

Syllabus

Objective

This course provides students with the most widely used econometric tools of cross-sectional and panel data. It will enable students to both conduct own empirical research projects and assess empirical research papers. We will implement each of the discussed tools using standard statistical software and real world data. The main focus will be on the correct statistical interpretation of the results and their translation into economically meaningful answers.

Teacher

Kurt Schmidheiny is Assistant Professor at the Universitat Pompeu Fabra, a Ramón y Cajal Fellow, Affiliated Professor at the Barcelona GSE, and a research affiliate with CEPR and CESifo. He has received research grants from the Spanish Ministry of Education and Science and the Swiss National Science Foundation. His research interests include urban economics, economic geography, public finance, tax competition, microeconometrics. He holds a PhD from the Universität Bern.

Structure and Time

There will 3 hours of lectures and a 1 hour practica session.

Monday 3pm - 5pm, Thursday 11am - 1pm

Topics

1. Causal effects and the logic of randomized experiments
2. Linear regression: Estimation, small and large sample properties, hypothesis, testing, omitted variable bias, model selection, functional form, heteroscedasticity, autocorrelation, clustering
3. Instrumental variable estimation: Estimation, identification, weak instruments
4. Panel data: Fixed effects, random effects
5. Maximum likelihood estimation
6. Binary choice: Probit and logit

Assessment

Graded weekly take home problem sets (25%) and a written exam (75%).

Software

We will use the econometrics software STATA. The Review Course in Mathematics, Statistics and Computational Tools from Sep. 6 to 17 will prepare the students to immediately start with empirical work.

Resources

Hand-outs, lecture notes and selected articles and data sets are provided on the course homepage:

<http://kurt.schmidheiny.name/teaching/empiricalmethods/>

Textbooks

Any textbook in econometrics covers the topics developed in this course. The technical level of this course will be closer to introductory textbooks. However, students with a strong mathematical background may find the advanced textbook more appropriate. The two companions are not self-contained textbooks but useful to deepen the intuitive understanding.

Main Introductory textbook

Stock, James H. and Mark W. Watson (2007), Introduction to Econometrics, 2nd ed., Pearson Addison-Wesley.

Alternative Introductory textbook

Wooldridge, Jeffrey M. (2009), Introductory Econometrics: A Modern Approach, 4th ed., South-Western Cengage Learning.

Advanced textbooks

Cameron, A. Colin and Pravin K. Trivedi (2005), Microeconometrics: Methods and Applications, Cambridge University Press.

Wooldridge, Jeffrey M. (2002), Econometric Analysis of Cross Section and Panel Data, MIT Press.

Companion textbooks

Angrist, Joshua D. and Jörn-Steffen Pischke (2009), Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press.

Kennedy, Peter (2008), A Guide to Econometrics, 6th ed., Blackwell