

Topics in Applied Economics I

Faculty

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Schedule

Classes are scheduled on *Tuesdays and Wednesdays from 17:00 to 19:00* in the first trimester (Fall 2008).

Course description

This will be an advanced Ph.D. course in *empirical research methods (applied econometrics)*, geared towards students doing or wanting to do applied research. We will assume you have taken the core graduate courses in econometrics and have a working knowledge of Stata. Other than that, each topic will assume relatively little prior knowledge, but will be taught at high speed. Interested faculty is welcome to attend the course.

Each class is a self-contained, 90 minutes lecture on a current topic in applied econometrics and will be taught by a different professor. Each lecture, we start with an applied introduction to the topic: What kind of problems are we considering? Why is it an important problem in practice? Then, we discuss the theory (depending on the topic: the details of the estimator; how to implement it in Stata; variance-covariance matrix; Monte Carlo evidence on small sample behavior; etc). Finally, we close with an application from the literature, in which the technique under discussion makes a difference. We will try to make the data and if necessary Stata code for the application available.

Grading

Every week, we will hand out a problem set. Typically, the problem sets will include replicating and extending an existing paper in the literature in addition to some questions about the theory. Students are encouraged to try all problem sets, but they may choose four to be handed in and graded. In addition, there will be an exam, with some choice about the questions. This will allow students to focus their efforts on the topics that are most relevant to them for their research.

Readings

A detailed reading list for each topic will be circulated before class and posted on the website. Readings include journal articles, both on the theory and on applications, but when available also references to textbooks or Stata manuals that may be more accessible. The contents of this course is based in part on the "What's New in Econometrics?" minicourse, taught by Guido Imbens and Jeffrey Wooldridge as part of the NBER summer institute 2007. The lecture notes of this course provide good background reading for many of the topics covered and are available on the web at <http://www.nber.org/~confer/2007/si2007/wneprg.html>.

Outline

The topics below are organized by method. Each lecture will be a combination of a method and an application. This course is not primarily about econometric theory, but rather focuses on how the various techniques can and have been used in interesting economic applications.

Introduction

- 1) September 30, 17:00-19:00 - Thijs van Rens and Kurt Schmidheiny
Introduction
- 2) October 1, 17:00-19:00 - Kurt Schmidheiny
Coding with Mata in Stata

Experimental approach to actual data

- 3) October 7, 17:00-19:00 - Carmit Segal
Laboratory Experiments
Application: *Peer Effects in Education (TBC)*
- 4) October 8, 17:00-19:00 - Paula Bustos
Natural Experiments and Difference-in-Differences
Application: *TBA*
- 5) October 14, 17:00-19:00 - Paula Bustos
Heterogeneity and Local Average Treatment Effects
Application: *TBA*

Panel data estimators

- 6) October 15, 17:00-19:00 - Ghazala Azmat
Panel Data Models
Application: *Gasoline Demand in the OECD (TBC)*
- 7) October 21, 17:00-19:00 - Ghazala Azmat
Dynamic Panel Data Models
Application: *From Education to Democracy? (TBC)*
- 8) October 22, 17:00-19:00 - Sergi Jimenez
Selection in Panel Data Models
Application: *TBA*

Standard Errors

- 9) October 28, 17:00-19:00 - Thijs van Rens
Robust Estimation of Standard Errors
Application: *The Effect of Human Capital on Growth (TBC)*
- 10) October 29, 17:00-19:00 - Kurt Schmidheiny
Clustering
Application: *The Effect of Placebo Laws on Female Wages*
- 11) November 4, 17:00-19:00 - Thijs van Rens
Two-step estimators
Application: *Do Wages Fall in Recessions?*

Non-parametric statistics

- 12) November 5, 17:00-19:00 - Gabrielle Fack
Kernel estimation and semi-parametric regression
Application: *TBA*
- 13) November 11, 17:00-19:00 - Karl Schlag
Distribution-free and non-parametric hypothesis testing
Application: *TBA*
- 14) November 12, 17:00-19:00 - Sergi Jimenez
Matching
Application: *TBA*

Alternatives to least squares regression

- 15) November 18, 17:00-19:00 - Albrecht Glitz
Duration models
Application: *Labor Market Transitions and Unemployment Duration*
- 16) November 19, 17:00-19:00 - Albrecht Glitz
Quantile Regression
Application: *Looking for Glass Ceilings in the Male-Female Wage Distributions*
- 17) November 25, 17:00-19:00 - Kurt Schmidheiny
Multinomial Choice Models
Application: *Predicting Demand for the Bay Area Rapid Transit System before it Existed*

Identification

- 18) November 26, 17:00-19:00 - Stephan Litschig
Regression Discontinuity Design
Application: *TBA*
- 19) December 2, 17:00-19:00 - Joachim Voth
When Turning Good Data into Bad is a Great Way Forward
Application: *The Volatility of National Income Growth*
- 20) December 3, 17:00-19:00 - Francesc Ortega
Weak Instruments and Many Instruments
Application: *Have Pencils Changed the Wage Structure? (TBC)*

The latest version of this syllabus is available at:

<http://www.crei.cat/~vanrens/applied>