830-20150903. Research in Transportation Economics. 2016/11. 59(0) pp 450-461(Figs., Maps., Refs., Tabs.)

Abstract: With competing demands for scarce resources, governments need to demonstrate the value for money of new infrastructures. Cost Benefit Analysis (CBA) is the traditional welfare approach to demonstrate the value of using public funds. CBA captures the tangible costs and benefits for users, the benefits and costs of externalities and some of the wider economic benefits. However, this welfare approach does not distinguish the distribution of activity impacts in terms of spatial locations, timing, or economic sectors, nor does it capture all impacts on the economy of a region. Economic Impact Analysis (EIA) shows such changes in terms of jobs, compensation and business output. Economic impact changes are very much the language used by politicians in explaining the benefits of an investment and making the points better understood by the electorate. This paper provides the rationale for using an extended analysis EIA as a complement to the welfare based CBA. The approach is illustrated by a case study of a bus rapid transit (BRT) proposal in Sydney. It shows how these approaches are complementary, answers different questions, and can be used together to provide a more holistic evaluation of the value of a public transport infrastructure change.

Title: Infrastructure Investments and its Impact on Regional Economy - Evidence From Two Case Studies.

Author: Klementschitz Roman

Citation: Conference Title: 2nd International Conference on Road and Rail Infrastructure - CETRA 2012. Location: Dubrovnik. Held: 20120507-20120509. Proceedings of the International Conference on Road and Rail Infrastructure CETRA. 2012/5. pp 883-890(Figs., Refs., Tabs.)

Abstract: Infrastructure investments in rail-based systems, such as metro or regional railways, mainly are funded by the public sector. Public sector spending needs justification before the tax payers. Traditional cost-benefit analysis is usually used to show the expected effects. However, results are often not satisfying as the expected benefits (user costs, travel time, emission, noise and safety) do not sufficiently cover the investments and operation costs in public transport projects. Effects on regional economy of the areas accessed such as increasing land value, follow-up investments or increased consumption of users are usually not included in such analysis. The Institute of Transport Studies of the University of Natural Resources and Life Sciences (BÖ KU) Vienna, Austria, participated in several research projects (Interreg, EU-framework programme, national) where empirical data of such effects were explored through ex post analysis. Reference projects investigated are the new main railway station of Linz (capital of Upper Austria) and metro line U3 in Vienna. Follow up investments were compared with reference areas to identify different developments. Interviews with stakeholders (shop keepers, investors, etc.) were carried out especially to identify the cause and effect chains. In the Linz case users of the transport systems were interviewed to identify their consumptions at the station. In the Viennese case, data of real estate market was accessible to analyse effects in price developments of offices, shops or apartments. The presentation will give an overview of these results. Results show that these effects are very relevant as the basis for decisions for rail-based infrastructure investment and need to be considered more deeply in future planning. Therefore, the Institute currently has developed a calculation model for infrastructure measures as a planning tool including land value effects and employment effects.

Title: Road to Growth: The Case for Investing in America's Transportation Infrastructure.

Citation: 2015/9. 33p

Abstract: Public investment in transportation infrastructure continues to decline while the investment needed to address America's deteriorating infrastructure system grows. This document argues that reinvesting in America's transportation infrastructure would result in long term economic benefits including
job creation, productivity, and international competitiveness. It also reviews the state of U.S. roads and bridges, public transit, rail, aviation, and ports and waterways. In addition, public investment is examined including the rate of public investment, the types of public infrastructure spending, lessons learned from other countries, and barriers to public investment.

Author: Mejia Dorantes Lucia; Lucas Karen
Citation: Transport Policy. 2014/9. 35(0) pp 241-252(Refs., Tabs.)
Abstract: Despite a long-standing tradition within transport studies research, capturing and assessing the long-term impacts of major transport investment projects is still problematic. This is partly due to the relative paucity of empirical data, as well as the considerable research effort involved in undertaking appropriate data collection for detailed longitudinal evaluations. Past studies suggest that economic impacts can vary significantly depending on the type of interventions, the locations and geographical areas served, pre-existing market conditions and other policy and planning factors. However, another issue for evaluation is the extent to which the different studies that are available are comparable in terms of their methodologies, which makes the synthesis of research findings across different case studies extremely difficult. Whilst the authors are not able to overcome all of these methodological issues in the context of this paper, their main objective is to construct a typology of the 'success' factors for securing economic uplift from such projects. The main aim of the research and this paper is to make key gaps in the evidence-base concerning the economic and development impacts of major transport infrastructure impact investments more transparent. This will allow policymakers and other investors to be better informed about the likely success of these investments for the regeneration of local areas under different pre-existing conditions. It also helps to identify where there are current gaps in the knowledge base and where a lack of adequate data prevents the potential to identify economic uplifts and regeneration outcomes. An important finding of the research is that in the case of the Jubilee Line Extension and the Madrid Metrosur positive economic benefits occurred most frequently around the stations where there were already enforceable land use plans and complementary policies in place to increase urban densities and encourage mixed land uses, alongside restricted car and good walking access to stations.

Title: U.S. Infrastructure: Ignore the Need or Retake the Lead?.
Citation: 2011/3. 8p
Abstract: Decaying and aging U.S. public works, bridges and highways require urgent and imminent attention. The increasing population is putting great demand on transportation networks, and it is crucial that improvements in transportation networks and public services occur. However, U.S. infrastructure financing continues to fall short as federal, state and local budget deficits constrain sorely needed investments. The consequences of underinvestment in these vital systems are severe, impacting the United States' international standing as a leader in productivity, job creation, lifestyle, economic growth, competitiveness, sustainability, and flow of capital. The decisions made today will dictate whether the U.S. will disregard its current and future infrastructure needs or retake its position as the world's leader in social and economic progress. The secret to securing ongoing infrastructure leadership lies in the creativity, determination and innovative ability of private and public institutions to finance the needed investments. Every day that goes by without substantial commitments to U.S. infrastructure development only postpones the inevitable, multiplies the expense, and compounds the likelihood of an intractable public works crisis that will last for generations.

Title: Economic Competitiveness: Performance Measures for Transportation.
Author: Peters Jonathan R; Paaswell Robert E; Berechman Joseph
Citation: 2008/11. 19p
Abstract: The New York State Department of Transportation (NYSDOT) is developing a comprehensive set of measures that link investments in transportation to the general economic performance of the New York
State Economy. The agency would like to understand in particular how NYSDOT investments singularly or in concert with investments by State and Local governments and Public Agencies/Authorities could improve economic competitiveness. As in the rest of the U.S., transport systems have been designed to link, impact and even stimulate economic activities. New York State, one of the older industrialized States must continue to evaluate the scope and impact of their infrastructure investments and estimate the quantitative impacts of those investments. Is there a clear one to one relationship between dollars spent on transportation investments (e.g., new lanes of highways, airport access roads, rail improvements) and economic returns to the State? While it is widely posited that investments in transportation infrastructure contribute to economic growth and performance, the measurement and the magnitude of the impact of a given component of the transportation system on regional economic performance is difficult to establish. Wide scale projects that impact many users by providing increased mobility, access to port and trade facilities or perhaps provide an increase in tourist traffic are difficult to value through a single performance measure. The true economic value of a transportation system may not be best captured by measurement of individual parts, but in fact may be best measured by the overall network quality. To establish the national and international best practices in terms of establishing the economic value of transportation network, the authors conducted two basic forms of research. Their first method was to review the existing literature concerning the relationship of transportation on economic development. Their second method was to conduct a survey of the State Departments of Transportation across the United States to request information on their use of economic performance metrics and reporting standards regarding the economic benefits of transportation investments.

Title: Physical Infrastructure: Challenges and Investment Options for the Nation's Infrastructure. Testimony.
Citation: 2008/5/8. 34p(2 Tabs.)
Abstract: Physical infrastructure is critical to the nation's economy and affects the daily life of virtually all Americans°from facilitating the movement of goods and people within and beyond U.S. borders to providing clean drinking water. However, this infrastructure°including aviation, highway, transit, rail, water, and dam infrastructure°is under strain. Estimates to repair, replace, or upgrade aging infrastructure as well as expand capacity to meet increased demand top hundreds of billions of dollars. Calls for increased investment in infrastructure come at a time when traditional funding for infrastructure projects is increasingly strained, and the federal government's fiscal outlook is worse than many may understand. This testimony discusses (1) challenges associated with the nation's surface transportation, aviation, water, and dam infrastructure, and the principles GAO has identified to help guide efforts to address these challenges and (2) existing and proposed options to fund investments in the nation's infrastructure. This statement is primarily based on a body of work the U.S. Government Accountability Office (GAO) has completed for the Congress over the last several years. The nation faces a host of serious infrastructure challenges. Demand has outpaced the capacity of our nation's surface transportation and aviation systems, resulting in decreased performance and reliability. In addition, water utilities are facing pressure to upgrade the nation's aging and deteriorating water infrastructure to improve security, serve growing demands, and meet new regulatory requirements. Given these types of challenges and the federal government's fiscal outlook, it is clear that the federal government cannot continue with business as usual. Rather, a fundamental reexamination of government programs, policies, and activities is needed. Through prior analyses of existing programs, GAO identified a number of principles that could guide a reexamination of federal infrastructure programs. These principles include (1) creating well-defined goals based on identified areas of national interest, (2) establishing and clearly defining the federal role in achieving each goal, (3) incorporating performance and accountability into funding decisions, (4) employing the best tools and approaches to emphasize return on investment, and (5) ensuring fiscal sustainability. Various options are available to fund infrastructure investments. These options include altering existing or introducing new funding approaches and employing various financing mechanisms, such as bonds and loans. For example, a variety of taxes and user fees, such as tolling, can be used to help fund infrastructure projects. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure projects. Each of these options has different merits and challenges, and choosing among them will likely involve trade-offs among different policy goals. Furthermore, the suitability of the various options depends on the level of
federal involvement or control that policymakers desire. However, as GAO has reported, when infrastructure investment decisions are made based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private costs and benefits. To help policymakers make explicit decisions about how much overall federal spending should be devoted to investment, GAO has previously proposed establishing an investment component within the unified budget.

Citation: 2007/6. 24p(13 Figs., 5 Tabs.)
Abstract: This report addresses the linkages between transportation and the economy as well as how and why the transportation system should adapt to accommodate economic trends. As Florida's economy grows, increased demand for movement of people and goods is putting pressure on Florida's transportation system. The first section of this report discusses the economic trends that influence demand for movement of passengers and freight on the transportation system, and how those trends affect system performance. Investments in transportation infrastructure and services affect the performance of the system, resulting in a broad range of impacts to Florida's economy. The second section of the report illustrates how transportation system performance creates tangible impacts on people and businesses. The movement of people and goods itself accounts for a significant share of economic activity in Florida, which depends directly on how well the transportation system functions. The final section of this report explains the significance of the impacts of transportation investments on Florida's overall economic vitality and economic competitiveness.

Citation: Transportation Research Record: Journal of the Transportation Research Board. 2006. (1960) 174p(Figs., Refs., Tabs.)
Abstract: This Transportation Research Record contains 20 papers on the subject of finance, economics, and economic development. Specific topics discussed include California's transportation finance reform proposal; financing local roads; transportation infrastructure concessions in Chile; targeting transportation funding to economic development in low-income communities; highway-induced development; the combined traffic impacts of the time-of-day pricing program and E-ZPass usage on the New Jersey turnpike; the impacts of the Port Authority of New York and New Jersey time-of-day pricing initiative on car and truck traffic; the feasibility of a truck-only toll lane network in Atlanta, Georgia; an analytical tool for evaluating the adaptation of a high-occupancy vehicle lane to a high-occupancy toll lane; a value pricing education and outreach model in Minnesota; lessons in public support for congestion pricing from Edinburgh, Scotland; guidelines for the conversion of a high-occupancy vehicle lane to a high-occupancy toll lane; value pricing in the Dallas-Fort Worth region; a stated-preference survey of single-occupancy vehicle demand for high-occupancy vehicle lanes; the Malaysian toll road public-private partnership program; the econometric estimation of motor fuel sales with incomplete data; the cost-benefit analysis of a high-speed train system in Spain; an economic impact assessment of the large-scale infrastructure project in the Lyon-Turin corridor; the benefits and financial feasibility of a multimodal investment and pricing strategy; and the behavioral responses to road pricing in the Netherlands.

Title: Follow the Money: Uncovering and Reforming Michigan's Sprawl Subsidies.
Citation: 2005/1. 19p
Abstract: This paper presents the tenet that misguided strategies of investment in Michigan are subsidizing sprawl and hurting the quality of life in Michigan. Especially harmed are the cities, older suburbs, and people who do not drive. Though the newer suburbs benefit by investment in their communities, in actuality all residents of Michigan are harmed by the misguided investment strategies. Traffic congestion in Michigan has been increasing, even though Michigan is one of the slowest growing states in the nation. Sewage treatment plants are overrun with heavy stormwater runoff due to urban sprawl. This is causing a water pollution problem in Michigan. Local and state budgets are experiencing deficits due to the outrageous cost of maintaining and building public infrastructure across a state that is so spread out. The negative
consequences of sprawl are detailed in this paper, and it becomes clear that subsidies, grants, incentives and tax abatements, bonds and loans are responsible for enabling and continuing the sprawl.

Title: UNDERSTANDING THE IMPACT OF TRANSPORTATION ON ECONOMIC DEVELOPMENT.
Author: Eberts R
Citation: Transportation in the New Millennium. 2000. 5 p.
Abstract: The interface between transportation investment and economic development has broad ramifications that go beyond transportation's basic purpose of moving goods and people from one place to another. Whereas there is no doubt that transportation is essential in the operation of a market economy, much still needs to be understood about ways in which an efficient transportation system can improve the productivity of the economy. Policymakers not only want to know the effect of transportation on additional economic development; they also want to know the transportation needs of future growth. This paper examines four factors that are important in understanding the relationship between transportation and economic development: relevant type of transportation investment, data necessary to analyze the economic effect of the investment, appropriate methodology to analyze the economic effect, and the proper dissemination of the results and education of professionals as to the economic effects of transportation investment.

Title: POSITIVE EXTERNALITIES AND THE PUBLIC PROVISION OF TRANSPORTATION INFRASTRUCTURE: AN EVOLUTIONARY PERSPECTIVE.
Author: BLUM U
Citation: Journal of Transportation and Statistics. 1998/10. 1(3) p. 81-88(1 Figs., Refs., 1 Tabs.)
Abstract: Do transportation systems, comprising infrastructure, service, and use, produce external benefits? If they do, should positive externalities be accounted for in the evaluation of infrastructure investments? This paper argues that while direct, technological, external benefits from transportation are difficult to find, meaningful positive externalities can arise from transportation systems in at least two ways. First, transportation infrastructure can reduce pre-existing negative externalities, and the reduction of external cost must be considered an external benefit. Second, because transportation is essentially a derived demand its effects are broadly diffused throughout the primary markets that induce transportation demand. To the extent that changes in transportation infrastructure induce positive externalities in these primary markets, external benefits should be attributed to transportation.

Title: MACROECONOMIC ANALYSIS OF THE LINKAGES BETWEEN TRANSPORTATION INVESTMENTS AND ECONOMIC PERFORMANCE.
Author: Bell M E; McGuire T J; Crihfield J B; Dalenberg D R; Eberts R W; Garcia Mila T; Man J Z
Citation: NCHRP Report. 1997. (389) 89 p.(1 Apps., Figs., Refs., Tabs.)
Abstract: This report documents the findings of a project aimed at improving the understanding of the linkages between transportation investments and economic performance. The research evaluated data on the value of the public and private capital stock (structures, equipment, and land) in transportation over time. It developed an improved and updated dataset for capital stock to provide the basis for investigations into the linkages between public and private transportation investments and economic performance. The report will be useful to researchers interested in better understanding the linkages between transportation investments and economic performance. It should also be of interest to policy makers trying to estimate the impacts of transportation investment decisions.

Title: ECONOMIC RETURNS FROM TRANSPORTATION INVESTMENT.
Author: Madrick J
Citation: 1996. 74 p.(3 Apps.)
Abstract: The Eno Foundation convened a public policy forum to discuss the economic return on transportation investment. About 35 people with varied perspectives on this issue attended this day-long
discussion on July 23, 1996. The Federal Highway Administrator, Rodney Slater, opened the forum by saying that the Federal Highway Administration (FHWA) has made fostering productivity growth through investment in highways one of its primary goals. He emphasized the importance of high-quality economic research to find the linkage between highway investments and economic performance. Dr. Ishaq Nadiri, an economist at New York University, discussed his finding that there has indeed been a significant positive rate of return from public investment in highways in the United States in recent decades, although the magnitude of this return has tapered off in later decades. An overriding issue addressed by the forum was how to continue to make significant investments in transportation infrastructure in an era of scarce public resources. Public-private partnerships and innovative financing methods were discussed as possible solutions to this issue. In general, forum participants agreed that a public awareness must be created for thinking about how infrastructure investment can promote the growth of the nation’s productivity. Participants urged policy makers to apply the results of new economic research to their decision-making processes and to develop new ways to present the case to legislators and to the public that infrastructure investment can improve productivity and economic growth.

Title: THE DEVELOPMENTAL IMPACTS OF TRANSPORTATION INVESTMENTS.
Author: Johnson T G
Citation: Conference Title: Rural Infrastructure and Economic Development Issues: Information Systems, Transportation and Education. Location: Atlanta, Georgia. Sponsored by: Southern Region Information Exchange Group-53. Held: 19901003-19901004. 1991/4. p. 25-34(Refs.)
Abstract: This paper deals with the developmental impacts of infrastructure investments in general and transportation investments in particular. The perspective is that of an analyst who must predict either (or both) the net economic benefits or the economic impacts of alternative public expenditure programs on transportation infrastructure. The paper necessarily must transcend theoretical and empirical issues in order to determine the most appropriate means of measuring benefits and impacts. The most salient theoretical issues involved in benefit measurement and impact projection are raised first. Next, issues related to the empirical estimation of economic impacts of infrastructure investments are reviewed, including major strengths and weaknesses of alternative approaches, obstacles to the accurate measurement of economic impacts, data sources and data limitations. Finally, specific methods are detailed to accomplish these two goals.

Title: HOW FEDERAL SPENDING FOR INFRASTRUCTURE AND OTHER PUBLIC INVESTMENTS AFFECTS THE ECONOMY.
Author: Deich M; Beider P; SMITH R; Moore D; Sturrock J; Webre P
Citation: 1991/7. 119 p.(11 Figs., 6 Tabs.)
Abstract: This study examines the effect on the economy of three broad classes of federal investment spending: physical infrastructure, including programs for transportation and environmental facilities; human capital, including programs that increase the skills and productive knowledge that people bring to their jobs; and intangible capital, such as research and development. Within each of these categories, the study examines trends in spending, discusses the rationales for that spending, and reviews evidence on the contribution of public investment to economic performance.

Title: SECONDARY IMPACTS OF INFRASTRUCTURE INVESTMENTS IN THE DENVER REGION.
Citation: See also PB-240 332. Prepared in cooperation with Environmental Protection Agency, Washington, D.C. Office of Research and Development, Department of Housing and Urban Development, Washington, D.C. Policy Development and Research.
Abstract: Statistical correlations between the amount and form of land use changes and the location of new highways and wastewater facilities were established for four major metropolitan areas individually and in combination. The statistical findings were supplemented with results from a dynamic simulation model of land use in metropolitan Washington. The broader study (Secondary Effects of Public Investments in
Highways and Sewers) emphasizes approximations which helped generalize results across different metropolitan areas. This report presents econometric analyses derived for the Denver region. These statistical analyses illustrate the historical influence of highways, water, and sewer facilities in shaping land use patterns in the Denver area and provide basic methods for forecasting impacts of future investments.

Publication Year
1974


Citation: Mn/DOT Library Main Collection HE196.5 .R68 2004
Transportation infrastructure, productivity and externalities / by C.R. Hulten -- The rate of return to transportation infrastructure / by D. Canning and E. Bennathan -- Macroeconomic productivity effects of road investment : a reassessment for Western Europe / by A. Kopp -- Summary of discussions.

Summary: This Round Table is one of a series of research events to discuss tools to improve transport planning. It addressed the macroeconomic effects of transport infrastructure policies, and aimed at identifying analytical and empirical tools that could determine the overall volume of public expenditure for transport infrastructure investment. It also sought to identify state-of-the-art methods for assessing the macroeconomic impact of transport infrastructure investment. --Publisher’s description.


Citation: Mn/DOT Library Main Collection HE196.5 .I45 2002
Summary: Based on a comprehensive study of a working group established by the OECD Road Transport and Intermodal Linkages Research Programme.


Citation: Mn/DOT Library Main Collection TE220 .H53 1996 / FHWA-PL-96-015


Citation: Mn/DOT Library Transportation Research Board NCHRP RRD 200

Title: Transportation and economic development in the Upper Midwest : new models for federal, state and local cooperation in infrastructure investment. Minneapolis, Minn. : State and Local Policy Program, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, [1993]

Citation: CTS Library CTS Library HE209 .T73 1993

Title: 2017 Infrastructure Report Card: Economic Impact:
URL: https://www.infrastructurereportcard.org/the-impact/economic-impact/

Title: The Economic Impact and Financing of Infrastructure Spending
URL: https://www.wm.edu/as/publicpolicy/documents/prs/aed.pdf

Title: Environmental and Energy Study Institute (EESI)- The Economic Impact of Public Transportation Investment: Stories from Around the Country
URL: http://www.eesi.org/briefings/view/051514transit
Title: State Smart Transportation Initiative (SSTI)- Economic Effects of Public Investment in Transportation and Directions for the Future

Title: HIS- Transportation Infrastructure Investment: Macroeconomic and Industry Contribution of the Federal Highway and Mass Transit Program

Title: Bay Area Economic Institute- The Economic Impacts of Infrastructure Investment: Forecasting the Effects of VTA’s Traffic Relief and Road Repair Measure

Title: U.S. Treasury- An Economic Analysis of Infrastructure Investment

Title: White House Archives- An Economic Analysis of Transportation Infrastructure Investment

Least Relevant Results