

Panel Data Econometrics

Course description

The analysis of data on several units (individuals, firms, etc) observed over several periods of time—i.e. of panel, or longitudinal, data—has become a standard part of econometric work. The course covers specification, estimation, and inference of various panel data models, with a focus on fixed-effects models, models with serial correlation and dynamic panels, and is accompanied by pen/paper and computer tutorials. After completing the course, you will have a solid ground for empirical research using panel data sets.

Intended audience

- Elective (and meaningful) for Master Econometrics, 9 credit points.
- Elective for Master Data Science, Master Statistics and Bachelor Statistics.

Prerequisites

- Econometrics (master), English

Outline

1. Estimation of linear panel data models
2. Specification tests for panel data models
3. Estimation of autocorrelated panel data models
4. Instrumental variables estimation and Hausman-Taylor models
5. Dynamic panel data models
6. Limited dependent variables
7. Large- N Large- T issues (if time allows)

Materials

- Slides will be made available in due time
- The basic textbook is
 - Wooldridge, J.M. (2010), *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2nd edition.
- Also useful
 - Baltagi, B.H. (2008), *Econometric Analysis of Panel Data*, Wiley, 4th edition or newer.
- (If needed) Specific papers, to be mentioned in class.

Schedule

- regular course, 4 hrs. per week
- pen&paper tutorial, 2 hrs. every second week (tutored by Fabian Schmidt)
- pc tutorial (you'll need **R**), 2 hrs. every second week (tutored by Fabian Schmidt)
- See lsf for exact times and location!

Exam

- written exam
- you may use a formulary (will be available for download)

Contact:

- `mdeme@statistik.tu-dortmund.de`, `f.schmidt@statistik.tu-dortmund.de`

Office hours:

- by appointment; but before resorting to such desperate measures do not hesitate to ask simpler questions per email.