EC 571 Advanced Econometrics

Course Syllabus

Winter 2012, 4:40 - 6:30pm TTH (CH 307)
Prof. K.-P. Lin (CH 241G, 725-3931)
Office Hours: 3:30-4:30 TTH & by appointment

This is the continuation of EC 570 covering advanced topics in econometrics. The main focuses of this course are generalized methods of moments, time series regression, distributed lags, systems of regression equations, and simultaneous equations models.

Texts

- Required:
  - W. H. Greene, *Econometric Analysis*, 7th ed., Prentice Hall, 2011.
- Recommended:
  1. J. M. Wooldridge, *Econometric Analysis of Cross Section and Panel Data*, 2nd ed., The MIP Press, 2010.
  2. A. Colin Cameron and Pravin K. Trivedi, *Microecometrics: Methods and Applications*, Cambridge University Press, 2005.
  3. F. Hayashi, *Econometrics*, Princeton University Press, 2000.
  4. K.-P. Lin, *Computational Econometrics: GAUSS Programming for Econometricians and Financial Analysts*, ETEXT Publishing, 2001.
  5. C. F. Braum, *An Introduction to Modern Econometrics Using Stata*, Stata Press, 2006.

Software and Manual

Both Stata and GAUSS are available in the Economics Lab (CH-230).

- Stata 11, StataCorp, 2010.
  A version of Small Stata may be used for the class.
  You can order it through Stata Course GradPlan here (Contact your instructor for the required GradPlan ID).

- GAUSS (Optional)
  - GAUSS 11, Aptech Systems, 2011.
    A student (Light) verstion of GAUSS may be used for the class.
  - GPE2 for GAUSS, included in *Computational Econometrics*.
    Free download of GPE2 for GAUSS 11 is available here for registered students only (Contact your instructor for download information).

Course Topics

Topic	Greene's Chapter	Example	Class Slide
Hetroscedasticity (Review)	9		
Autocorrelation	20	1.8, 1.9, 1.10, 1.11	

Distributed Lag Models	20	1.12	
Instrumental Variables Estimation	8	1.13, 1.14, 1.15	Instrumental Variables
Systems of Regression Equations	10	bw1.do, bw2.do, bw3.do, bwp.dta, bwq.dta	Translog Cost Function
Simultaneous Equations Models	13	klein1_1.do, klein1_2.do, klein1_3.do	
Panel Data	11	panel1_1.do, panel1_2.do, panel1_3.do	

Homeworks

- Homework 1: Due 1-26-12
- Homework 2: Due 2-09-12
- Homework 3: Due 2-23-12
- Homework 4: Due 3-08-12

Course Expectation

For this course, there are two (2) tests: midterm and final. In addition, there are 4 or 5 homeworks (once every two weeks in average). Also there is a course project due at the end of term. The time schedule and grade distribution are as follows:

Midterm	Feburary 16, in class	(30%)
Final	March 20, 5:30pm	(30%)
Project	March 20 or earlier	(20%)
Homework	Due every 2 weeks	(20%)

Guideline on Writing a Course Project

- **Format**
  1. 5-10 pages typed (double-space and wide margins).
  2. The format of the paper should follow a standard journal article closely.
  3. The model presented must be an original econometric model covering problems of estimating and testing model specifications. Continuation of EC 570 project is acceptable.
  4. Supporting data and computer program printout have to be included, but not counted for the page number.
- **Contents**
  1. Introduction and brief discussion of the main results.
  2. Technical description of the econometric model constructed: estimation, hypothesis testing, regression diagnosis, and remedial methods.
  3. Economic interpretation of the estimated model: the use of the model in practice.
  4. References (including data sources).
- **Grade**
  - The project is evaluated based on its originality, creativity, and consistency with the format and content requirements described above.
- **Deadlines**
  - Project proposal (1 page typed): March 1 or earlier.
  - Project due: March 20 or earlier.