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EXERCISES SESSION 10

The topic of this lab is the Multinomial Logit (MNL) model. You will work with the *Swissmetro* dataset. On the course webpage we provide you with the data files (`.dat`) as well as 3 example models (`MNL_SM_XX.mod`).

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

**Question 1**

Study the 3 provided model specifications (`MNL_SM_XX.mod` files). 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. For this task you can get help from the remaining 3 `.mod` files (`SpecTest_SM_XX.mod`).