11TH AACHEN INTERNATIONAL SUMMER SCHOOL (ACISS)

PANEL DATA ECONOMETRICS

PROF. DR. MICHAELA KESINA

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SUMMER 2025

1   COURSE OVERVIEW

Course Name:	**Panel Data Econometrics**
Degree Programmes:	1. Post-Docs and PhD students 2. Master BWL (all specializations): MSBWL10, MSBWL13 Master Wirtschaftswissenschaften (all specializations): MSWiWi10, MSWiWi14 Master Wirt.-Ing. (MSWiBau, MSWiEET, MSWiWPT, MSWiMB, all specializations): MSWI10, MSWI15
Lecturer:	Prof. Dr. Michaela Kesina
Contact:	m.kesina@rug.nl
Location and Time:	Templergraben 64, Room 518 (WiÜ) / Room 114-117 (C.Le.Ver) 04th August to 08th August 2025, 9:00 am – 4:00 pm
Content Description:	This short course on Panel Data Econometrics is designed to introduce students to both linear and nonlinear panel data models, covering static and dynamic specifications. The course will combine theoretical content with practical applications using Stata, where students will learn to analyze and estimate econometric models with real-world panel data.
Qualification Objectives:	Learning objectives: By the end of this course, students will be able to: 1. Understand the key concepts and theoretical foundations of various panel data models. 2. Identify and compare different estimation approaches for panel data models. 3. Evaluate the advantages and limitations of different estimation methods in the context of panel data. 4. Assess the suitability of specific estimation methods based on the characteristics of the empirical research question and dataset. 5. Implement panel data models using Stata, applying appropriate estimation techniques to real-world datasets. 6. Interpret and critically analyze the results of panel data analyses, including the implications for policy or research.
Literature:	Textbooks - Baltagi, B.H. (2021). Econometric Analysis of Panel Data. Cham: Springer. - Cameron, A.C. and Trivedi, P.K. (2005). Microeconometrics: Methods and Applications. Cambridge: Cambridge University Press. - Wooldridge, J.M. (2010). Econometric Analysis of Cross Section and Panel Data. Cambridge, Mass.: MIT Press. Relevant journal articles and research papers

Course Examination:	Written exam
Participation Requirements:	- Basic knowledge of matrix algebra and probability theory. - Basic knowledge of econometrics. - Familiarity with Stata or willingness to learn.
Group Size:	20 participants (max)
Workload:	30 hours of lecturing and group work 120 hours of additional individual and group preparation
Type of Teaching Event:	Lecture with integrated individual and group work
Language:	English
Credits:	5

2 SCOPE OF THE COURSE

In the course, I will cover the following topics

1. Static linear panel data models
2. Static nonlinear panel data model
3. Dynamic linear panel data models
4. Dynamic nonlinear panel data models

3 PARTICIPANTS AND REQUIREMENTS

Participants

1. Post-Docs and PhD students
2. Master BWL (all specializations): MSBWL10, MSBWL13
   Master Wirtschaftswissenschaften (all specializations): MSWiWi10, MSWiWi14
   Master Wirt.-Ing. (MSWiBau, MSWiEET, MSWiWPT, MSWiMB, all specializations): MSWI10, MSWI15

Advanced master students are invited to participate. However, they should be in the second half of their respective MSc program.

Due to the interactive teaching format, the number of participants is limited to 20. Preference will be given to PhD students.

Grading

Students need to pass the final written exam.

Complete attendance of each session of the course. Absolutely no exceptions apply. Leaves will only be granted in cases of illnesses or if the person demanding a leave is required to participate in an official activity of the University, Faculty, or Institute. In the first case, the doctor's medical certificate must be presented to the Chair immediately (i.e. latest by the first working day following the absence day). Failure to comply with this rule leads to a no-pass grade. Passing grades can generally not be earned by students who miss more than 20% of the total class-time

4 TENTATIVE COURSE SCHEDULE

Day	Time	Lecture/Computer Practical
4.8.2025	9.00 - 12.00	Lecture
	13.00 - 14.00	Lecture
	14.00 - 16.00	Computer Practical
5.8.2025	9.00 - 12.00	Lecture
	13.00 - 14.00	Lecture
	14.00 - 16.00	Computer Practical
6.8.2025	9.00 - 12.00	Lecture
	13.00 - 14.00	Lecture
	14.00 - 16.00	Computer Practical
7.8.2025	9.00 - 12.00	Lecture
	13.00 - 14.00	Lecture
	14.00 - 16.00	Computer Practical
8.8.2025	9.00 - 12.00	Lecture
	13.00 - 14.00	Lecture
	14.00 - 16.00	Computer Practical

CONTACT DETAILS

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