Econ 240B
Econometrics:
SPRING 2009

Professor:

Denis Nekipelov, Evans Hall 667
email: nekipelov@econ.berkeley.edu . Office Hours: Wednesday 8am-10am.

Time and Location:

MW 10:00-12:00, 608-7 Evans Hall.

Teaching assistant:

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Course Description:

This part of Econ 240 is devoted to analysis of extremum estimators. These estimators include such important estimation techniques as maximum likelihood estimators and generalized method of moment estimators. We will discuss the general theory of these estimators and illustrate it by using examples of important cross-sectional econometric models: discrete choice models, tobit models, censoring models. The following is an outline of the course:

1. Asymptotic properties of extremum estimators

2. Maximum likelihood estimation

   - Likelihood function, maximum likelihood estimator, the score.
   - Identification of the model and information. Information bound inequality.
   - Basic information regarding computational procedures.
   - Testing in the maximum likelihood framework.
   - Maximum likelihood estimation of discrete choice-based models

3. Method of moments and instrumental variable estimation

   - Definition of the generalized method of moments, identification and distribution theory
   - Linear instrumental variable models
   - Non-linear two-stage procedures
   - Two-step estimation of discrete choice-based models
   - Information and efficiency of GMM estimation
   - Hypothesis testing in GMM models

Grading:

There will be six homeworks and a final. The homeworks count for 10% of the final grade, and the final exame counts for another 90% of the course grade.

Textbook:

1. An Introduction to the Classical Econometric Theory, Paul A. Ruud.

Optional books:

1. Advanced Econometrics, Amemyia.

2. Estimation and inference in econometrics, Davidson and MacKinnon.

3. Handbook of Econometrics, Vol 4(1994).