Fachbereich Rechts- und Wirtschaftswissenschaften
Fachgebiet Empirische Wirtschaftsforschung
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TECHNISCHE UNIVERSITÄT DARMSTADT

Winter Term

Course

Microeconometrics

The course microeconometrics covers special methods of regression analysis to deal with different data situations arising with individual firm or household data. The general approach consists of the specification of a suitable distribution and the parameter estimation by maximum likelihood. Covered are logit and probit models for discrete dependent variables, Poisson and Negbin models for count data as well as models of truncated and censored dependent variables. In addition, introductions to selection models, durations models and quantile regression are given. A short introduction to the problems of regressions with panel data is also provided. R implementations of the methods are presented and applied to example data sets.

Outline:

1. Introduction and Basics
2. Maximum Likelihood Estimation
3. Discrete Choice Models (binary, multinomial, ordered)
4. Count Data Models
5. Limited Dependent Variables
6. Selection Models
7. Duration Models (Cox Regression)
8. Quantile Regression
9. Panel Data Regression

Prerequisites: basics from statistics and linear regression analysis (e.g. from an introductory econometrics course)

Materials:

- slides and exercises on Moodle
- literature:

Cameron, A.C., Trivedi, P.K. (2005), Microeonometrics: Methods and Applications, Cambridge (Mass.): Cambridge University Press.
Franses, P.H., Paap, R. (2001), Quantitative Models in Marketing Research, Cambridge (Mass.): Cambridge University Press.
Greene, W.H. (2007), Econometric Analysis, 6. Aufl., New Jersey: Prentice Hall.
Heij, C., De Boer, P., Franses, P.H., Kloek, T., van Dijk, H.K. (2004), Econometric Methods with Applications in Business and Economics, Oxford: Oxford University Press.
Wooldrigde, J.M. (2002), Econometric Analysis of Cross Section and Panel Data, Cambridge (Mass.): MIT Press.

- software: R-Homepage (http://cran.r-project.org)

Time and Place: see the course page on TUCaN