

Transportation Solutions

By Todd Litman

Current transportation systems and land use patterns tend to be relatively “automobile dependent,” meaning that they provide a relatively high level of service to motorists, but inferior access by other modes. Since physically, economically, and socially disadvantaged people tend to have limited ability to drive, automobile dependency tends to make them even worse off. Planning reforms that create more balanced, multi-modal transportation systems and more accessible land use patterns tend to support social equity objectives, such as helping the poor access education and employment opportunities, and helping disabled people access medical services and social activities. Many of these reforms are incremental and their equity impact may appear small, but the cumulative effects of a well planned package of reforms that improve travel options and reduce automobile dependency can substantially increase social equity.

Market Distortions

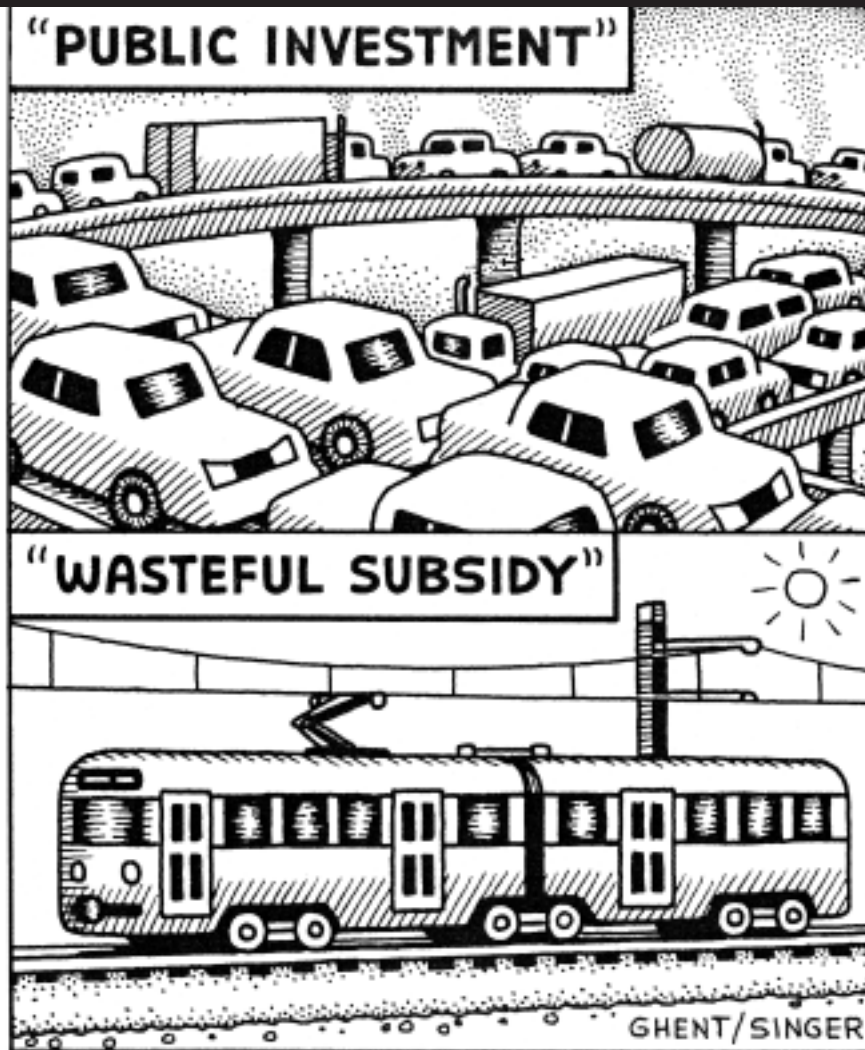
One important way of improving transportation for disadvantaged people is to correct existing market distortions that favor automobile travel over other modes, and that contribute to urban sprawl. Many common planning practices that contribute to automobile dependency reflect market distortions that violate basic economic principles. Planning reforms that correct these distortions can help achieve multiple economic, social, and environmental objectives.

The underpricing of automobile transportation in planning models is fundamental to the skewed preference for automobile dependent systems. Although vehicles are expensive to own, they are relatively cheap to drive—just a few cents per mile in direct expenses—because most costs, such as depreciation, insurance, registration, and residential parking, are fixed. Other costs, such as free parking and local road maintenance, plus the costs associated with congestion, accident risks, and environmental impacts, are external, funded by general tax revenues. In fact, less than half the costs of driving are efficiently priced. This increases per capita automobile travel and reduces demand for alternative modes, which leads to a self-reinforcing cycle of automobile-dependency.

Other distortions that favor motorized travel include:

- Travel surveys undercount non-motorized travel (walking and cycling trips) and overlook short or non-commute trips, and travel by children. A multi-modal trip involving walking, a bus ride, and bicycling may be counted solely as a transit trip.
- Economic evaluations of transportation investments often ignore the true impacts of increased vehicular traffic—incremental parking, traffic accidents, and consumer costs—and the real benefits of alternative modes of transport.
- Most travel models do not account for the negative impacts of additional vehicular traffic that results from roadway capacity expansion, and overestimate the economic benefits of urban highway projects.
- Transportation planning indicators, such as average traffic speeds, congestion delays, and roadway level of service, measure mobility rather than accessibility.

Current funding practices tend to increase automobile dependency by favoring parking and roadway facilities over alternative modes of transport, even if the latter are more cost-effective. Most parking costs are bundled into building costs, often due to zoning code requirements, or funded through special



accounts. Many jurisdictions have dedicated highway funds that either cannot be used for other transportation projects, or which provide lower matching rates for alternatives. In addition, land use planning practices tend to encourage lower-density, single-use, urban fringe development, which is unsuited for access by alternative modes.

Although individual market distortions may seem modest and justified, their effects are cumulative, significantly increasing transportation inequities and problems. For example, many businesses provide free parking, a subsidy that typically increases automobile travel by 15 to 25 percent. Offering a comparable benefit for users of other modes of transport is more equitable and an effective way to reduce congestion and pollution problems.

Win-Win Transportation Solutions

Integrated transportation planning gives as much weight to managing demand as to increasing capacity. It considers all significant costs and

benefits, including non-market impacts. And it involves the public in developing and evaluating alternatives.

For example, instead of segregated highway and public transit programs, funding available for roadway and parking facility expansion projects could be used for transit improvements, rideshare programs, or mobility management programs if they are proven to be more cost effective overall.

Improvement in the public transit system—such as additional routes, expanded coverage, increased service frequency, and longer hours of operation; comfort improvements; pricing innovations; improved rider information; and transit oriented development (neighborhoods designed around transit stations)—would bring benefits for all.

Win-Win Solutions, such as mileage-based pricing for insurance and car registration, road congestion pricing, managing parking access, and other modest reforms, are “no regret” measures whose combined benefits can be substantial while increasing consumer

benefits and economic development.

Parking access changes, such as reduced or flexible minimum parking requirements, cash subsidies for employees, and unbundling parking from building space, can encourage more transit use.

Pay-as-you-drive pricing, which bases insurance premiums on a vehicle's mileage during the policy term, makes insurance more equitable and affordable, and benefits lower-income motorists who tend to drive their vehicles less than average.

High occupancy vehicles-only lanes give buses, vanpools, and carpools priority over general traffic. High-occupancy vehicles-only lanes are a more efficient and equitable allocation of road space and use of road capacity (they impose less congestion on other road users), and can serve as an incentive to shift transportation modes.

Commuter trip reduction programs give commuters resources and incentives to reduce their automobile trips. They typically include improved transportation options, such as ridesharing, transit, telework and flextime, and incentives such as parking cash out or parking pricing.

Walking and bicycling improvements directly substitute for automobile trips and support public transit and ridesharing. Residents of communities with good walking and bicycling conditions drive less and use transit more.

“Smart Growth” land use improves accessibility for non-drivers and encourage the development of more compact, pedestrian-friendly, transit-oriented communities, where residents need to drive less.

Carsharing provides affordable, short-term (hourly and daily rate) motor vehicle rentals in residential areas, giving consumers a convenient and affordable alternative to vehicle ownership.

Traffic management designs reduce traffic speeds and volumes, and discourage short-cuts through residential neighborhoods. This increases road safety and community livability, and creates a more pedestrian- and bicycle-friendly environment.

Road/congestion pricing, where motorists pay a fee to drive on a particular roadway causes drivers to shift travel times, routes, destinations, and modes of transport, and increases overall transportation efficiency.

Many transportation problems are impossible to resolve without some of the reforms suggested. Unfortunately, although transportation planners recognize their potential benefits, they often treat them as last resort measures, to be used to address specific congestion and air pollution problems where conventional solutions prove to be ineffective. If fully implemented to the degree that they are economically justified, Win-Win Solutions could reduce motor vehicle impacts by 20 to 40 percent, and help meet Kyoto emission reduction targets. ■

Todd Litman is founder and executive director of the Victoria Transport Policy Institute and author of Online TDM Encyclopedia, a resource for identifying and evaluating mobility management strategies, and Transportation Cost and Benefit Analysis.

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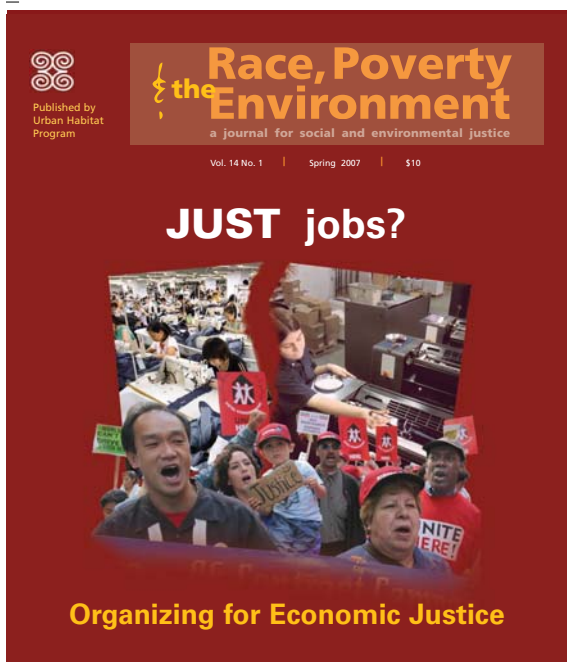
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