Applied Econometrics for Management

(2014~2015, 2rd Module)

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Class meetings: Mon. & Thur., 10:30 am~12:20 pm
Classroom: TBA
Office hours: Mon. & Thur., 14:00~15:00 pm
TA: TBA

I. Course Overview

1. Course Description

This course provides applicable knowledge of econometrics for 1st year management students. The course begins with the brief review of probability and statistic theories which are essential for econometrics. We then cover the classical econometric methodologies which are popularly used in recent management researches such as regression model and panel data analysis. Even though the course provides necessary statistical and mathematical background to introduce these methodologies, the course focuses on the application of the econometric tools which are useful for students' academic research. The basic guidance of statistical software (MS-Excel or STATA) is also provided for students who have little experience of analyzing data. To make sure students' understanding, individual problem sets will be given after almost every week.

2. Objective of the course

1) Provide students solid econometric knowledge necessary to assess their academic research and business problems
2) Improve students' ability of analyzing data, constructing model, and interpreting the estimation results
3) Get students hand dirty as much as possible: opportunities of playing with data sets by using statistical software.

II. Course Materials

1. Required Textbook

"Introduction to Econometrics, 3E (2012)" by James H. Stock and Mark M. Watson
(ISBN-10: 1-4082-6433-1 / ISBN-13: 978-1-4082-6433-1)

Additional reference

* "Econometric Theory and Methods" (2004) by Russell Davidson and James G. MacKinnon, Oxford

* "Microeconometrics: methods and applications" by A. Colin Cameron and Pravin K. Trivedi, Cambridge

* "Marketing Research(2010)" by Aaker, Kumar, Day, and Leone, Willey

III. Course Work and Grading

1. Course Assignments

1) Problem Set (6): Students solve the problem sets by using the technique learnt from the courses **individually**. Data would be given by instructor at the same day a problem set is distributed. You can use proper software to solve the problem set. The guidance for MS-Excel or STATA would be given during the class. Students must submit their final answers **by deadline (BEFORE THE CLASS STARTS!). Paper version is strongly recommended!** For special occasions, partial grade can be provided for late submission: however, you must get permission from an instructor first.

2) Project Assignment**:** Each student is required to choose his/her own research questions, construct the model, and conduct analysis to answer the research questions by using econometric techniques leant in the class. Each student must submit the final report by individual no later than deadline. Detailed guidance will be provided in the first class. You will present your work at the end of course
* Additional points are given to whom provide meaningful comments to others' presentation up to 10 points

3) Final Exam: there is a comprehensive class-room exam at the end of the semester. The exam will cover the materials only we discuss in the class. The review session might be given before the exam according to the course schedule.

2. Grading

Category	%
Participation	15
Problem Sets	30
Project Assignment	15
Final Exam	40

IV. Class Participation

You are required to be prepared and contribute regularly to our class discussion. Learning depends heavily upon thorough and lively participation and your preparation since I may from time to time call on individuals even when their hands are not raised. You should let me know before the start of class if some emergency has made it impossible for you to be prepared adequately for that class.

V. Class Room Policies

- Do not disturb other classmates with distracting devices such as cell phones and laptops.
- **Additionally, please display the name card.** My classes are very interactive, and so it is important for me to know who you are.
- Do not come to class late or leave early. Once the class starts you are expected to stay in your seat. Of course, I understand that there are special circumstances that can make this necessary; if you do need to come to class late, or leave early, please let me know ahead of time.
- Finally, please remember that we have a strict academic dishonesty program here. For example, you need to be careful not to plagiarize from other sources. Failure to adhere to these policies will result in a failing grade.

VI. Class Schedule*

week	Contents	Reading(Text) **	Assignment Due	Topics
1	- Course description - Introduction of Econometrics	Ch.1		
2	- Review of Probability & Statistics	Ch.2		Probability & Distribution
3	- Review of Probability & Statistics	Ch.2		Joint Distribution
4	- Sampling Distribution	Ch.3	PS1	Sampling Distribution Property of Estimator
5	- Hypothesis Test I	Ch.3		Hypothesis Test Intro
6	- Hypothesis Test II	Ch.3		Frequently Used Hypothesis Tests
7	- Hypothesis Test III	Ch.3	PS2	Frequently Used Hypothesis Tests
8	- Hypothesis Test IV	Ch.3		ANOVA
9	- Linear Regression Model I	Ch.4, Ch.5, Ch.17	PS3	Single Regression Model
10	- Linear Regression Model II	Ch.6, Ch.7, Ch.18		Multiple Regression Model
11	- Linear Regression Model III	Ch.8, Ch.9, Ch.18	PS4	Model Specification & Issues in Regression Model
12	- Linear Regression Model IV	Ch.8, Ch.9, Ch.18		Violation of OLS Assumptions
13	- Linear Regression Model IV	Ch.9, Ch.12, Ch 15, Ch.18	PS5	Violation of OLS Assumptions
14	- Panel Analysis I	Ch.10		Fixed Effect Model / Random Effect Model
15	- Panel Analysis II	Ch.10		Fixed Effect Model / Random Effect Model
16	- Panel Analysis III	Ch.10	PS6	Dynamic Panel Model
17	- Review			
18	- Project Presentation			Individual Presentation (Random Selection)

* This Course schedule is tentative. (subject to change)

** Additional reference will be provided in the class if necessary