



Estimating the Individual Travel Cost Model

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Policy Question

Ecological scientists suggest the closing of the MS national marine park for one year for restoration purposes. Economists are involved in estimating the economic losses to local businesses, you are asked to find tourists' welfare loss as a result of this policy.

Exercise

Estimate the annual welfare loss to tourists when the MS national marine park is closed. The number of total visitors in previous years is given as follows:

Year	No. of Visitors
2003	120,000
2004	92,000
2005	110,000
2006	104,000
2007	150,000

Data Set

An on-site survey was conducted, collecting 379 observations. Variables needed in the model are: (We restricted ourselves to only 4 independent variable for simplicity.)

trip = number of round trips (including this trip)
income = annual income (baht/person/year)
gender = 0 if respondent is female
 1 if respondent is male
age = age of respondent (years)
tcost = total trip costs (traveling + on-site costs)

Instruction

1. Open SPSS and import the data file (TCM_UNEP.xls)
2. Get familiar with the data set (Check for missing values and present the descriptive analysis – min, max, mean, standard deviation, and cross tabulation tables if possible)
3. Estimate the demand function. Please use the *linear functional form* and drop insignificant variable(s)
4. Calculate the individual welfare (consumer surplus) *per visit* and *per trip*
5. Calculate the total welfare for all tourists