

Applied Econometrics

Panel Data Econometrics

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Panel data are increasingly available

Panel data have several advantages:

- Controlling for individual heterogeneity
- Using more information, more degrees of freedom
- Modeling dynamics
- Identifying otherwise non-detectable effects
- Avoiding aggregation biases

There are some disadvantages too.

Aims and scope

The course introduces you to the econometric analysis of panel data.

After successfully participating, you will become ...

... quite familiar with various types of panel data models,

and, in particular,

... be able to work with panels (and evaluate other people's work...).

Aims and scope cont'd

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 Cross-sectional dependence
- 7 Limited dependent variables (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, 1 hr. per week (tutored by Fabian Schmidt)
- PC tutorial (you'll need **R**), 1 hr. per week (Fabian Schmidt)
- See [lsf](#) for exact times and location!

Exam

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

Further details

Contact

- `mdeme@statistik.tu-dortmund.de`,
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Office hours

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

Q & A

Any specific questions?