



Florida Department of Transportation Research

Improving Value of Travel Time Savings Estimation for More Effective Transportation Project Evaluation

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The daily commute to a job is a cost of working. Workers may share stories about the extent or rigors of their commute, or they may enjoy the time with reading, music, or drive-time radio personalities. For any trip, many factors contribute to a traveler's choice of mode and route. Travel costs are estimated as value of time (VOT) and value of travel time savings (VTTS), estimates that seek to quantify both the tangible and intangible aspects of travel. Research into the proper methodologies and uses of data continue to evolve, but despite these uncertainties, VOT and VTTS are measures critical for transportation planners when developing cost-benefit analyses of projects, congestion pricing policies, or information about the likelihood of diverting travelers from single-occupant vehicles to alternative modes.

Current means of estimating VOT and VTTS are often based on averages of entire populations or large subgroups and may not adequately reveal traveler behavior. In this project, researchers from the University of South Florida sought an improved estimation of VTTS. Earlier researchers (Synthesis of Research on Value of Time and Value of Reliability, FDOT Project BD549-46) presented several competing definitions of VOT and various methodologies for computing VTTS.

For this project, the researchers chose to start at the most basic level and collect better data. VOT estimates are often based on the stated preferences of travelers responding to surveys about what they might do under certain

circumstances. The researchers instead conducted a survey based on revealed preferences, asking travelers about trips they have actually taken. They chose the 95 Express Lanes corridor, which operates along I-95 in Miami-Dade County, as an excellent site for this work. The 95 Express project includes alternative modes such as high-occupancy lanes with dynamic tolling and bus



Miami-Dade's 95 Express provides a number of travel alternatives managed under several strategies.

rapid transit, and other congestion management strategies including ramp metering.

Travelers were invited to participate in a Web-based survey consisting of fifty-one questions designed to balance thoroughness and agreeable length. Additional questions in the

survey extended its usefulness beyond the needs of VTTS estimation. Respondents were asked for basic trip and demographic characteristics, such as trip origin and destination, income, and attitudes toward various travel choices. To be included in the final collection, surveys submitted had to meet specific date and geographic criteria. Discrete choice modeling was used to estimate VTTS from survey results.

In addition to the primary project goal related to VTTS, a significant secondary objective was to provide and synthesize information on managed lane operations in the United States. The report contains information on several existing projects around the country, such as the Dulles Greenway in Virginia and the I-25 Express Lanes in Denver. Information is also presented for cities that have been named part of the federal Urban Partnership Agreement (UPA) or Congestion Reduction Demonstration (CRD) program.