

Transportation Economic Analysis And Pricing Reforms

23 February 2010

The Victoria Transport Policy Institute is an independent research organization dedicated to developing innovative solutions to transport problems. Our work helps expand the range of impacts and options considered in transportation decision-making, improve evaluation methods, and make specialized technical concepts accessible to a larger audience. VTPI has worked on a variety of economic evaluation and pricing reform programs in a variety of institutional and geographic conditions. Below are examples of our work.

Public Transit Benefits Evaluation

Performed analysis of the full benefits of public transportation, including public health and economic development. Analyzing the degree to which current planning accounts for full benefits. (Client: American Public Transportation Association. Project Manager: Robert Padgett. Time Period: December 2008-November 2009.)

Transportation and Public Health Study

Performed research on the effects transport patterns have on public health and ways to incorporate health objectives into transportation policies and planning practices. Final results were published in the book, *Equitable Transportation Policy: Recommendations and Research*. (Client: US Center of Disease Control and the Healthy Eating and Active Living Convergence Partnership [www.convergencepartnership.org]. Project Manager: Professor Stephanie Pollack, Northwestern University. Time Period: Oct. 2008-November 2009.)

Transit Improvement Valuation Study

Investigated public transit service improvement valuation. Analyzed the value transit passengers place on factors such as comfort, convenience and reliability; identified ways to quantify these factors by adjusting travel time unit costs; identified how such improvements affect travel behaviour. (Client: TransLink. Project Manager: Don Buchanan. Time Period: January-February 2007.)

Transportation Cost Study

Coauthored a comprehensive study assessing the sustainability of Nova Scotia's transportation system using various indicators and cost categories. Provided recommendations for improving transport efficiency, affordability and sustainability. Published as *The GPI Transportation Accounts: Sustainable Transportation for Nova Scotia - Measuring Sustainable Development, Application Of The Genuine Progress Index To Nova Scotia*. (Client: GPI Atlantic, www.gpiatlantic.org. Project Manager: Ronald Colman. Time Period: January-December 2006.)

Transportation Facility Land Valuation Study

Helped develop transportation facility land valuation methods for various modes and locations. Published as *A Report On The Estimation Of Unit Values Of Land Occupied By Transportation Infrastructures In Canada*

(www.tc.gc.ca/pol/en/aca/fci/transmodal/menu.htm) (Client: Transport Canada. Project Manager: Professor Clarence Woudsma. Time Period: Nov. 2005-June 2006.)

Helped Develop Vehicle Operating Cost Estimates

Contributed information on vehicle depreciation, insurance and parking costs for the report, *Estimation of Costs of Cars and Light Truck Use per Vehicle-Kilometre in Canada*. (Client: Transport Canada. With Ray Barton Associates Ltd. Time Period: Nov. 2005-March 2006.)

Induced Travel Impacts Study

Performed analysis of the effects of increasing highway capacity into the city of Montreal, Quebec on vehicle traffic volumes, and the resulting impacts on traffic congestion, pollution emissions and other costs. (Client: Direction de santé publique de Montréal. Time Period: May, 2005.)

Rail Transit Benefits Study

Performed a comprehensive evaluation rail transit impacts on transportation system performance in U.S. cities. Produced the report *Rail Transit in America: Comprehensive Evaluation of Benefits*, and presented results at the Transportation Research Board annual meeting, January 2005. (Funding: American Public Transportation Association. Time Period: Sept.-Dec. 2004.)

Congestion Management Best Practices

Provided technical support for the Washington DC Downtown Congestion Management Task Force. Included research to identify congestion management strategies suitable for a large city central business district. (Project manager: Volpe Transportation Center, for City of Washington DC [www.dc.gov]. Time Period: April – Oct. 2004).

Parking Tax Policy Evaluation

Helped evaluate the feasibility and impacts of various parking tax options for funding transportation in the Greater Vancouver region. Included research on various parking taxes, and analysis of their impacts on consumers, businesses, parking supply, parking price, travel patterns and land use. (Prime contractor: InterVISTAS [www.intervistas.com], for TransLink [www.translink.bc.ca] regional transportation authority. Time Period: November 2003).

Transportation and Social Exclusion Research

Wrote and presented a paper titled *Social Inclusion As A Transport Planning Issue in Canada* (www.vtppi.org/soc_ex.pdf), at a seminar at the University of Westminster in London, April 3-4, 2003 as part of a study to evaluate transport-related social exclusion issues in various countries. (Project Manager: Professor Karen Lucas, University of Westminster. Client: Federation Internationale de l'Automobile [www.fiafoundation.com]. Time Period: January – April 2003.)

Evaluated Integrated Mobility Systems

Helped to develop a model to predict the effects that an integrated, “smart card” electronic transit fare system can have on transit ridership and vehicle travel in the Toronto region. Involves developing an analysis framework, and research on the effects that user prices and convenience factors have on transit demand. (Client: Integrated Mobility Systems Consortium, Toronto. Time Period: September-December 2002)

TDM Program Evaluation

Performed a detailed evaluation of the travel impacts, benefits and costs of the City of Seattle’s “Way To Go” program (www.cityofseattle.net/waytogo). Developed an analysis framework for evaluating the full benefits and costs of various mobility management programs. (Manager: CH2M Hill. Client: City of Seattle. Time Period: January to April 2002)

Transit Elasticity Values Review

Reviewed and summarized information on transit price, service and cross-elasticities for modeling and planning applications in the Vancouver, BC region. (Client: TransLink. Time Period: March 2002.)

Mobility Benefits of Passenger Transport

Performed a detailed analysis of the mobility benefits of passenger transport. This project involves examining the social benefits of public transit services, identifying methods to quantify these benefits, and developing a framework for evaluating them in transportation planning applications. (Project Manager: Booz-Allen & Hamilton, New Zealand. Client: TransFund New Zealand. Time Period: May to December 2001.)

Evaluated Urban Development Costs

Co-Researcher on the study *Analysis Of The Costs Of Urban Development*. This study examines the costs of alternative development patterns, including variations in economic, social and environmental costs. (Project Manager: Simon Worsey. Client: Department Of Transport, Western Australia. Time Period: September 2000 to January 2001.)

Comprehensive Study of Distance-Based Vehicle Insurance Pricing

Performed a comprehensive study of the feasibility, costs, benefits and equity impacts of implementing mileage-based vehicle insurance in British Columbia. Included analysis of a unique database of vehicle odometer and crash records. Served as project manager with two staff. (Client: Insurance Corporation of British Columbia. Time Period: April 1997 to January 1998.)

Identified and Evaluated Potential State Level Transportation Market Reforms

Identified and evaluated seventeen potential transportation market reforms suitable for implementation in Washington State. Developed a spreadsheet model that identified the consumer costs, travel impacts, emission impacts, and revenue of individual price changes and reform packages. Wrote the report, *Road Relief; Tax and Pricing Shifts for a Fairer, Cleaner, and Less Congested Transportation System in Washington State*. Co-authors: Charles Komanoff and Douglas Howell. (Client: Energy Outreach Center, now

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Climate Solutions, Olympia, WA, www.climatesolutions.org, with funding from USEPA. Time Period: May to October 1998.)

Framework for Estimating The Full Costs of Motor Vehicle Crashes

Developed analysis model and guidebook for estimating the total costs motor vehicle crashes and crimes impose on specific geographic communities in British Columbia. (Client: Insurance Corporation of British Columbia. Time Period: May to December 1997.)

Evaluated Tax Exempt Transit Benefits

Evaluated transportation and economic impacts of making Canadian tax law more favorable to transit commuting. (Client: Transit Advocacy Project. Time Period: Sept. 1996 to January 1997.)

Transportation Costing Analysis Framework

Developed transportation cost analysis framework for the Washington DC region. Client: Metropolitan Washington Council of Governments. (Project Manager: Kiran Bhatt, K.T. Analytics, Inc. Time Period: January to March 1997.)

Compared Rail and Bus Transit for Resort Community

Study comparing the full costs and benefits of rail and bus transit options. (Client: City of Aspen, Colorado. Time Period: July to October 1996.)

Transit Benefit Analysis

Comprehensive study of the benefits of transit service in the Victoria region. (Client: BC Transit. Time Period: January to April 1996.)

Comprehensive Cost Study: City of Edmonton

Comprehensive transportation cost study for the city of Edmonton, Alberta. (Project Manager: KPMG. Client: City of Edmonton Transportation Dept. Time Period: March to June 1996.)

Comprehensive Cost Study: Santiago

Comprehensive transportation cost study for the city of Santiago, Chile. Project Manager: Christopher Zegras. (Client: International Institute for Energy Conservation, Washington DC. Time Period: October 1996 to March 1997.)

Least Cost Planning Review

Reviewed *Least-Cost Planning for Transportation*. (Client: Puget Sound Council of Governments, funded by the U.S. Federal Highway Administration. Time Period: 1995.)

Publications

Todd Litman (1996), "Using Road Pricing Revenue: Economic Efficiency and Equity Considerations," *Transportation Research Record 1558*, TRB (www.trb.org), pp. 24-28; at www.vtpi.org/revenue.pdf.

Todd Litman (2001), *What's It Worth? Life Cycle and Benefit/Cost Analysis for Evaluating Economic Value*, Presented at Internet Symposium on Benefit-Cost Analysis, Transportation Association of Canada (www.tac-atc.ca), at www.vtpi.org/worth.pdf.

Todd Litman (2003), *London Congestion Pricing: Implications for Other Cities*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/london.pdf.

Todd Litman (2003), "Measuring Transportation: Traffic, Mobility and Accessibility," *ITE Journal* (www.ite.org), Vol. 73, No. 10, October 2003, pp. 28-32; at www.vtpi.org/measure.pdf.

Todd Litman (2006), *Parking Taxes: Evaluating Options and Impacts*, VTPI (www.vtpi.org); at www.vtpi.org/parking_tax.pdf.

Todd Litman (2006), "Transportation Market Distortions," *Berkeley Planning Journal: Sustainable Transport in the United States: From Rhetoric to Reality?* (<http://www-dcrp.ced.berkeley.edu/bpj>), Volume 19, 2006, pp. 19-36.

Todd Litman (2007), *Socially Optimal Transport Prices and Markets*, VTPI (www.vtpi.org); at www.vtpi.org/sotpm.pdf.

Todd Litman (2006), "Changing Travel Demand: Implications for Transport Planning," *ITE Journal*, Vol. 76, No. 9, (www.ite.org), September 2006, pp. 27-33; at www.vtpi.org/future.pdf.

Todd Litman (2007), *Guide to Calculating Mobility Management Benefits*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/tdmben.pdf.

Todd Litman (2008), *Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/elasticities.pdf.

Todd Litman (2008), *Well Measured: Developing Indicators for Comprehensive and Sustainable Transport Planning*, VTPI (www.vtpi.org); at www.vtpi.org/wellmeas.pdf.

Todd Litman (2008), *Comprehensive Transport Planning: Best Practices For Evaluating All Options And Impacts*, VTPI (www.vtpi.org); at www.vtpi.org/comprehensive.pdf.

Todd Litman (2009), *Transportation Cost and Benefit Analysis; Techniques, Estimates and Implications*, Victoria Transport Policy Institute (www.vtpi.org/tca).

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