Course syllabus for PhD course

Course part of the research school: People, Society and Sustainability

Department of Economics/Department of Urban and Rural Development

Discrete Choice Experiments in Agricultural, Food, and Environmental Economics

Diskreta valexperiment inom jordbruks-, livsmedels- och miljöekonomi

Higher education credits

5 HEC

Subject

Other social science

Course type

Methods course

Language

English

Prerequisites

Accepted as a PhD student in social science/business studies/economics (interested students from other subject areas may join upon agreement)

Course period

October 21, 2024 – December 6, 2024

Objective

Upon completion of this course, the students will be able to:

- Describe theory and applications of discrete choice experiments in Agricultural, Food, and Environmental Economics
- Discuss the limitations of discrete choice experiments and when and when not a discrete choice experiment can be applied
- Develop and design discrete choice experiments
- Analyze data from discrete choice experiments with and without accounting for preference heterogeneity
- Discuss recent methodological advances and limitations of discrete choice experiments

Content

- Theoretical models explaining discrete choices in a utility maximization framework
- Econometric models to estimate parameters of utility functions with discrete dependent variables
- Maximum Likelihood Estimation
- Principles of experimental design for discrete choice experiments
- Advanced discrete choice modeling and data analysis and recent methodological advances

Examination

- Students present one recent research paper in the field (assigned by the course leader not later than two weeks before the start of the course); they will also replicate at least part of the analysis of this paper. The exact requirements for the replication will be discussed individually with the examiners.
- Students submit an assignment on experimental design (by December 6, 2024 the latest)
- Students submit an assignment on data analysis (by December 6, 2024 the latest)
- Students actively take part in the course and contribute to group discussions and seminars

Contact for application and further information

On course content: Julian Sagebiel, julian.sagebiel@idiv.de; on organizational issues: Jens Rommel, jens.rommel@slu.se

Literature

- Train, K. E. (2009). Discrete choice methods with simulation. Cambridge University Press (Chapters 1-3).

- Mariel, P., Hoyos, D., Meyerhoff, J., Czajkowski, M., Dekker, T., Glenk, K., ... & Thiene, M. (2021). Environmental valuation with discrete choice experiments: Guidance on design, implementation and data analysis. Springer Nature.

- Additional literature will be provided before and during the course.

Additional Information

This course is part of the research school People, Society and Sustainability, a joined research school between the Department of Economics and the Department of Urban and Rural Development.

Preparation

1. Read chapters 1-3 in Train (2009)
2. Watch the lecture videos (link will be provided 4 weeks before the on-campus meetings):
    - Theoretical background
    - Econometric model
    - Principles of experimental design
    - Maximum likelihood estimation
3. Work on the exercises assigned to you 2 weeks before the course. The exercises are directly related to the videos.
4. Get familiar with R and do the datacamp courses assigned to you (4 weeks before the on-campus meetings)

Course schedule

November 18, 2024

09 – 12	Flipped classroom/discussion: Discuss contents from videos and work with practical examples and exercises (partly in R)
13 – 16	Short student presentations on assigned papers and time to work on replication assignment

November 19, 2024

09 – 12	Exercises on maximum likelihood estimation (mostly in R)
13 – 16	Time to work on replication and Q&A

November 20, 2024

09 – 12	Estimating discrete choice models with Apollo in R
13 – 16	Exercises on statistical analysis (on student's own project)

November 21, 2024

09 – 12	Estimating advanced discrete choice models with Apollo in R
13 – 16	Exercises on statistical analysis (on student's own project)

November 22, 2024 (Jens joins for this session)

09 – 16	Seminar: Students present their projects with a clear reference to a methodological debate based on the papers they replicated