

COURSE SYLLABUS

Doctoral course: Applied Panel Data Econometrics, 7.5 credit points

Course code:
Reviewed by: RFB
Approved by: RFB
Valid as of: 2023-05-03
Version: 1
Reference number:

Education Cycle: Third cycle, doctoral program course
Doctoral programme subject: Economics

Purpose

This is an intermediate level Ph.D. course in econometrics dealing with a range of topics focusing on empirical work with panel data. The course aims to build on a previous course in econometrics at the doctoral level that has dealt with panel data by providing an extended up-to-date knowledge in the use of methodologies to work with such data. Numerous applications from recent literature will be considered. An additional purpose is to help the students to identify possible thesis topics and to prepare them for conducting original applied research in the field.

Intended Learning Outcomes (ILO)

On completion of the course, the students will be able to:

Knowledge and understanding

1. Demonstrate a broad knowledge of the development in the field of panel data econometrics as a subject and its applicability and practice.
2. Demonstrate familiarity with methods used within the field of panel data econometrics, i.e., modelling, estimation, testing, inference and analysis of results.

Skills and abilities

3. Demonstrate the ability to engage in scholarly analysis, presentations and discussions within the field of panel data econometrics.
4. Demonstrate skills in performing panel data econometric analysis.

Judgement and approach

5. Critically and independently evaluate own and colleagues' assignments that apply panel data methodologies.

Contents

The course is divided into three main parts:

Part 1 – Estimation of Fixed and Random Effects, Heteroscedasticity and Autocorrelation, and Dynamic Models

Part 2 – Parameter Heterogeneity and Random Parameter Models, Non-linear Models, Common Factor Models, Panel with Multiple Dimensions, Unobserved Heterogeneity Structure

Part 3 – Generalized Quantile Regressions, Estimation of Treatment Effects, Counterfactual Constructions, with Selected Current Time Applications

The course will include computer assignments using STATA, LIMDEP or R

Type of instruction

Lectures, assignment, essay, and seminar presentation.
The teaching is conducted in English.

Prerequisites

Admitted to a doctoral programme in economics, statistics or equivalent in a recognized university and having completed at least one Ph.D. course in statistics and/or econometrics that has dealt with panel data in part and having completed a course that had dealt with matrix algebra.

Examination and grades

The course is graded Fail (U) or Pass (G).

The course is assessed through: (i) home assignments covering the main parts of the course, (ii) authoring an essay (6,000-8,000 words) that uses advanced panel data econometric methods and is preferably aimed to be part of the participant's PhD thesis, (iii) presentation of the essay at a seminar.

The home assignments, essay and its presentation each need to be passed in order to pass the course.

The ILOs are assessed as follows:

- The home assignment covers ILOs 1, 2, 3, 4.
- Authoring an essay covers ILOs 1, 2, 3, 4, 5.
- Presentation of essay at seminar covers ILOs 1, 2, 3, 4, 5.

Course evaluation

A course evaluation will be conducted at the end of the course.

Course literature

The reading material consists of selected journal articles published in econometrics and applied economics journals.