

Econometrics

September 2021

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Course Outline

Module aims

This course investigates the main econometric methods as a tool for the quantitative analysis of economic and financial phenomena. The application of econometric models allows measuring variables that are not directly observable, studying their relationships and behaviour, testing and comparing alternative theories, as well as forecasting and simulating the effects of different policies. This course heavily emphasizes the importance of applications. A discussion of the main theoretical issues and a systematic analysis of econometric tools are intended as prerequisites for the investigation of a series of problems that are of particular relevance for economic and financial applications. At the end of the course, students will:

- learn methods for estimating causal effects using observational data
- learn to evaluate the regression analysis of others this means students will be able to read/understand empirical economics papers in other courses
- be able to be conversant with modern econometric theory and practice
- be able to prepare and independent empirical analysis using modern econometric techniques

Course details and announcements:

The class meets on:

- Tuesday 08:30 - 10:30
- Tuesday 17:30 - 19:30
- Wednesday 08:30 - 09:30

Syllabus plan

I plan to cover most of chapters 1, 2, 3 of ETM.

- Regression Models. A chapter containing a brief review of regressions, along with a few reminders of things from statistics and probability theory that will be needed later
- The Geometry of Linear Regression. In this chapter, statistical issues are set aside in order to discuss ordinary least squares as a purely formal procedure.
- The Statistical Properties of Ordinary Least Squares.

Reading

- Econometric Theory and Methods, R. Davidson e J. MacKinnon, Oxford University Press, 2004

Method of Evaluation

There is a written examination based on two sections:

- A: Six True or False questions
- B: Six Multiple choice questions

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