Applied Microeconomics

Professor: Wenlan Qian
E-mail: wenlan.qian@nus.edu.sg

COURSE DESCRIPTION

The objective of this class is to introduce you to empirical methods and data used in the current social science research (e.g., economics, finance, accounting, and strategy). The overall approach is to understand the common methods and research design in the empirical research, combined with an intensive reading and replicating (and even extending) of prior empirical work. The goal of the course is for you to better appreciate and develop the methods, approaches, and intuition of the empirical research in your discipline.

The material in the course is entirely complementary, instead of substitute, to your (theory) econometrics classes. The focus is more on how to design and conduct credible inference based on empirical data, rather than the mathematical/statistical properties of econometrics. Those are necessary skills but I leave them to dedicated PhD courses on econometrics (for example at the economics department).

COURSE PRE-REQUISITES

Intermediate econometrics

TEXTBOOK

1. Wooldridge, Jeffrey M., 2002, Econometric Analysis of Cross-Section and Panel Data, MIT Press, MA. (a more technical treatment of the materials)

2. Greene, William., 2002,

3. J. D. Angrist and J. Pischke, 2009, Mostly Harmless Econometrics, ISBN 978-0-691-12035-5. Published by Princeton University Press

None of the textbooks is essential or required. You do not need to buy any for this specific class but might find it handy to have them around. Other relevant reading materials/papers will be assigned or distributed during the course of the class.

SOFTWARE

Modern empirical research demands a combination of programming skill sets in the following areas but this course will have a focus on Stata

- STATA and/or SAS and/or R

COURSE TOPICS

- Introduction
- Data and measurement
- General issues on estimation and interpretation
- Causal inference and identification challenges
- Selection and matching
- Instrumental variables
- Experiments and difference-in-differences
- Regression discontinuity

COURSE EVALUATION

1. *Paper summaries (15%)*

   You are expected to read carefully assigned papers and provide a summary of the paper (with a focus on its empirical methods and findings). The summary should be no more than 2 pages.

2. *Mini-referee reports (15%)*
   I will periodically ask you to review articles and submit referee reports on them. These reports should write about:
   a. What research questions are being addressed and how authors approach the question?
   b. Discuss the strength of the paper (especially its empirical methodology)
   c. Critique the paper's research design and methods. Is the interpretation appropriate given the methods? What is not done well and what would you do better?
   d. Given the authors have addressed your concerns satisfactorily, where would you recommend publishing the paper?

3. *Empirical Replication project (30%):*
   You will be asked to replicate published papers (or recent working papers) in various course topics. In addition to replicating the main findings of the paper, you are also expected to perform additional analysis to study the robustness of the paper as well as possible extensions.

4. *Presentation* (20%)
   You will be assigned to present your work (paper summary, referee work, replication exercise) in class using PPT.

5. *Final test (20%)*

   An in-class test will be given at the end of the course.

ACADEMIC HONESTY & 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, honors, 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*.