TRANSPORTATION RESEARCH BOARD
TRB REPORT IN BRIEF
November 2011

Equity of Evolving Transportation Finance Mechanisms

Transportation plays a key role in the functioning of the nation's economy and in determining people's ability to participate fully in society. As traditional sources of funding for the nation's surface transportation system fail to keep pace with demand, proposals for a variety of other funding mechanisms, particularly those based on tolling and road use metering (i.e., road pricing), have proliferated. As with all transportation policies, these alternative funding mechanisms raise questions about equity. The committee that developed TRB's Special Report 303: Equity of Evolving Transportation Finance Mechanisms *concluded that broad generalizations about the fairness of high-occupancy toll lanes, cordon tolls, and other evolving mechanisms oversimplify the reality and are misleading. The fairness of a given type of finance mechanism depends on how it is structured, what transportation alternatives are offered to users, and which aspects of equity are deemed most important.*

WHY IS THIS REPORT IMPORTANT?

Society is increasingly concerned with issues of equity, notably, who pays for and who benefits from publicly delivered services such as health care, education, and transportation. Transportation in particular—how we get to work or school, to medical appointments, to the grocery store, and to a variety of social activities—is central in determining who is able to participate fully in society.

Ways of raising the revenues needed to sustain and renew the nation's surface transportation system have attracted considerable attention in recent years, in large part because the costs to operate and maintain the road system exceed the revenues flowing into the Highway Trust Fund. Policy makers are exploring a range of alternatives to current finance mechanisms, and in this context, questions have been raised about equity issues in financing surface transportation.

Special Report 303 was requested by the TRB Executive Committee, which recognized that equity issues associated with surface transportation are complex and that practical experience with emerging finance mechanisms is limited. The purpose of the report is to provide guidance about equity issues to public officials responsible for deciding how to fund transportation programs and projects. The report is directed to policy makers at all levels of government who are considering new finance mechanisms and to their advisors.

LESSONS LEARNED

The most important lesson from the committee's work is that broad generalizations about the fairness of high-occupancy toll (HOT) lanes, cordon tolls, and other evolving mechanisms oversimplify the reality and are misleading. The fairness of a given type of finance mechanism depends on how it is structured, what transportation alternatives are offered to users, and which aspects of equity are deemed most important. It is impossible to draw reliable conclusions about the equity of a particular type of finance mechanism without delving into the details.

MnPASS I-394 HOT lanes in Minneapolis. (Photo courtesy of David Gonzalez, Minnesota Department of Transportation.)

Public policy makers should pay attention to the defining characteristics of all finance proposals, particularly the ways in which revenues are collected and used, because the fairness of many transportation finance mechanisms depends so much on application-specific details. Moreover, the equity implications of transportation finance mechanisms are not always as they seem initially. New transportation finance policies motivate people to find ways of avoiding or passing on additional charges. For example, individuals may change their travel behavior to avoid paying a new tax or fee or to take advantage of new travel options, and businesses may pass on new charges by raising prices to their customers. Determining who wins and who loses as the result of behavioral changes and their consequences is complicated, and the answers are rarely clear cut.

Comparing finance proposals against current funding mechanisms is also important. If the current mechanism is itself inequitable, one of the key questions for policy makers becomes "how does an alternative funding method change the equity picture?"

To help inform decisions about equity issues, researchers need to gather fine-grained data on personal travel and freight movements and to develop models that can simulate relevant travel behaviors. Analysts then need to use these tools to explore a wide range of questions about how travelers and businesses modify their use of the transportation system in response to changes in prices and services and about the consequences of these responses, always bearing in mind the uncertainties inherent in travel forecasting models.

In deciding what constitutes an equitable transportation finance policy, policy makers need to recognize that there are multiple dimensions of equity, some of which may be contradictory. Policy makers need to consider a variety of factors in making choices about what is equitable in a given situation. Good data and analytical tools; knowledge gained through research; carefully crafted, situation-specific analyses; and meaningful interactions with all stakeholders can help policy makers compare the equity of alternative mechanisms and craft policies that enhance equity.

RECOMMENDATIONS

For Public Policy Makers and Their Staff

Public policy makers should engage all their constituents and stakeholders early and repeatedly in discussions of proposed transportation finance mechanisms. They and their staff should ensure that appropriate data, analytical results, and communication strategies are used to address equity explicitly from the outset of a program or project. Specific tasks include

- Assessing likely impacts of financing strategies,
- Using lessons learned elsewhere to inform discussions,
- Developing outreach programs and educational materials, and
- Exploring possible remedies for inequities.

For Researchers and Analysts

Researchers and analysts should conduct scientifically rigorous before-and-after and cross-sectional studies to measure the equity implications of evolving financing mechanisms and provide a robust basis for future decision making. These studies should

- Track short- and long-term behavioral shifts in response to the evolving mechanisms,
- Conduct verifiable analyses to ensure the validity and transferability of results, and
- Avoid preconceived notions and oversimplification.

Among the questions for which research could provide useful insights into the equity implications of transportation finance mechanisms are the following:

San Diego uses revenues from the I-15 HOT lanes to support bus service in the corridor. (Photo courtesy of San Diego Association of Governments.)

- How do members of different socioeconomic groups alter their behavior systematically to avoid or reduce payments, either in the short or long term? Short-term changes could include changing routes or time of travel, or both; using public transit rather than driving; or foregoing a trip entirely. Long-term changes (over a period of years) could include changing home, job, or business locations or choosing to stop work or travel less.
- Do the consequences of any of these behavioral changes have direct and material equity impacts on the people involved, including the range of costs that they may incur (e.g., longer commutes, poorer job benefits, more expensive rents or mortgages)?
- Do the consequences of any of these behavioral changes have indirect or independent equity impacts on other stakeholders? For example, do behavioral changes in response to new taxes or fees change the competitiveness of certain retail, housing, land, or labor markets, possibly accompanied by a spatial rearrangement of jobs? Do such behavioral changes improve health outcomes by reducing environmental pollutants, noise, or other negative externalities? And if so, what are the equity effects?
- What have been the behavioral responses to remedies intended to address inequities in transportation finance and services? How effective have the remedial actions or programs been? Have efforts to mitigate perceived inequities of a finance policy ever worsened actual equity outcomes?

Aerial view of Southern California I-15 HOT lanes. (Photo courtesy of California Department of Transportation, District 11.)

Open road tolling on the Illinois Tri-State Tollway. (Photo courtesy of Illinois Tollway.)

As practical experience is gained with newer transportation finance mechanisms, researchers and analysts in the United States should take full advantage of opportunities to capture lessons learned abroad.

Also, as researchers and analysts continue to develop and implement advanced travel behavior and land use models for a variety of applications, they should ensure that such models incorporate features needed to inform equity analyses of transportation finance policies. In particular, models need to recognize that a willingness to pay to save time (value of time) varies from person to person and for the same person in different situations.

For the Federal Highway Administration and the Federal Transit Administration

FHWA and FTA should ensure that equity assessments integrated into overall project and program evaluation processes are both effective and meaningful. To this end, they should clarify and publicize the eligibility of such equity assessments as expenses of the federal aid program.

For the U.S. Department of Transportation's Office of Policy and Its Research and Innovative Technology Administration

The U.S. Department of Transportation's Office of Policy and its Research and Innovative Technology Administration should support and direct a collaborative effort to build a knowledge base for decision support that includes

- A program of scientifically rigorous before-and-after and cross-sectional studies to assess the equity outcomes of road pricing and other evolving transportation finance mechanisms as they are implemented in the United States and
- An ongoing effort to gather lessons learned about equity implications from the implementation of such mechanisms abroad.

For the American Association of State Highway and Transportation Officials and the FTA

AASHTO and FTA should support activities under both NCHRP and TCRP to develop information, guidance, and analysis tools for state departments of transportation and others to use in studying and understanding the equity implications of evolving transportation finance mechanisms. These activities should include the development of a handbook describing recommended procedures for conducting equity analyses of transportation finance policies.

CONCLUSIONS

The equity implications of transportation finance mechanisms are complex, often controversial, and important in decision making. Policy makers addressing such equity issues need to have a broad understanding of the array of issues involved. They also need to recognize that the complexity of the issues can be managed—though not eliminated—through systematic consideration of the ways in which burdens and benefits are distributed across society and institutions. Such an approach means

- Considering the ways in which people and organizations respond to, and sometimes shift, new transportation charges;
- Taking into account the distribution of the benefits from the use of those funds;
- Weighing the equity concerns about new ways to pay for transportation against those for existing methods;
- Exploring and assessing possible remedies to inequities; and
- Working closely with stakeholders to find solutions that are feasible, effective, and acceptable.

The knowledge and tools to accomplish these tasks are emerging, but a need remains to invest in research and development to provide more effective support for decisions about new finance mechanisms. In the meantime, there is much that can be done to support our transportation systems and to make informed decisions about paying for them.

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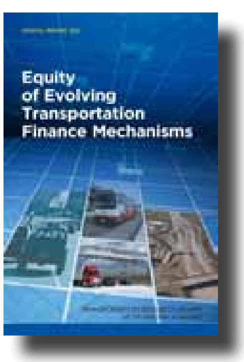

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