

## The Value of Leisure Time of Weekends and Long Holidays:

### The Multiple Discrete–Continuous Extreme Value (MDCEV) Choice Model with Triple Constraints

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#### Abstract

In this study, we apply the multiple discrete–continuous extreme value (MDCEV) model with triple constraints to identify the value of leisure time during weekends and long holidays. Our approach models the economic behavior of leisure trips with the triple constraints of budget, duration of weekend, and duration of holiday. The econometric model is developed to construct a joint estimation using the observed allocation of goods and time between a weekend and a long holiday. Furthermore, we solve a system of nonlinear equations using the Karush-Kuhn-Tucker condition and the Markov Chain Monte Carlo (MCMC), which constructs the value of leisure times, demand prediction, and welfare analysis. Finally, we apply the proposed model to the recreation demand for national parks in Japan. The results suggest a significantly large difference in the value of leisure time between weekends and long holidays.

#### Keywords

Value of time, multiple discrete–continuous models, recreation demand, demand system, welfare analysis

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