

Syllabus
Winter Term 2021/22
Dynamic Discrete Choice
Dr. Andreas Mense

Description

The lecture starts with an introduction to static discrete choice and random utility models, using the multinomial logit model as an example. Building on this foundation, we then move to dynamic discrete choice models, where agents have rational expectations about the future state of the world. Taking into account dynamic considerations of decision makers is important in many areas of economics and business studies. The lecture focuses on the so-called CCP estimator of Arcidiacono and Miller (2011). The estimator is useful for dynamic decision models that can be estimated from short panels (if only several periods are observed), including data generated by randomized laboratory experiments. We then discuss an application of the estimator.

Semester plan

1. Introduction to Discrete Choice Modeling
2. Static Discrete Choice
 - a. The Random Utility Framework
 - b. Multinomial Logit
 - c. Nested Logit
3. Dynamic Discrete Choice
 - a. The dynamic choice problem and the value function
 - b. Mapping value functions to conditional choice probabilities
 - c. The CCP estimator of Arcidiacono and Miller (2011)
 - d. Application: Neighborhood Effects and Housing Vouchers

Literature

- Arcidiacono, P. & Miller, R.A. (2011). Conditional Choice Probability Estimation of Dynamic Discrete Choice Models With Unobserved Heterogeneity. *Econometrica* 79(6), pp. 1823-67. [Link](#).
- Cameron, A.C. & Trivedi, P.K. (2009). *Microeconometrics - Methods and Applications*. Cambridge University Press. (Chapters 14 and 15)
- Croissant, Y. (2010). Estimation of Multinomial Logit Models in R: The mlogit Packages. [Link](#).
- Davis, M.A., Gregory, J.M., Hartley, D.A., & Tan, K.T.G. (2021). Neighborhood Effects and Housing Vouchers. NBER Working Paper 28508. [Link](#).
- Stata Manual: mlogit command. [Link](#).