EPFL
ENAC TRANSP-OR
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Mathematical Modeling of Behavior
Fall 2016

EXERCISE SESSION 10

The objective of this lab is to get familiar with the Nested Logit (NL) and Cross-Nested Logit (CNL) models. For this purpose, choose between one of the two case studies, *Swissmetro* or *Residential Telephone Services*, download the corresponding files from the course webpage, perform the following tasks :

1. Start by testing different specifications of a NL model.
2. Continue by testing different specifications of a CNL model. Estimate your CNL models with :
   (a) *fixed* α's, and
   (b) *unknown* (variable) α's.

and answer the following questions :

1. Draw the nesting structures that you propose.
2. What assumptions do the nesting structures that you test reflect?
3. Is any of your proposed NL specifications better than the logit model (with the same specification of the deterministic part of the utility functions)? How can you test/ justify this?

You may refer to the *.pdf* files of the case studies to get inspiration.

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