EPFL
ENAC INTER TRANSP-OR
Prof. M. Bierlaire

Mathematical Modeling of Behaviour
Fall 2012/2013

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 *Optima* data set.

We recommend you to start with a basic model specification you used in the previous lab sessions 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 *Optima* data set and hand in your results (by e-mail to the teaching assistants) by Friday November 9, 2012 before noon. Results include:

- the specification as a `.mod` file (only one, your best model),

- the corresponding `.html` file and

- a `.pdf` document containing a description of the model specification with its underlying hypotheses (one double-sided page maximum).

This is a group work. Groups are the same than for previous assignment. Note that this assignment is **compulsory**!

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