

Value of Commuters' Travel Time—A Study in Urban Transportation

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ABRIDGMENT

●TYPICAL suburban commuters are willing to pay at a rate approaching 50 percent of their wage rate to save time on their trips to work. Further, when overall door-to-door commuting times are equal between travel modes, these same commuters place a \$2.00 value on the extra comfort afforded by their own cars over that provided by transit.

These are two of the most important results of a modal choice study conducted on household interview data collected as part of the Chicago "Skokie Swift" Mass Transportation Demonstration project. This study, which used minutely derived times and costs for alternative trip modes, inferred from actual choices made by commuters the values they placed on the various factors entering into their choices. It simultaneously measured the effects of different commuter characteristics, such as income, on the choices made. The analytical tool used was multiple probit analysis, a tool similar to logit analysis, and one which fits curves appropriate to the modal choice problem.

The results have very strong implications both for mass transportation planning and for its pricing. Among other things, the study indicates that the actual comfort provided by the transit vehicle can be very important in contributing to commuter satisfaction. It also shows that transit ridership by commuters should be very unresponsive to fare changes. With typical commuters valuing time at 4 or 5 cents a minute, and comfort at \$2.00 a day, the transit fare becomes relatively unimportant in the modal choice decision. This, in turn, implies that most transit systems can probably be self-supporting simply through charging economic fares.

Two other results deserve mentioning. The first is that, given the values put on time and comfort by the commuters studied, their choices of transportation mode appeared to be both rational and consistent. Where automobiles were the better choice, people drove. Otherwise, transit was used. There was no evidence of an irrational commuter "love affair" with the automobile. The second result concerns walking time. A small supplementary study of parking lot prices in downtown Chicago indicated that at the margin, people who drive downtown are willing to pay 30 cents a block or 12 cents a minute to avoid extra walking. This extreme discomfort value of walking time would indicate that a two- or three-block difference in the placement of transit stations may be very important in determining mass transportation use.