EMPIRICAL INDUSTRIAL ORGANIZATION – MODULE 3, SPRING 2021

Faculty of Economic Sciences
National Research University Higher School of Economics

BASIC INFORMATION

Instructor's name	Ekaterina Kazakova
Class Times and Locations	Lectures: Monday 18:10-19:30, R-614
	Seminars: Monday 19:40-21:00, R-614
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Office Location	Room S-444
Office Hours	Friday 10:30 – 13:30, Room S-444

GENERAL INFORMATION ABOUT THE COURSE

This course is designed to introduce students to the tools for the empirical analysis of industries and markets. Broadly speaking, empirical industrial organization (EIO) combines empirical methods, data, and models to analyze imperfect competition and the organization of markets. Modern methods of the EIO are widely applied in merger review, antitrust litigation, regulatory decision making, marketing, and other related fields. Moreover, the increasing availability of firm- and consumer-level data ("big data") opens new empirical questions, that cannot be answered without understanding the basics of the EIO analysis.

In this course, we will cover traditional empirical models related to

- Demand estimation for homogeneous and differentiated products;
- Production function estimation and firm productivity;
- Identification of conduct;
- Static entry/exit models.

The course is associated to exercise sessions devoted to practical applications. We will replicate some of the empirical workhorse models using software like Stata and MATLAB.

COURSE GOALS, LEARNING OBJECTIVES, EXPECTED LEARNING OUTCOMES

You are expected to acquire broad knowledge on the key models and techniques of empirical industrial organization. Accordingly, you are expected to be able to conduct your own independent industrial analysis using real-life data.

COURSE OUTLINE

The course consists of 10 lectures and 14 seminar sessions. In the lectures, we will cover basic static EIO models. The seminar is devoted to replicating EIO models and applying techniques discussed in the preceding week. The goal of seminars is to make sure students understand and are able to work with data and implement basic methods of EIO in practice.

Description of course methodology and forms of assessment to be used

50%	Homeworks	The content of homework assignments will be the application of learned estimation techniques in practice and replication of related papers. Assignments should be submitted individually. Homework assignments will be posted 3 weeks in advance to the corresponding submission deadline. There are two homework assignments.
20%	Term project	Term project evaluation consists of the short essay in the form of a research proposal. It should be submitted individually. Essay requirements are posted online.
30%	Final exam	Final written exam will mainly consist of open questions related to the practical application of EIO for industry analysis.

Tentative schedule

Lecture 1: **Introduction**

Aguirregabiria, Victor, 2012. "Empirical Industrial Organization: Models, Methods, and Applications"

Ackerberg, Daniel & Lanier Benkard, C. & Berry, Steven & Pakes, Ariel, 2007. "Econometric Tools for Analyzing Market Outcomes," Handbook of Econometrics

Ryan, Stephen, 2012. "The Costs of Environmental Regulation in a Concentrated Industry," Econometrica

Lecture 2-3: **Competition, collusion and cartel**

Porter, Robert H., 1983. "A Study of Cartel Stability: The Joint Executive Committee, 1880-1886," Bell Journal of Economics, The RAND Corporation, vol. 14(2), pages 301-314

Bresnahan, Timothy F., 1987. "Competition and Collusion in the American Automobile Industry: The 1955 Price War," Journal of Industrial Economics, Wiley Blackwell, vol. 35(4), pages 457-482

Genesove, David & Mullin, Wallace P., 1998. "Testing Static Oligopoly Models: Conduct and Cost in the Sugar Industry, 1890-1914," RAND Journal of Economics, The RAND Corporation, vol. 29(2), pages 355-377

Lecture 4-5: **Estimation of demand for differentiated goods**

Berry, Steven T., 1994. "Estimating Discrete-Choice Models of Product Differentiation," RAND Journal of Economics, The RAND Corporation, vol. 25(2), pages 242-262

Berry, Steven & Levinsohn, James & Pakes, Ariel, 1995. "Automobile Prices in Market Equilibrium," Econometrica, Econometric Society, vol. 63(4), pages 841-890

Deaton, Angus & Muellbauer, John, 1980. "An Almost Ideal Demand System," American Economic Review, vol. 70(3), pages 312-326

Lecture 6-7: **Estimation of production functions**

Olley, G. Steven & Pakes, Ariel, 1996. "The Dynamics of Productivity in the Telecommunications Equipment Industry," Econometrica, Econometric Society, vol. 64(6), pages 1263-1297

Levinsohn, James & Petrin, Amil, 2003. "Estimating Production Functions Using Inputs to Control for Unobservables," Review of Economic Studies, Oxford University Press, vol. 70(2), pages 317-341

Ackerberg, Daniel A. & Caves, Kevin & Frazer, Garth, 2015. "Identification Properties of Recent Production Function Estimators," Econometrica, Econometric Society, vol. 83, pages 2411-2451

LECTURE 8-9: **Estimation of static entry/exit games**

Bresnahan, Timothy F & Reiss, Peter C., 1991. "Entry and Competition in Concentrated Markets," Journal of Political Economy, University of Chicago Press, vol. 99(5), pages 977-1009

Seim, Katja, 2006. "An empirical model of firm entry with endogenous product-type choices," RAND Journal of Economics, RAND Corporation, vol. 37(3), pages 619-640

LECTURE 10: **Extensions and applications or additional selected topic**

* Lectures will be based on the papers in the above list, which will be complemented by extensions and applications of those models.

TEXTS, READINGS AND OTHER INFORMATIONAL RESOURCES

Lecture slides are posted in the LMS website and ekaterinakazakova.com (in the teaching section). Lectures are self-sufficient and presented by a convex combination of papers mentioned above and material from the following books:

- Victor Aguirregabiria, "Empirical Industrial Organization: Models, Methods and Applications".
- Paul Belleflamme and Martin Peitz, "Industrial Organization: Markets and Strategies".

EXAMINATION/EVALUATION

To receive a passing grade, students should earn at least 35% of the maximum possible final grade.

There is a retake for the exam for students missing the first-take for a valid reason.

ACADEMIC INTEGRITY

The Higher School of Economics strictly adheres to the principle of academic integrity and honesty. Accordingly, in this course, there will be a zero-tolerance policy toward academic dishonesty. This includes, but is not limited to, cheating, plagiarism (including failure to properly cite sources), fabricating citations or information, tampering with other students' work, and presenting a part of or the entirety of another person's work as your own. HSE uses an automated plagiarism-detection system to ensure the originality of students' work. Students who violate university rules on academic honesty will face disciplinary consequences, which, depending on the severity of the offense, may include having points deducted on a specific assignment, receiving a failing grade for the course, being expelled from the university, or other measures specified in HSE's Internal Regulations.

CHANGES TO THE SYLLABUS

Any changes to this syllabus will be announced in class and ekaterinakazakova.com.