Evaluation Study of the Port Authority of NY and NJ's Value Pricing Initiative

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In 2001, the Port Authority of New York and New Jersey (PANYNJ) implemented a new pricing structure with tolls that varied according to time of day and the payment technology used. It saw the plan as a means for reducing congestion, increasing the use of mass transit and EZ-Pass, and facilitating commercial traffic control management.

Subsequently, the Federal Highway Administration's Value Pricing Program funded this research project, which was aimed at assessing the behavioral impacts produce by time of day pricing. The project was a collaborative effort of the Rensselaer Polytechnic Institute, Rutgers University and New York University.

In order to assess the impacts on users, the study team pursued a multi-prong strategy using aggregate and disaggregate data, and qualitative and quantitative modeling techniques. It quantified the overall impacts of the time of day pricing initiative on traffic patterns and transit ridership with aggregate data provided by the PANYNJ and New Jersey Transit.

A second line of inquiry quantified behavioral changes at the user (disaggregate) level using focus groups, behavioral surveys and behavioral modeling, focusing on the two user populations that were the target of the time of day pricing initiative: passenger cars and commercial trucks. The focus groups gathered qualitative information about the impacts of the time of day pricing initiative on passenger and carrier behavior, and the underlying dynamics of decisionmaking.

The behavioral surveys targeted regular and former users of the facilities (car drivers and truckers), and collected data about socio-economic (company) characteristics, the most recent trip, EZ-Pass usage patterns, opinions about time of day pricing, and a set of stated preference experiments. The interviews were conducted by the Rutgers University's Eagleton Institute using computer aided telephone interviews.

Behavioral modeling provided solid econometric evidence about the significance and the role played by the various independent variables. These analyses were conducted using a data set collected for the PANYNJ as part of another project. The project also analyzed media and decision makers' reactions to the time of day pricing initiative, as well as user opinions (passenger and carriers) after the fact.

Results from this project have been presented at the 13th Pan-American Conference of Traffic and Transportation Engineering, Albany NY, 2004, and the 2004 Annual Meeting of the Transportation Research Board.

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