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**Title:** Theoretical and Empirical Specifications Issues in Travel Cost Demand Studies

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**Abstract:**

This paper specifies a model of utility-maximizing recreation demand behavior that estimates the number of days individuals choose to spend at a recreation site. Recreation days is calculated as the product of number of trips and average number of days per trip. This model predetermines the number of days an individual will stay at a site, but recreators included in this study can stay for any number of days. This differs from traditional travel cost models in that most before this study used the same type of trip (such as a day trip). This model also differs in that it uses two methods to determine demand parameters as a possible range of values and in this study, the difference between estimates are large. The data is from a 1978 mail survey of Lake Michigan sports persons to determine number of days spent fishing in the Wisconsin portion of Lake Michigan. The opportunity cost of a recreation day is determined by the monetary and time costs.

The study finds that the average consumer surplus (willingness to pay) per recreation day is \$20.35 (\$19.54 after a 4% bias estimate correction) for one method and \$73.52 for the other. Aggregating the surplus estimates for the full user population gives annual economic impact estimates from \$55 million (\$52 million after correction) to \$200 million. The study concludes that the best estimate of the value of Great Lakes fishing is \$19.54 per day since the higher value was subject to severe biases.