Introduction to Stata

Lecturer: Michele Slocovich

Language

English

Course Description and Objectives

Stata is a statistical software package widely adopted in a scholar and research environment. The aim of this introductory course is to make participants confident with the basic Stata usage for analyzing business and economic data, since in many courses basic Stata topics will be taken for granted. The course is designed for students who have little or no experience with Stata and intend to develop the knowledge of this useful software for business and economics data analysis

An overview of the main Stata functions will be provided as well as the application of these functions with real examples.

The course has two main objectives:

- To demonstrate the potentialities of the software for analyzing data by making use of different examples
- To enable students to handle data by importing it and cleaning it for analysis
- To enable them to carry out basic statistical analyses on their own
- To give pointers for further skills development

Upon successful completion of this course, the student will be enabled to:

- Import and manipulate data for purpose of analysis
- Produce descriptive analyses by means of simple statistical tables, measures and graphs
- Estimate a linear regression model
- Basic usage of STATA programming

Every session will intermix the presentation of syllabus topics followed by examples and in class exercises.

Important notice: The course presents the software Stata with its main features; therefore, it does not represent whatsoever a substitute of a formal statistics course.

Details of any statistics methodology used *will not be presented*.

Audience

The course is open to all Bocconi students. In particular:

- Those who will be involved in projects requiring the analysis of a dataset
- Students who will need Stata to prepare their final thesis work

Prerequisites

To feel comfortable in this course, students should be familiar with basic statistical concepts (i.e. frequency distribution, average, standard deviation, probability, bivariate descriptive statistics …) as taught in a first level statistical course (e.g. 30001 Statistics).
Basic computer knowledge is given as acquired (i.e. file manager use, basic knowledge of Excel …) – having attended 30424 CS would be ideal.

Duration

16 hours

Teaching mode

This course will be only taught in person. Distance mode will not be provided.

Calendar

Lecture	Date	Time	Room
1	Tue 07/11/2023	18.15 – 19.45	N15 (Velodromo)
2	Thu 09/11/2023	18.15 – 19.45	N15 (Velodromo)
3	Tue 14/11/2023	18.15 – 19.45	N15 (Velodromo)
4	Thu 16/11/2023	18.15 – 19.45	N15 (Velodromo)
5	Tue 21/11/2023	18.15 – 19.45	N15 (Velodromo)
6	Thu 23/11/2023	18.15 – 19.45	N15 (Velodromo)
7	Tue 28/11/2023	18.15 – 19.45	N15 (Velodromo)
8	Thu 30/11/2023	18.15 – 19.45	N15 (Velodromo)

Syllabus of the course

Lesson	Topics
1	**Introduction to Stata** - Stata environment overview - Finding help: resources - Dataset basics: variables, edit, browse, list - Stata commands structure
2	**Data management and preparation** - Qualifiers for data partitioning - Preparing data for analysis, manipulation & labelling - Importing data from another software
3	**Manipulating and Exploring Data** - Basic descriptive uni- and bi-variate statistics - Frequency tables - Managing formats, recoding - Combining data files - Generating new variables
4	**Missing Data** - Handling “missing values” - Variable types **Data Visualization** - Graphics data representation - Using menu vs line commands - Saving, exporting, modifying graphs - Observation Weights
5	**Hypothesis testing & Simple Linear Model** - Tools for hypothesis testing - Simple and multiple OLS: regress command - Values prediction & Post Estimation
6	**Linear Model Advanced** - Modelling Interaction effects - Instrumental variables - Diagnosing regression commands - Solutions to common “problems”

Lesson	Topics
7	**Beyond simple regression** - Useful Techniques - Representing date/time values - Overview of time series - Panel data: setup and regression
8	**Programming with Stata** - Programming with Stata: concepts - Programming with Stata: loops, conditionals and other useful statements - Self-assessment

Suggested Bibliography

Hamilton L. C., *Statistics with STATA: Version 12, 8th Edition*, Cengage, 2013.
Bittmann F., *STATA, a really short introduction,* De Gruyter Oldenbourg, 2019.

Software

Stata version 18 (although version 14 onwards is enough to attend: differences among these versions are not relevant to course contents)

Available seats

This activity is limited to **110 participants**. Registrations cannot be carried out once this number has been reached or after closing of the registration period.