TRANSP-OR

EXERCISES SESSION 5

The topic of this lab and the lab next week is the Multinomial Logit (MNL) model. You will work on the *Airline Itinerary Choice (Boeing)* dataset. On the course web site we provide the data file (`.dat`) as well as 3 example models (`.mod`) for it.

The goal of this lab is to estimate different specifications of MNL models.

Question 1
Study the 3 model specifications (the `.mod` files) provided on the course webpage. Try to understand which are the underlying assumptions and how these assumptions are modeled. Which of the provided models is the best? How do you test this?

Question 2
Choose one of the 3 models as a baseline and improve it by performing the following actions:

1. Add some attributes of the alternatives to the utilities.

2. Try a non-linear specification of the utilities (e.g. piecewise linear specification, Box-Cox transformation, power series, log transformation, etc.). How would you test your new model against the linear model? Propose different solutions to this and apply them to the chosen dataset.

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