TRANSPORTATION FINANCE STUDY COMMISSION

Selected Reports on Transportation Finance

A Review of Relevant Literature at the Request of the Transportation Finance Study Commission

Leigh B. Boske, Ph.D.
Associate Dean & Professor of Economics
LBJ School of Public Affairs
University of Texas at Austin

Introduction

In recent years, any number of diverse organizations have published reports on the subject of transportation finance, including federal and state agencies, think tanks, and universities. The following pages highlight the contents and findings/recommendations of selected reports produced by the Brookings Institution, Federal Highway Administration of the U.S. Department of Transportation, National Chamber Foundation of the U.S. Chamber of Commerce, Reason Foundation, Transportation Research Board of the National Research Council, the U.S. General Accountability Office (formerly the General Accounting Office), and Citizens for Rail Safety. Topics of discussion include passenger vs. freight transport financing, urban vs. intercity transport financing, traditional vs. innovative transport financing, modal vs. intermodal transport financing, and public-private partnerships.

P.O. BOX 12068, SAM HOUSTON BUILDING, ROOM 445, AUSTIN, TEXAS 78711
512/463-0067 FAX 512/463-0097 DIAL 711 FOR RELAY CALLS
HTTP://WWW.SENATE.STATE.TX.US/75R/SENATE/COMMIT/C865/C865.HTM

Transportation Research Board. *The Fuel Tax and Alternatives for Transportation Funding*. Special Report 285. Committee for the Study of the Long-Term Viability of Fuel Taxes for Transportation Finance (Washington, D.C.: 2005)

Purpose: This TRB report responds to "concerns that present funding arrangements, especially fuel taxes may become less reliable revenue sources for transportation programs in the future…The goals of the study are to assess what recent trends imply for the future of traditional transportation finance, identify finance alternatives and the criteria by which they should be evaluated, and suggest ways in which barriers to acceptance of new approaches might be overcome. The study was sponsored by the state transportation departments through the National Cooperative Highway Research Program, the Federal Highway Administration, and TRB."

Contents:

1. Introduction
2. Present Finance Arrangements
3. Evaluation of Present Finance System
4. Effects of Auto Technology, Energy and Regulatory Developments on Finance
5. Finance Reform Proposals: Toll Road Expansion and Road Use Metering
6. Finance Reform Proposals: Reforms Within the Present Framework

Findings/Recommendations:

1. The threat is not great that the challenges today will prevent the highway finance system from maintaining its historical performance over the next 15 years. It should be able to fund growth in capacity and some service improvements, although not at a rate that will reduce overall congestion.

2. Although the present structure can remain viable, travelers and the public would benefit greatly from a transition to a fee structure that more directly charges vehicle operators for their actual use of roads.

3. The Committee recommends that the nation:
   a. maintain and reinforce the existing use fee finance system
   b. expand the use of tolls and toll-road use metering
   c. provide stable, broad-based tax support for transit
   d. evaluate the impact of finance arrangements on transportation system performance

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Transportation Research Board. *International Perspectives on Road Pricing*. Conference Proceedings 34. Report of the Committee on Road Pricing (Washington, D.C.: 2005)

Purpose: The conference committee was charged with organizing a symposium to explore American and international applications of road pricing strategies in various governmental and socioeconomic settings. Under a road pricing strategy, road users are charged a fee that reflects the cost of their use of the road more fully than do existing fees and taxes, and thus pricing can serve as a public policy tool to help manage demand for a limited resource.

Contents:

Findings/Recommendations:

A number of potential policy initiatives were identified and discussed in conference deliberations. The following initiatives were judged to be worthy of further consideration:

1. Provide broad permission for state and local officials to pursue pricing on new and existing federal-aid roads.
2. Provide state and local officials with discretion to use revenues collected from pricing projects for any transportation improvement along the corridor on in an area in which the pricing in question has been applied.
3. Permit toll lanes or facilities on federal-aid routes dedicated to truck traffic and permit longer-combination trucks to operate in those dedicated lanes and facilities, subject to approval by the state and affected MPO.
4. Establish a special commission to examine the means for funding transportation infrastructure through a long-range alternative to the fuel tax.
5. Treat the federally tax-exempt status of parking and public transit subsidies equally.

Transportation Research Board. *Transportation Finance: Meeting the Funding Challenge Today, Shaping Policies for Tomorrow*. Conference Proceedings 33. Report of the Committee for the Third National Conference on Transportation Finance (Washington, D.C.: 2005)

Purpose: The conference program was designed to achieve two primary objectives: to educate federal, state and local officials regarding new transportation infrastructure and operations financing mechanisms, their structures and their benefits and costs; and to explore the development of additional new funding mechanisms and sources.

Contents:

1. How to Finance the Next Transportation Program—Reauthorization and Beyond
2. Tools and Techniques to Deliver More Projects Faster
3. Structures, Institutions, and Partnerships to Deliver More Projects Faster and Cheaper
4. New Transportation Initiatives and Demands on Financing

Findings/Recommendations:

1. In the near term, identify ways to use alternative funding sources to begin to lessen the reliance on fuel tax revenue.
2. Encourage transportation stakeholders to seek more flexibility in making use of available finance tools.
3. Consider alternative financing mechanisms and adjustments: indexing the gas tax; addressing the problem of fuel tax evasion; facilitating private-sector investment; and encouraging broader use of value pricing and tolling. Enhance the ability of states to capture the value of transportation investments.
4. Consider taking the first steps to move toward a multimodal, multipurpose transportation program.
5. Continue to expand flexibility relating to non-federal match provisions, including the application of program match alternatives, tax credits, and other soft match provisions.
6. Given the complexity of many innovative finance strategies, provide full disclosure of the public sector's financial commitment and exposure to risk and liability.
7. Expand innovative finance programs for rail, increase utilization of State Infrastructure Banks, and facilitate public-private partnerships to develop and operate transport facilities.

National Chamber Foundation. *Future Highway and Public Transportation Financing*. Report prepared by Cambridge Systematics, Inc. (Washington, D.C.: 2005)

Purpose: Phase I study calculates the funding shortfall needed to meet the nation's highway and transit needs and Phase II examines specific strategies to address the deficit in the Highway Trust Fund (HTF).

Contents:

1. Challenges
2. Federal Responsibilities
3. The Highway Account of the Highway Trust Fund
4. Short-Term Strategies 2006-2016
5. Mid-Term Strategies 2010-2015
6. Long-Term Strategies 2015-2030

Findings/Recommendations:

The major reason for the shortfall in federal revenues is that federal motor fuel taxes are not indexed to inflation and have lost one-third of their purchasing power since the last adjustment in 1993.

1. Short-Term Strategies
   a. Close exemptions to the HTF so that revenues dedicated to transportation are spent on transportation.
   b. Re-credit interest to HTF so that HTF can earn full benefit of the revenue paid into the fund by users.
   c. Dedicate 10% of U.S. Customs import revenues to transportation to account for transportation's contribution to facilitating international commerce.
   d. Give states and local governments more revenue and investment options by authorizing expanded use of tolling and encouraging states to index their motor fuel taxes.
   e. Stimulate the use of innovative finance tools: federal loan guarantees, private activity bonds, tax-credit bond financing, and investment tax credits.
2. Mid-Term Strategies
   a. Broaden the base of user payments to the HTF by collecting a vehicle fee to capture fair payments from hybrid and alternative fuel vehicles.
   b. Ensure that any subsidies for the purchase of hybrid vehicles come from the general fund, not from the HTF.
3. Long-Term Strategies
   a. Implement a mileage-based transportation revenue system to help address long-term revenue shortfalls.
   b. Adopt a state vehicle miles-of-travel (VMT) fee, as well as a local option VMT fee to help ease congestion.
   c. Index VMT fees to inflation to close gap between revenues and needs.
   d. Consider varying the VMT fee by vehicle weight, fuel type and consumption, environmental impact, road system, and/or geography to ensure that all users of road system pay their fair share of infrastructure costs.

The Brookings Institution's Center on Urban and Metropolitan Policy. *Improving Efficiency and Equity in Transportation*. Report prepared by Martin Wachs (Washington, D.C.: 2003)

Purpose: This policy brief outlines the complex series of relationships that define federal, state, and local roles in financing transportation systems. It summarizes some of the most pressing problems that regions and the nation encounter in paying for the growth, management, and maintenance of transportation systems and proposes actions to address those problems.

Contents:

1. Introduction
2. Roles and Responsibilities for American Roads
3. The Challenge Facing Transportation Revenues
4. Strategies for Renewing Transportation Revenues

Findings/Recommendations:

Selecting the best financing mechanisms for transportation is a difficult balancing act. It is essential that charges and fees for the use of transportation systems produce needed revenues, but it is also important that they incorporate incentives and price signals to attain other program and policy objectives, including efficiency and equity.

1. States should assume responsibility for increasing transportation revenues, rather than devolving the obligation to local governments.
2. While continuing to rely on motor fuel taxes as the principal source of user financing, states should explore and plan for widespread deployment of electronic toll collection systems.
3. Pricing strategies should promote more efficient use of the roadway system.
4. Pricing strategies should reflect the costs to provide different transport services.

The Brookings Institution's Center on Urban and Metropolitan Policy. *Fueling Transportation Finance: A Primer on the Gas Tax*. Report prepared by Robert Puentes and Ryan Prince (Washington, D.C.: 2002)

Purpose: This policy brief describes the use of federal and state gas taxes and assesses their impacts on state and local transportation systems and funding. It also considers various ways to improve the current use and distribution of gas-tax revenues to support the development or more balanced, multimodal transport networks.

Contents:

1. Introduction
2. What is the Gas Tax?
3. Findings
4. Conclusions and Policy Recommendations

Findings/Recommendations:

1. Allow gas tax revenues to be spent on a balanced variety of transport modes.
2. Re-configure formulas to avoid penalizing urban places and metropolitan areas.
3. Expand state gas-tax exemptions to local public agencies to provide tax relief to local jurisdictions.
4. States should consider raising their gas tax, but only after instituting applicable reforms, including removing restrictions on gas tax spending and ensuring that urban areas receive an equitable distribution of gas-tax revenues.

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U.S. General Accounting Office. *Freight Transportation: Strategies Needed to Address Planning and Financing Limitations*. Report to the Committee on Environment and Public works, U.S. Senate. GAO-04-165 (Washington, D.C.: December 2003)

Purpose: This report identifies the challenges to freight mobility, the limitations to advancing freight improvements, and strategies to enhance freight mobility.

Contents:

1. Background
2. Challenges to Freight Mobility Center on Congestion
3. Planning and Financing Limitations Pose Difficulties in Addressing Challenges
4. Two Key Strategies Could Help
5. Conclusions
6. Recommendations for Executive Action

Findings/Recommendations:

The fundamental limitation to overcoming freight mobility challenges is that the public-sector process, at the state and local levels, for planning and financing transportation improvements is not well suited to addressing freight projects. Public planners tend to allocate funding to passenger-oriented projects which clearly benefit local constituents.

Financing limitations pose another difficulty in advancing freight projects because they may generate substantial private-sector benefits and are intermodal in nature, while funding sources often restrict access to private firms and focus on a single mode.

Two key strategies were identified to effectively address freight planning and financing limitations:

1. The first strategy involves promoting a more systemwide perspective in planning transportation projects and entails coordination across various transport modes and planning jurisdictions, and active private-sector participation.

2. The second involves determining the appropriate federal role and providing a wider range of financing and related options to enhance freight mobility. One way could involve expanded support for alternative financing mechanisms, such as federal loan programs, and new sources of revenue, such as truck toll lanes, so as to appropriately blend public and private funds to match public and private benefits and costs. Another way is promote low-cost alternatives to expand capacity through more efficient use of existing infrastructure.

U.S. General Accounting Office. *Transportation Infrastructure: Alternative Financing Mechanisms for Surface Transportation*. Statement of JayEtta Z. Hecker before the Committee on Finance and Committee on Environment and Public Works, U.S. Senate. GAO-02-1126T (Washington, D.C.: September 25, 2002)

Purpose: At the request of the two Senate committees, the GAO examined a range of surface transportation financing issues, including the Federal Highway Administration's (FHWA) Innovative Finance Program and proposed alternative financing approaches. The statement addresses the use and performance of existing financing tools and factors limiting their use; and the prospective costs of current and newly proposed alternative financing techniques for meeting surface transportation infrastructure investment needs

Contents:.

1. Background
2. Alternative Financing Mechanisms Offer States Options But Limit Their Use
3. Costs and Risks of Alternative Financing Mechanisms Vary
4. Alternatives Result in Different Shares of the Cost
5. The Federal Role in Bearing Investment Risk Varies

Findings/Recommendations:

A number of states are using existing alternative financing tools such as State Infrastructure Banks, GARVEE bonds, and TIFIA loans. These tools can provide states with additional options to accelerate projects and leverage federal assistance. However, a number of factors limit their use: states' preference not to use them; restrictions in some states' laws on using them; and restrictions in federal law on the number of states and types of projects that can use them.

Federal funding of surface transportation investments includes the federal-aid highway program funding appropriated by Congress out of the Highway Trust Fund, loans and loan guarantees, and bonds that are issues by states and that are exempt from federal taxation. In addition, the use of tax credit bonds—where investors receive a tax credit against their federal income taxes instead of interest payments from the bond issuers—has been proposed for helping to finance investments.

Expanding the use of alternative financing mechanisms has the potential to stimulate additional investment and private participation. But expanding investment in the nation's highways and transit systems raises basic questions of who pays, how much, and when. How alternative financing mechanisms are structured determines how much of total needs are met by federal and state funding, respectively, and how much of the costs are met by current vs. future users and taxpayers.

Hudson Institute's Center for Economic Competitiveness. *Dude, Innovative Finance: Does It Have a Future, or What's the Deal Man*? Report by Richard R. Mudge (Perdue University: 2004).

Purpose: The report provides a brief review of how and when so-called innovative finance came to be, showing how it changes over time. It summarizes innovative finance techniques and then presents suggestions on how to re-invigorate the concepts to address specific transportation funding problems.

Content:
1. Introduction
2. The Dark Ages: How was Transportation Financed Without Innovative Finance?
3. The Renaissance: Development of an Innovative Finance Movement
4. The Industrial Revolution or ?
5. Options for the Future
6. Menu of Mid-course Changes

Findings/Recommendations:
Innovative finance is about more than techniques that can be used to increase transport investments and improve their quality. Its highest and best use may be when it is stimulated by and integrated into a broader vision of transportation. Three concepts are offered for consideration:

- Concept #1—Integrated transport and tele-communications networks. A key to the success of telematics and Intelligent Transport Systems (ITS) in general is an effective means of communication between the vehicle and infrastructure. This should be universal, continuous, always on, low cost, and easy to adapt to the technology.
- Concept #2—We perhaps now need a National Interstate Security and Logistics System. This would equip all components of the supply chain (containers, chassis, rail cars, trailers, trucks) with a location device and a communications device to support Homeland Security and to support another revolution in supply-chain logistics.
- Concept #3—Value-based transportation system. The technology exists to implement variable roadway pricing, with charges based where and when one travels.

A menu of mid-course changes:
1. Re-expansion of the State Infrastructure Banks (SIB) to all states.
2. Make SIBs more accessible to transit, freight, and intermodal.
3. Expand private activity bond provisions to aid surface transport projects.
4. Expand Transportation Infrastructure Finance and Innovation Act (TIFIA) by lowering project-size thresholds.
5. Fix the Railroad Revitalization and Improvement Funding Program (RRIF) of loans and guarantees for railroads.
6. Consider a program with a focus on freight and intermodal in general.
7. Make available tax credit bonds for high-speed passenger and inter-city improvements.
8. Introduce a risk insurance program for development risk on public-private partnership projects.

Reason Foundation. *Should States Sell Their Toll Roads*? Policy Study 334 by Peter Samuel (Los Angeles, CA: June 2005)

Purpose: This study provides context for the debate on toll roads privatization. It reviews the private sector's emerging role in developing new U.S. toll roads and summarizes the recent global experience with the sale of long-term concessions to operate and manage existing toll roads. It explores the fiscal implications of toll road privatization and discuss whether privatization results in better outcomes for motorists.

Contents:

1. Introduction
2. Toll Road Privatization in Practice
3. The Fiscal Implications of Toll Agency Privatization
4. The Implications for Motorists
5. Problems and Objections
6. Guidelines for Privatizing Toll Roads

Findings/Recommendations:

Privatization can be done well or badly. Tolls offer the opportunity not only to finance roads, but also to manage traffic. Motorists pay tolls for the opportunity to buy a smooth, uncongested ride and a predictable, quick journey.

The essence of privatization is that the toll-road business is investor-owned with the rewards of profit and capital gains. And executives must be free to run their business within prescribed guidelines. Most commonly, governments will choose to retain the title to the toll-road property and to concession or lease out the business under contract. The contract can lay down whatever conditions the government considers to be in the public interest. The conditions will be a matter of judgment by elected officials. They can get the conditions "priced" by bidders and make explicit the tradeoffs involved.

New toll-collection technologies allow costs to be greatly reduced and service improved, again adding value to projects. Cash toll collection on the road seems destined to become very small, so toll roads need new capital to rebuild and install new technology.

Governments will want to get maximum value for taxpayers and motorists. They will look at privatization first because they can usually strengthen their budgets by realizing the value of the state toll business and retiring debt. Second, they should look at privatization as a means of shifting business risk to investors. Third, toll roads can tap equity capital. Fourth, governments can reduce the politicalization of a business enterprise that is inherent in state ownership. And, fifth, because tolling is a rapidly changing business with new opportunities, it will be best managed as a business within a contractual framework.

Federal Highway Administration. *Funding and Institutional Options for Freight Infrastructure Improvements* (Washington, D.C.: 2002)

Purpose: Current and past mechanisms are identified in this report for financing freight infrastructure development. The report is not exclusive to FHWA funding options, but also includes options under the jurisdiction of the Federal Railroad Administration, Maritime Administration, U.S. Army Corps of Engineers, Department of Commerce, and Department of Agriculture. Moreover 49 state highway agencies and 6 modal national associations were contacted.

Contents:

1. Background and Approach
2. Study Findings
3. Observations
4. Lessons Learned

Findings/Recommendations:

Freight financing is approached in several ways. Case studies provide examples of variation in levels of support, mechanisms for leveraging funds, application cycles for funding, eligibility criteria, and development objectives. Local jurisdictions have become common sponsoring entities. Local support is provided not only through financial means, but also as a liaison to federal and state mechanisms. Planners lack data and tools that they can employ to evaluate a freight project against a non-freight project. The local level acts as a filter to identify projects that are most easily adaptable to federal programs. The cost of financing varies by sponsoring agency. More projects benefited from tax-exempt revenue bonds than from federal lending programs. Finally, federal funding may not be pursued due to timing conflicts. Although federal funding provides the greatest leverage, some local project sponsors choose to issue debt, rather than waiting for a once-per-year cycle.

The lessons for potential applicants include:

1. Assure program longevity through sustained state funding.
2. Tailor eligibility requirements to specific program objectives.
3. Leverage resources through bonding and use local match.
4. Form public/private partnerships to support private investment in port and airport infrastructure.
5. Provide adequate funding to address long-term rehabilitation of aging track.
6. Implement continuous application cycle to better meet market requirements.
7. Use large-scale intermodal packaging and state-level review boards to help resolve jurisdiction and eligibility conflicts.
8. Seek support from highest levels of state government to sustain public/private activities.

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U.S. Department of Transportation. *Report to Congress on Public-Private Partnerships* (Washington, D.C.: December 2004)

Contents: This report intends to accomplish three goals: (1) examine the value of public-private partnerships as they are used to build large, capital-intensive transportation projects; (2) uncover some of the impediments in current laws, regulations, and practices that discourage the formation of public-private partnerships; and (3) compile a list of recommendations from states, trade associations, private law firms, consultants, designers, and contractors regarding changes that should be made to encourage the formation of public-private partnerships.

Contents:

1. Public-Private Partnerships—history and Initiatives
2. Value of Public-Private Partnerships
3. Impediments to the Formation of Public-Private Partnerships
4. Comments on Public-Private Partnerships
5. U.S. DOT Recommendations

Findings/Recommendations:

Public-private partnerships have been viewed as a more effective way to build a project. These partnerships, however, do have their disadvantages. States not accustomed to this method of procurement can find it difficult to oversee these types of projects. Although they can be used to reduce the amount of staff time required to monitor cost, quality, and timeliness of a project, the different nature of this type of procurement usually results in staff spending considerable time developing new systems. In addition, concerns have been raised that public-private partnerships weaken some of the safeguards found in more traditional financing and procurement methods.

Current transportation laws, regulations, and practices are designed to protect the integrity of the design-bid-build method of procurement. This traditional method separates the design and construction of facilities into two separate steps. While effective for traditional procurement, the current system of regulation and oversight creates a number of unintended problems for states interested in exploring more innovative ways to improve and expand transportation infrastructure.

The U.S. Department of Transportation endorses a number of SAFETEA provisions:

1. Establish a variable toll pricing program to allow states to use variable pricing to manage congestion on their interstates or reduce emissions in a non-attainment area.
2. Allow state and local governments, in the aggregate to issue up to $15 billion on private tax-exempt bonds to pay for highway facilities or surface freight transfer facilities.
3. Streamline the environmental process and make it more predictable.
4. Lower the project cost threshold of TIFIA.
5. Allow states to use design-build on smaller federal-aid projects.
6. Allow grantees to use federal funds to create a debt-service reserve.

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Citizens for Rail Safety. *Financing Intermodal Freight Investments: The Challenges and Emerging Opportunities*. Report prepared by Northeastern University's College of Business Administration (Woburn, MA: 2005)

Purpose: This report offers ideas on how to coordinate the use of currently available, but badly fragmented resources to finance the growing infrastructure needs of intermodal freight transportation. It also discusses new financing resources to fill in the gaps that still remain.

Contents:

1. The Structure of the Freight Transportation Industry
2. Current Funding Resources for Transportation Infrastructure
3. Evaluating the Competing Needs for Insufficient Federal funds
4. Today's Transportation Crisis
5. Some Ideas for solving the Problem

Findings/Recommendations:

The report has found a confusing welter of highly fragmented financing sources in the public and private sectors that lack anything like meaningful coordination. The first lesson that needed to be learned as one tries to solve surface transportation problems is the importance of having a sound game plan. The obvious choice would be to assign responsibility for developing a sound game plan to the federal government. But if the leaders of the transportation industry believe that government cannot or will not meet this responsibility, then they must take the initiative to find an alternative. This could involve establishing (which means funding) an industry-wide planning council to develop the right kind of game plan, possibly by tapping technical expertise available in various think tanks, universities, and metropolitan areas.

The second lesson is the importance of partnership. Hopefully, both the public and private sectors will learn how to apply this lesson to the challenging task of finding more effective ways to move freight under many different kinds of demand conditions. One simple way to start is by establishing a Freight Trust Fund within the U.S. Department of Transportation modeled after the Highway Trust Fund to assure consistent and adequate flow of funds for investments to increase rail capacity and to build intermodal facilities. This would be accomplished by turning railroad excise taxes into dedicated revenue sources for the Freight Trust Fund. Although it would represent a small beginning (some $170 million per year), it would be an important first step on the road to providing the nation with a more effective freight transportation system.