Ph D Advanced Econometrics III
Module 2, 2019

Course Information

Instructor: Liang Chen
Office: PHBS Building, Room 759
Phone: 86-188 2727 9232
Email: chenliang@phbs.pku.edu.cn
Office Hour: Tuesday 10:00-12:00

Teaching Assistant: TBA
Phone:
Email:

Classes:
Lectures: Mon & Thur: 13:30-15:20
Venue: PHBS Building, Room XXX

1. Course Description

1.1 Context
Course overview: This course covers the theories and applications of various panel data models, ranging from the most basic linear models to nonlinear panel data models.

Prerequisites: Advanced Econmetrics I.

1.2 Textbooks and Reading Materials

Baltagi, Badi : *Panel Data*, 5th edition, Wiley.
Hsiao, C. (2014). *Analysis of Panel Data*, 3rd edition, Cambridge Uniersity Press.

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	YES
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	YES
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	NA
	2.2. Students will be able to apply leadership theories and related skills.	NA
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	NA

	3.2. Our students will practice ethics in the duration of the program.	YES
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	NA
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	YES
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	YES
	5.3. Our students will demonstrate competency in critical thinking.	YES

2.2 Course specific objectives
Learn rigorous econometrics.

2.3 Assessment/Grading Details
Problem sets: 20%
Midterm: 20%
final exam: 60%

2.4 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honours, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to *PHBS Student Handbook*.

3. Topics, Teaching and Assessment Schedule

Week 1: Linear panel data models (random-effects and fixed-effects estimators)

Week 2: Linear panel data models (two-way errors models, hypothesis testing)

Week 3: Dynamic panel data models (GMM estimators, Arellano-Bond estimator)
Week 4: Linear panel data models with interactive fixed effects

Week 5: Review and Midterm exam

Week 6: Panel data models with limited dependent variables (Probit and Logit models)

Week 7: Nonlinear panel data models with large T (large sample theory and bias correction)

Week 8: Factor models (principal component analysis, selecting the number of factors)

Week 9: Quantile regressions with panel data