

Prof. V. Steiner / L. Hammer

Professur für Empirische Wirtschaftsforschung und Wirtschaftspolitik

Applied Microeconometrics (SS 2022)

Aim and contents of the course

The aim of applied microeconometrics is to analyze individual behavior on the basis of micro data (cross-section and panel data of individuals, households, and firms) and evaluate the effects of economic policies at the micro level. Microeconomic methods account for the non-metric measurement and censoring of dependent variables at the individual level, selectivity and incomplete observability of endogenous variables, and the dependence of individual observations over time. The course surveys discrete-choice, limited-dependent and selection models, duration models, panel data models, and “treatment effects” estimation. Several applications in empirical microeconomics are presented. Students learn how to apply these methods using real-world micro data and the software package STATA.

Format

There will be bi-weekly online lectures (2 times 90 minutes) starting on **6th June**, the weekly tutorials will take place in person.

Requirements and grading

Knowledge of basic estimation methods, such as the linear regression model, instrumental variables and the maximum likelihood method is assumed.

Grading will be based on the **final exam** which may be written in English or German.

Background reading (optional):

James Heckman, Micro Data, Heterogeneity, and the Evaluation of Public Policy, Journal of Political Economy, 2001, 109 (4), 673 – 748 (Nobel Lecture)

(Skip the technical parts at first reading; hopefully, you may want to re-read the full paper after completing this course.)

Text books (in increasing order of difficulty)

M. Verbeek, A Guide to Modern Econometrics (4 ed.), Wiley, 2012.

W. H. Greene, Econometric Analysis (7 ed.), Pearson, 2012, Chapters 11 and 17-19.

A. C. Cameron and P. K. Trivedi, Microeconometrics. Methods and Applications, Cambridge University Press, 2005

J. Wooldridge, Econometric Analysis of Cross Section and Panel Data. 2nd ed., MIT Press, 2010

Lecture slides and references to **selected journal articles** on empirical applications will be made available at the course blackboard. Text books are not required for the course but recommended for background reading.

Syllabus

Introduction: The Econometric Analysis of Micro Data

1. Discrete Choice Models

- 1.1 Binary logit and probit models
- 1.2 Multinomial discrete-choice models
- 1.3 Endogeneity in discrete-choice models

2. Limited-Dependent Variable Models

- 2.1 Tobit models
- 2.2 Selection models and treatment-effects estimation
- 2.3 Duration models

3. Panel Data Models

- 3.1 Static linear fixed-effects and random-effects models
- 3.2 Difference-in-Differences estimation and policy evaluation
- 3.3. Dynamic linear models
- 3.4. Non-linear panel data models