DATA ANALYSIS IN ACCOUNTING

Master in Accounting

(Academic year 2020/2021)

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OBJECTIVES

- To develop the skills and knowledge to apply a variety of data analysis techniques, ranging from simple descriptive and factorial analysis, to the construction of regression models for both sectional and panel data and for continuous or limited dependent variables;
- To understand the theoretical background of the different techniques and to be able to evaluate and interpret their results;
- To plan and to conduct empirical studies;
- Computing skills and knowledge of the econometric software Stata.

PROGRAM

1. Exploratory data analysis
2. Summarizing information by factor analysis
3. Multiple regression (including dummies, interactions, specification analysis, and heteroskedasticity robust estimation and inference)
4. Models for panel data
5. Models for binary data
6. Models for censored data

TEACHING METODOLOGY

Each class is divided into a theoretical and a practical component. Building on the theoretical topics and on the short examples presented in the first part of the class, the students are then invited to exploit real datasets, using the Stata software, in order to understand the concepts and apply, in practical terms, the methodology.

ASSESSMENT PROCESS

Evaluation includes an individual (open book) written test (50%) and an empirical project in groups of 3/4 students, where the students apply several econometric models to a dataset (50%). The minimum classification allowed at the written test is 7 (out of 20). Students with a classification in the written test lower than 7 will be considered in the examination system (written test weights 100%) and, thus, not approved.

Students may choose to follow an examination system, in which case the final written test weights 100%.

A re-sit examination will be available. The examination is a written test that weights 100%

EMPIRICAL PROJECT: Each group will receive a real dataset, together with a short variable description. Based on that dataset, the group will produce an empirical analysis, guided by a problem set provided in two occasions: week 7 and week 11. Specifically, using the Stata software, the group will deal with the problem set in 3 hours and then submit the answers.

MAJOR REFERENCES

- Newbold, P., Carlson, W. & Thorne, N. (2013). Statistics for Business and Economics. 8th ed. Pearson
- Wooldridge, J. (2016) Introductory Econometrics – A Modern Approach, 6th ed., Cengage Learning

PLAN

Session	Date	Topics
1	16/02	Introduction to data analysis: data, figures, descriptive statistics. Introduction to STATA.
2	23/02	Point and interval estimation. Introduction to parametric hypotheses tests.
3	02/03	Some parametric and nonparamentric hypotheses tests
4	09/03	Factor analysis
	16/03	Linear regression with sectional data: specification, estimation, partial effects interpretation
6	23/03	Linear regression with sectional data: inference, specification analysis, qualitative variables and interactions
7	30/03	Linear regression with sectional data: structural break, functional form, and heteroskedasticity.
8	06/04	Linear regression with panel data: static models
9	13/04	Linear regression with panel data: introduction to programme evaluation and dynamic models
10	20/04	Nonlinear models: estimation and inference. Models for binary data
11	27/04	Modelos for binary data (cont.). Example
12	04/05	Models for excess of zeros: Tobit and two part models. Example
13	11/05	Analysis of exercises and empirical cases.