EPFL
ENAC INTER TRANSP-OR
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Mathematical Modeling of Behaviour
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TRANSP-OR

Exercises session 9

The topics of this and the following lab sessions are validation (discussed in the last part of the lecture on statistical tests) and forecasting. You can choose among the same datasets as for the multinomial, nested and cross-nested logit labs. That is, *Swissmetro*, *Airline Itinerary Choice (Boeing)* and *Residential Telephone Services* datasets that are available on the course web site.

Choose the best model (MNL, NL or CNL) that you have specified during the lab sessions.

Validation

1. Perform an outlier analysis (use Biosim for generating the probabilities and Excel for the analysis). Try to find possible causes for low probabilities and, if possible, modify the model specification in order to improve the model.

2. Compare predicted vs. observed shares for different market segments.

Forecasting

1. Choose a scenario you want to test. For example, test the effects of change in costs of alternatives across different market shares.

2. For each scenario, forecast the shares for the different market segments and compare with the original scenario.

3. Compute elasticites.

We refer to the BIOGEME tutorial page 67, for a manual on Biosim.

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