EPFL
ENAC INTER TRANSP-OR
Prof. M. Bierlaire

Mathematical Modeling of Behaviour
Fall 2011/2012

EXERCISES SESSION 7

The topic of this lab is specification testing of Multinomial Logit (MNL) models. The purpose is to apply all the techniques you tried in the previous exercises sessions and develop the best model you can on the *Swissmetro* data set.

On the course web site we have provided a basic model specification that can be used as a baseline.

1. Study and estimate the model specification that we have provided.

2. Improve this model by adding attributes of alternatives to the utilities and by trying non-linear specifications of some variables (e.g. piecewise linear specification, Box-Cox transformation, power series, log transformation, etc.).

3. Try some socio-economic segmentation.

Your lab participation for discussion during lectures:
Try to find the best model specification you can on the *Swissmetro* data set and hand in your results (by e-mail to the teaching assistants) between Tuesday 08/11/2011 and Friday 11/11/2011 at noon. Results include a `.html` file and a `.pdf` document containing a description of the model specification with its underlying hypotheses (one double-sided page maximum).

In order to complete this assignment, you should form groups of 2-3 persons. These groups will be determined during lab 7 session. Note that this assignment is **compulsory**!

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