

M.Sc. Economics

Code:		Type:	M.Sc. 3 rd semester lecture series
Title:	Econometrics III		
Lecturer:	Martin Wagner		
ECTS:	3	Contact hours (per semester):	12 á 90 min.
Semester:	Winter 2009/2010	Frequency of the lecture:	Twice a week
Dates:	November 18 th , 2009 until January 14 th , 2010		
Prerequisites:	First year courses: Mathematics I, Mathematics II, Statistics and Econometrics I		

Learning objectives (What are the intended learning outcomes? Which skills will be acquired?):

The goal of the course is to develop a detailed understanding of the major aspects of panel data econometrics. The lecture includes a discussion of the main estimation approaches, including least squares, instrumental variables, generalized method of moments and maximum likelihood approaches. Explicitly micro-econometric topics like discrete choice models or models involving censored data will not be covered in this course.

Content (Which professional competence and which contents will be imparted?):

- **Introduction:** this part covers a quick review of basic econometric knowledge required as well as a discussion of instrumental variables and generalized method of moments estimation
- **Static models with variable intercepts:** this part contains a discussion of fixed and random effects models; testing fixed versus random effects, testing for misspecification; individual specific variables; individual and time specific effects; heteroskedasticity, serially correlated errors
- **Dynamic models with variable intercepts:** properties of estimators for static models in dynamic models; estimation of fixed effects models; estimation of random effects models; initial conditions; random vs fixed effects; fixed effects panel vector autoregressive models
- **Robust inference:** detailed discussion of some of the recent contributions in the literature to robust inference, typically referred to as clustering (clustered standard errors)

Teaching approach (Description of the learning and teaching methods):

The course consists of lectures and homework assignments to be discussed in class. Furthermore students are required to implement the econometric methods discussed in class in some appropriate software, like e.g. MATLAB or R.

Workload (Definition of workload (ECTS), divided in pre-modules (e.g. pre-readings), core-modules (contact hours), post-modules (e.g. case studies)):

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Language of instruction (Information on the language of teaching):

English

Obligatory literature (E.g. scripts, books, articles, cases, papers):

Parts of the material will be distributed in the form of lecture notes (scripts)

Additional literature (E.g. books, articles, cases, papers):

The course will be essentially self-contained. The course follows however to a large extent the monograph:

Hsiao, Cheng: Analysis of Panel Data, 2nd Edition, Cambridge University Press 2003.

Furthermore, as the course proceeds a list of articles covering the material discussed in class will be made available. These papers will be considered to be relevant for both the course and the exam.

Mode of examination (Mode of the examinations and tests (e.g. oral or written examination, lecture, homework, papers, class participation):

Written examination

Grading:

The final grade will be composed of three components:

- 60% of the grade will be due to the results of the written final examination
- 20% of the grade relate to the exercises (in class room)
- 20% of the grade relate to the computer implementation

Special features (E.g. excursion, guest speaker):

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Contact information:

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Office hours:

By appointment

Course website:

<https://cecnet.tuwien.ac.at/>