Introduction to Stata

Universitat de Barcelona - MSc in Economics

Academic Year 2025/2026

1 Information

- Instructor: Salvatore Viola
- Email: sviola@ub.edu
- Office: 4320 (Diagonal 690, Tower 4) – meetings by request
- Course materials: https://github.com/salvatoreviola

2 Course Objectives

The objective of this course is to give students an overview of the Stata statistical software. This course will introduce students to a comprehensive set of basic commands and actions in Stata which are necessary for descriptive and econometric analysis. Students will learn the fundamentals of manipulating and visually representing data in addition to some best practices for saving and presenting tables and figures. Particular attention will be given to understanding the Stata interface as well as proper file and project management. By the end of the course, students should be equipped with the tools to conduct the basics of an economic research project. All of the course materials will be made available on my GitHub.

3 Evaluation

- **Problem Sets** (50 %): After the first and second sessions, students will be given a problem set to solve in groups of up to 3 outside of class. The problem sets reinforce topics taught in class and aim to encourage students "dig deeper" into the functionality of relevant commands and get use to problem solving in Stata. Before class the following week, each group should submit a single .do file (standard Stata script file format) containing the code and written answers to questions (commented out) via email to sviola@ub.edu in this format:
  - `PS#_LASTNAME_LASTNAME_LASTNAME.do`
- **Final Exam** (50 %): The final exam will be held in class on the **Friday, November 7th, at 10:00h**. The questions will reflect the core topics covered in class, including performing the fundamental tasks of any research project in Stata, understanding the nature of certain datasets and interpreting basic econometric results. Students will have one hour of this session to complete the exam. The use of any LLM (ChatGPT, Claude, etc.) is prohibited.

4 Organization

Class 1 (October 17th)

In the first class we will familiarize ourselves with Stata, importing and preparing data, and exporting results.

- Understand the interface of Stata

- Import files in different formats
- Rename, replace, drop variables, change labels, using conditionalities
- Descriptives and basic estimations
- Saving and exporting graphs and tables
- Graphs and tables for descriptive analysis
- Post-editing (for aesthetic purposes)
- In-class exercises

Class 2 (October 24th)

The second class will be devoted to more complex data manipulation techniques in Stata.

- Predictions, residuals and plotting them
- Merging datasets
- Different types of data (cross-section, time series, panel data)
- Collapsing and reshaping data
- In-class exercises

Class 3 (October 31st)

Class 3 will cover some advanced functionality of Stata and outline standard project formatting.

- Advanced Stata topics
- Project structuring and management
- Real code examples
- In-class exercises

5 Additional Resources

Online forums for Stata help

- (Statalist)
- (Stack Exchange)
- (Stack Overflow)

Online version of econometrics textbook with code examples by Scott Cunningham

- (Causal Inference: The Mixtape)

Useful textbooks

- *An Introduction to Modern Econometrics Using Stata* by Christopher F. Baum
- *Introductory Econometrics: A Modern Approach* by Jeffrey M. Wooldridge
- *Mostly Harmless Econometrics: An Empiricist's Companion* by Joshua D. Angrist and Jörn-Steffen Pischke