

Course Outline

EE484 Empirical Industrial Organization

Semester 2/2023 (January 8th – May 4th, 2024)

Number of Credit: 3 credits

Prerequisite: (a) EE311 and EE325 (or EE425) or
(b) with the consent of the lecturer.

Course Description: Empirical approach in industrial economics and application of econometric analysis in industrial economics theory i.e., Estimation of demand and production functions, Measurement of market power, Analysis of firm's strategic behavior, Vertical and horizontal competition, Firm's entry decisions, contract and learning. Measurement of firm performance by efficiency and productivity indicators.

Course Objectives:

Class Time and Logistic

Class day:	Friday
Class time:	13.00 – 16.00 hrs.
Venue:	Room 101, Faculty of Economics
Teaching Materials Platform:	[Google Classroom:]

Instructor:

Name: Asst. Prof. Dr. Monthien Satimanon

Office Hours: **By Appointment**

Email: monthien@econ.tu.ac.th

Phone:

Expected Learning Outcomes

1. Morality and Ethics EE484

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Students demonstrate integrity.	
○	2. Students prioritize social and public benefits over personal ones.	
●	3. Students are punctual and comply with the code of conduct of the institution and society at large.	
○	4. Students are responsible and accountable to society, the nation, and the subject of economics.	
○	5. Students realize the cultural and environmental value of a sustainable society.	

2. Knowledge

Applicability	Expected Learning Outcomes	
●	1. Students know and understand modern economics principles and theories, and are up to date with new developments.	
●	2. Students know and understand Thai and global economic structure and the importance of major international economic events.	
○	3. Students know and understand the instruments of economic analysis.	
●	4. Students know and understand applied fields in economics, including monetary, public, international, business, natural resource, and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.	
○	5. Students are informed about related fields including sociology, business administration, education, law policy, and science.	

3. Intellectual Development

Applicability	Expected Learning Outcomes	
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●	1. Students have developed individual critical thinking.	
●	2. Students are sufficiently trained in research skills.	
●	3. Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand the causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.	

4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes	
●	1. Students are responsible for assigned tasks and work in groups effectively.	
●	2. Students have problem-solving skills.	
○	3. Students show leadership skills and team spirit.	
●	4. Students are always improving themselves.	
○	5. Students have good interpersonal skills, adapt, and work under different conditions.	

5. Quantitative Analysis, communication, and information technology

Applicability	Expected Learning Outcomes	
○	1. Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.	
○	2. Students communicate effectively and select appropriate presentation methods.	
○	3. Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.	

Remark: ● Primary expected outcome ○ Secondary expected

Course Narratives:

Empirical I.O. studies how markets work, how firms compete or collude with each other, and how these interactions determine profits and consumer welfare. I.O. emphasizes the interdependence in the decisions of firms operating in a market. For instance, when a firm decides to open a new store, it should consider how other firms in the market will respond by changing their prices, advertising, closing stores, or opening new ones. These interdependences underlie firms' decisions and market competition.

Over the last two decades, research in IO. has become predominantly empirical I.O. economists use data on consumers' and firms' decisions to measure consumer demand, firm productivity, and profitability. They apply these measurements to understand firms' strategies and analyze how government regulations affect market competition and social welfare. Recently, the increasing availability of rich and detailed data on consumers' and firms' choices ("big data") has significantly impacted this field by generating new types of empirical questions requiring new models and methods.

Empirical I.O. emphasizes the importance of combining data, economic models, and appropriate econometric techniques to answer empirical questions. In terms of models and econometric methods, four main workhorses concentrate most of the research in this field: (i) production functions and the measurement of firm productivity; (ii) demand models and the estimation of consumer preferences; (iii) models of price and quantity competition; and (iv) models of market entry and innovation, both static and dynamic. This course is organized around these essential models.

Econometrics and data analysis are fundamental tools for the modern economist of the 21st Century. We will review and apply standard econometric models and methods such as the linear regression model, instrumental variables estimation, and discrete choice models. Students will gain practical experience working with economic data and using the STATA Data Analysis and Statistical Software package.

Textbook and References:

- [ABBP] Akerberg, D., L. Benkard, S. Berry, and A. Pakes (2006): "Econometric Tools for Analyzing Market Outcomes," Handbook of Econometrics, volume 6.
- [A.G.] Aguirregabiria, V. (2021): Book Project: "Empirical Industrial Organization: Models, Methods and Applications." Available at the course website.
- [ASL] Aguirregabiria, V., and M. Slade (2017): "Empirical Models of Firms and Industries," Canadian Journal of Economics, 50(5), 1445-1466.

- [ASU] Aguirregabiria, V. and J. Suzuki (2016): "Empirical Games of Market Entry and Spatial Competition in Retail Industries," Handbook on the Economics of Retail and Distribution, Chapter 9, pp 201-233. Emek Basker (editor). Edward Elgar Publishing.
- [B.R.] Berry, S., & Reiss, P. (2007): "Empirical Models of Entry and Market Structure," in Handbook of Industrial Organization, Volume 3, 1845-1886.
- [M.S.] Shum, M. (2016). Econometric Models for Industrial Organization (Vol. 3). World Scientific.
- [N.E.] Nevo, A. (2011): "Empirical Models of Consumer Behavior," Annual Review of Economics, 3, 51-75.
- [R.W.] Reiss, P., and Wolak, F. (2007): "Structural Econometric Modeling: Rationales and Examples from Industrial Organization," in Handbook of Econometrics, Volume 6, pp. 4277-4415.

LIST OF TOPICS [1] Introduction to the Course. [2] Measuring Productivity. Estimation of Production Functions. [3] Measuring Consumer Preferences. Estimation of Demand of Differentiated Products [4] Competition in Prices and Quantities. [5] Empirical Models of Market Entry

Lecture Schedule

(This schedule is subject to change. Please see Google Classroom for changes to dates, etc.)

Week	Date	Topics and Readings
1	January 12	[Introduction to the Course Measuring and explaining market power Data in Empirical IO Structural models in Empirical Industrial Organization: An Example An overview of the rest of the course
2	January 19	Measuring Productivity. Estimation of Production Functions Introduction Simultaneity Problem
3-4	January 26	Measuring Productivity. Estimation of Production Functions Dynamic Panel Data Methods Control function methods
5	February 2	Measuring Productivity. Estimation of Production Functions Application.
6	February 9	[Measuring Consumer Preferences. Estimation of Demand of Differentiated Products Introduction

Week	Date	Topics and Readings
7	February 16	[3] Measuring Consumer Preferences. Estimation of Demand of Differentiated Products
8	MIDTERM EXAM TBA	
9	March 1, 8	Demand systems in product space Demand systems in characteristics space Application
9-10	March 15	Competition in Prices and Quantities The Conjectural Variation Approach
11-12	March 22,29	Competition in Prices and Quantities Testing static oligopoly models (Genesove and Mullin: RAND 1998) Nevo on Cereals (Nevo, 2001)
13	April 5	Empirical Models of Market Entry Some general ideas
14	April 12	Empirical Models of Market Entry Bresnahan and Reiss (JPE, 1991)
15	April 26	Empirical Models of Market Entry Empirical Models of Market Entry with Heterogeneous firms
16	May 3	Student Presentations Or Wrapups

Assessment

Class participation	10%
Presentation	10%
Joint paper (Replication)	20%
Mid-term exam	30 %
Final exam	30 %

Class Participation (and attendance)

Students should read before class and bring a copy of the reading to the class. Students are encouraged to contribute answers, comments, and questions actively. *If a student is absent from more than two classes, marks will be deducted from her or his participation mark.*

Joint Essay and Presentation

Each group will consist of 3 students. Each group will research the topic and present findings in November. After receiving comments from the instructor at the end of the presentation, the group will revise and finalize the paper and submit it within one week after the student presentation. Details about the topics and the format of the paper will be provided on Google Classroom. A hard copy should be submitted in class, and the soft copy must be submitted to the instructor's email address.

Collaboration Policy:

Discussion and exchanging ideas and works are essential to student project work. Students and their teams are encouraged to consult and discuss the projects with student classmates and share resources and codes. However, the student should ensure that any working student submits for evaluation is the result of student work and reflects their integrity. Students should also understand and practice the standard citation practices, and please cite any books, articles, websites, lectures, etc., that have helped the student with their work. If the students receive any help with their work (e.g., feedback on drafts, help with code, or programming), they must also acknowledge and give credit to this assistance.

Remarks:

Mid-Term Examination TBA

Final Examination TBA

Semester 2/2023 (January 8 – May 4, 2024)	
Registration (Create Plan from Quota via TU Greats App) (*ID.62-66)	December 18 – 21, 2023.
Tuition Fee Payment Period (Via TU Greats App)	December 18 2023 - January 5, 2024.
Classes Begin	January 8, 2024
Add-drop period	January 8 – 21, 2024 <i>(from 9.00 AM of January 8 to 10.30 PM of January 21).</i>
Tuition Fee Payment Period (Via TU Greats App)	January 8 – 22, 2024 <i>(9 AM - 10.30 PM)</i>
Mid-term Examination Period	25, 27 - 29 February - 4 March, 2024
<i>Substitution for Makha Bucha Day *</i>	<i>February 26, 2024</i>
Withdrawal period with "W" on record	January 24 – March 17, 2024 <i>(from 9.00 AM of January 24 to 10.30 PM of March 17).</i>
Special Withdrawal with "w" on record	March 18 – April 22, 2024
<i>Substitution for Chakri Memorial Day*</i>	<i>April 8, 2024</i>
<i>Songkran Festival Day*</i>	<i>April 11 - 17, 2024</i>
Last day of class for Semester 2/2023	May 4, 2024
<i>Substitution for Coronation Day*</i>	<i>May 6, 2024</i>
Final exam period	May 7 - 21, 2024
Submitting Forms for Degree Conferral	January 8 – 21, 2024

Remark * Holiday, No classes during this period

Updated: November 1, 2023