

**Fulbright Economics Teaching Program
Masters in Public Policy 4
Academic Year 2011-2013
Spring 2012 (09/04 – 28/05/2012)**

**SYLLABUS
Research Method: Applied Econometrics**

Teaching team

Instructors: Dinh Cong Khai, Cao Hao Thi

Class Meeting Time

Mondays & Wednesdays: 15:15 - 16:45

Office hours

Dinh Cong Khai: Wednesday 17:00 – 19:00 or by email appointment
Cao Hao Thi: Monday 17:00 – 19:00 or by email appointment

Course Objectives and Description

The first aim of this course is to provide students with the ability to read and understand empirical papers done by others. Second, it is to provide students with the skills necessary to conduct a quantitative policy research on their own.

This course is devoted to advanced techniques for econometrics. First, students are introduced to estimation problems when the assumptions of the classical model (CLRM) are violated and their corresponding remedies. Participants will also learn how to use instrumental variables to deal with endogeneity in an estimation model. Second, this course introduces estimation with time series or panel data which has become very frequently and intensively used in empirical research. Third, students are provided with other useful econometric techniques such as difference in differences estimation and forecasting to study numerous policy questions.

Course Requirements

Participants are expected to attend class regularly and required to read the assigned readings before the class. There will be three problem sets and one final exam.

They are also encouraged to form study groups on their own to discuss the lessons, case studies, and the assigned readings together. Yet, each participant must write his/her own solution completely.

Applied econometrics is a challenging subject therefore if participants encounter any problems or have any questions, make sure to seek help from the teaching team as soon as possible.

The course will require the use of specialized software packages such as Eviews, SPSS, or Stata

to replicate examples in the books and a paper.

Grading

Discussion: 15%
Problem set: 45%
Final exam: 40%

All problem set solution must be submitted by 13:20, in both electronic copy (to <http://intranet.fetp.edu.vn:81>) and hard copy in the box in lab room, unless otherwise constructed.

A final grade of B- upward would be considered satisfactory in this course.

Readings

Lectures will be drawn mostly from two textbooks below, the first two of which are available in English and Vietnamese. Specific chapter references are given in the course outline. Additional material will be distributed at appropriate times. This material will also be part of required readings.

1. *Introductory Econometrics with Applications*, 5th edition, by Ramu Ramanathan, Harcourt College Publishers, 2003. This textbook has been selected because it has a strong orientation towards applications and a clear exposition of modern econometric practice. The textbook has a good website at: <http://econ.ucsd.edu/~rramanat/embook5.htm>. (Abbreviation: RR5)
2. *Basic Econometrics*, 3rd edition, by Damodar Gujarati, McGraw-Hill, 1995
3. *Basic Econometrics*, 4th edition, by Damodar Gujarati, McGraw-Hill, 2004. This book also has a useful website at: <http://www.mhhe.com/econometrics/gujarati4> (Please note that this website is associated with the 4th edition of the book.) (Abbreviation: DG4)

Several illustrative examples will be discussed in class at appropriate times. The purpose is to familiarize you with the various ways in which advanced econometric techniques have been used to investigate “real world” problems and policy issues. These examples will be drawn from the two main textbooks plus some case studies developed from the context of Vietnam.

Schedule

Week 1

Monday 09/04/2012 **Cao Hao Thi**

Review on Basic Econometrics I

Wednesday 11/04/2012 **Cao Hao Thi**

Relaxing the Assumptions of the Classical Model I:

Heteroscedasticity and small size sample

- DG3: Chapter 10
Distribute PS 1, due on 23/04/2012

Week 2

Monday 16/04/2012 **Dinh Cong Khai**

Relaxing the Assumptions of the Classical Model II:

Autocorrelation

- DG3: Chapter 11

Wednesday 18/04/2012 **Dinh Cong Khai**

Relaxing the Assumptions of the Classical Model III:

Serrial Correlation

- DG3: Chapter 12

Week 3

Monday 23/04/2012 **Cao Hao Thi**

Time Series I

- DG3: Chapter 21 and 22
PS1 due, distribute PS2, due on 14/05/2012

Wednesday 25/04/2012 **Cao Hao Thi**

Time Series II

Case study: Applying ARIMA Model to Forecast Prices and Stock Prices

- DG3: Chapter 21 and 22

Week 4 (29/4-6/5/2012) no class

Week 5

- ☐ **Monday 07/05/2012** **Dinh Cong Khai**

Spurious Regression in Econometrics

- DG3: Chapter 21
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- ☐ **Wednesday 09/05/2012** **Dinh Cong Khai**

Co-integration Regression and Granger Causality Test

- DG4: Chapter 17

Week 6

- ☐ **Monday 14/05/2012** **Dinh Cong Khai**

Panel Data

- DG4, Chapter 16

PS 2 due, distribute PS 3 – due on 28/05/2012

- ☐ **Wednesday 16/05/2012** **Nguyen Xuan Thanh**

Difference in Differences

- Ngân hàng Thế giới, Đánh giá tác động của các dự án phát triển tới đói nghèo: Sổ tay danh cho cán bộ thực hành, 2002, Chapter 3.
 - Nguyễn Xuân Thành, Estimating Schooling rate of return in Vietnam: Difference in Difference, Nov. 2006, FETP research paper.
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Week 7

- ☐ **Monday 21/05/2012** **Cao Hao Thi**

Instrumental Variables

- RR5, Chapter 13

☐ Wednesday 23/05/2012

Cao Hao Thi

Forecasting

- RR5, Chapter 11

Week 8

☐ Monday 28/05/2012

PS 3 due

Distribute final exam, due on 11/06/2012
