



EXERCISE SESSION 3

The objective of this session is to (i) become familiar with BIOGEME and (ii) estimate and interpret a **Binary Logit** model with the dataset of your choice. In order to achieve this, perform the following tasks:

1. Select a dataset between *Airline Itinerary Choice (Boeing)* and *Mode Choice in the Netherlands*.
2. Download the file (.zip) corresponding to the case study of your choice from the webpage. This file contains some models that we propose (.py), a data file (.dat), and description and interpretation of the proposed models (.pdf).
3. Follow the .pdf file and for each model:
 - Try to understand the proposed specification with the help of the description. Estimate the model and interpret the obtained results.
 - Compare your interpretations with the ones we have provided.
4. Develop new model specifications using your own hypotheses. Estimate these models and interpret the obtained results. Compare with the proposed models to see if there is any improvement. In order to help you in your work, we propose the following improvements :
 - Test some alternative specific parameters instead of generic ones, and;
 - Add some socio-economic variables.

Remarks and hints:

- Under the ‘Utilities’ section of the BIOGEME webpage (<http://biogeme.epfl.ch>), you can find an excel file that you can use to perform the statistical test in order to compare two nested models, i.e. the “Loglikelihood ratio test”.
- Descriptions of the variables contained in the different datasets can be found in the .pdf files that describe the case studies.