

Microeconometrics - summer term 2014

Preliminary Syllabus

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Course description

This course introduces the microeconomic methods needed for the analysis of cross-sectional and panel data and teaches the application of these methods and the programming of the respective estimators using the econometric software STATA. The goal of the course is to be able to read and understand more advanced methods in microeconomic research and to evaluate the output of academic articles using microeconomic methods. In addition, the students should be equipped to undertake their own microeconomic analyses.

1 Organisational

1.1 Preconditions

There are no formal requirements for this course, but we will assume that all students are familiar with basic Statistics and Econometrics; that is, having heard the course Econometrics is a clear advantage. There will be a very short refresher of Statistics and Econometrics at the beginning of the course. In case you are not familiar with basic Econometrics, at the very beginning you have to study the concepts by yourself (see literature references).

1.2 Structure of the course

- The course consists of a lecture and an exercise session

Dates:

- lecture (Dominik Menno): Wednesdays 14:15 - 15:45h (1810|013) (SG 13), first session April, 9th 2014
- exercise session (Dominik Menno): Thursdays 10:15 - 11:45h CiP Pool, Johanniterstr., first session April 17th, 2014

- **Office hours**

- Dominik Menno: Wednesdays 13.00 - 14.00h

Please sign up for the office hours by email. We urge you to ask questions concerning the exercise sheets in class, not in the office hours.

1.3 Course requirements

- There will be a 60min written exam.
- In order to pass the course, you need to pass the exam. According to the examination rules, there will be two dates to write the exam in the summer term. Note that there will be no possibility to pass the exam offered in the winter term.
- We offer the possibility to obtain a bonus by handing in two take home group assignments. The first assignment will be handed out after 6 lectures and the second after 12 lectures. You have one week in order to complete one problem set. The bonus will improve the grade by a maximum of one increment (e.g. from 2.0 to 1.7). The bonus is granted if
 - the exam is passed,
 - both group assignments are handed in
 - at least 60% of the sum of all points of the two assignments are achieved.
- Relevant for the exam is all material from the lecture and the exercise sessions. Please note that examples and small tasks from the lecture may be covered in the exam.

2 Content of the course

1. Introduction
2. Cross-sectional data
 - (a) OLS and problems with OLS (omitted variable bias, measurement error, heteroskedasticity)
Wooldridge Chapters 1-4
 - (b) IV estimation
Wooldridge Chapters 4-6, Cameron and Trivedi Chapter 4
3. Panel data
 - (a) Pooled repeated cross-section
Wooldridge Chapter 6
 - (b) Fixed effect and random effect estimation
Wooldridge Chapter 10, Baltagi Chapters 2-4
 - (c) Optional: Dynamic panel data: Arellano-Bond estimation
Baltagi Chapter 8

4. Maximum Likelihood Estimation (MLE) and non-linear models
 - (a) Discrete choice in cross-sectional and panel data
Wooldridge Chapters 15, 16, Cameron and Trivedi Chapters 14-16, Baltagi Chapter 11
 - (b) Heckman selection models
Wooldridge Chapter 26
 - (c) Optional: Duration models
Wooldridge Chapter 20, Cameron and Trivedi Chapter 17

3 Literature

3.1 Accompanying Literature

- **Main reference:** Jeffrey M. Wooldridge: *Econometric Analysis of Cross-Section and Panel Data*, 2002
- Cameron, A. Colin and Pravin K. Trivedi: *Microeconometrics*, 2005
- Badi H. Baltagi: *Econometric Analysis of Panel Data*, 3rd edition, 2005

3.2 Literature to refresh basic econometrics

- Stock, James H., und Mark W. Watson, *Introduction to Econometrics*, 2nd/3rd edition, Boston.
- Wooldridge, Jeffrey, *Introductory Econometrics - A Modern Approach*, South-Western Cengage Learning, 4th edition, 2009.
- Judge, George G. et al, *Introduction to the Theory and Practice of Econometrics*, Wiley, 2nd edition, 1988.
- Greene, William H., 2008, *Econometric Analysis*, Prentice Hall, 2011.