

EMPIRICAL INDUSTRIAL ORGANIZATION

Course title - Intitulé du cours	Empirical Industrial Organization
Level / Semester - Niveau / semestre	M2/S1
Teacher - Enseignant responsable	Pierre DUBOIS – Ana GAZMURI
Other teacher(s) - Autre(s) enseignant(s)	
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Other teacher(s) - Autre(s) enseignant(s)	
Lecture Hours - Volume Horaire CM	30
TA Hours - Volume horaire TD	0
TP Hours - Volume horaire TP	0
Course Language - Langue du cours	English
TA and/or TP Language - Langue des TD et/ou TP	

Teaching staff contacts - Coordonnées de l'équipe pédagogique :

Pierre Dubois (T687), email: pierre.dubois@tse-fr.eu, meetings by appointment. Pr. Dubois teaches the first half of the course.

Ana Gazmuri (T683), email: ana.gazmuri@tse-fr.eu, meetings by appointment. Pr. Gazmuri teaches the second half of the course.

Course's Objectives - Objectifs du cours :

We aim to give a solid grounding in understanding the structure of markets, and the strategic behavior of firms and consumers. The objective of the course is to familiarize students with the structural econometric methodologies commonly used in empirical industrial organization. At the end of the course, students are expected to know how to interpret the results in an empirical study, how to provide constructive criticism, and how to estimate some basic structural models. The course focuses on demand estimation and applications, estimation of market power, merger analysis and welfare, dynamic discrete choice models, entry models, estimation of production functions.

The topics we cover are central in the marketing, strategy, and information systems literature. Additionally, there are clear policy issues (on antitrust and regulation) and commercial implications that uses the tools and models we cover in this class. An objective of the class is to create discussion around these implications, to be critical of assumptions and to understand how the models can inform the policy questions.

Prerequisites - Pré requis :

Basic econometrics (knowledge of linear and non-linear econometric methods, generalized method of moments) and some software to perform assignments (Matlab, R or Stata)

Practical information about the sessions - Modalités pratiques de gestion du cours :

Students are expected to read the assigned papers before the class and participate actively in class discussions.

Grading system - Modalités d'évaluation :

For the first half: one homework and one written exam.

For the second half: one coding problem set and one homework based on a paper.

Bibliography/references - Bibliographie/références :

1. Akerberg, D., K. Caves, and G. Frazer (2015), Identification properties of recent production function estimators, *Econometrica*.
2. Berry, S. (1992), Estimation of a Model of Entry in the Airline Industry, *Econometrica*.
3. Berry, Levinsohn, Pakes (1995), Automobile Prices in Market Equilibrium, *Econometrica*.
4. Berry, Levinsohn, Pakes (2004), Differentiated Products Demand Systems from a Combination of Micro and Macro Data: The New Car Market, *Journal of Political Economy*
5. Bresnahan, T.F. and P. Reiss (1990), Entry in Monopoly Markets, *Review of Economic Studies*.
6. Bresnahan, T.F. and P.C.Reiss, (1991). Empirical models of discrete games, *Journal of Econometrics*.
7. Gowrisankaran, G., and Rysman (2012), Dynamics of Consumer Demand for New Durable Goods. *Journal of Political Economy*.
8. Hendel I. and A. Nevo (2006), Measuring the Implications of Sales and Consumer Inventory Behavior, *Econometrica*.
9. Hotz, J. and R. Miller (1993), Conditional Choice Probabilities and the Estimation of Dynamic Models, *Review of Economic Studies*.
10. Levinsohn, J. and A. Petrin (2003), Estimating Production Functions Using Inputs to Control for Unobservables, *Review of Economic Studies*.
11. Olley, G. S. and A. Pakes (1996), The Dynamics of Productivity in the Telecommunications Equipment Industry, *Econometrica*.
12. Pakes, A. (1986), Patents as Options: Some Estimates of the Value of Holding European Patent Stocks, *Econometrica*.
13. Rust, J. (1987), Optimal Replacement of GMC Bus Engines: An Empirical Model of Harold Zurcher, *Econometrica*.
14. Seim, K. (2006), An Empirical Model of Firm Entry with Endogenous Product-Type Choices, *The RAND Journal of Economics*.

Session planning - Planification des séances :

Part 1 (Pierre Dubois):

- Demand and supply models of product differentiation
- Measuring market power
- Merger analysis and welfare

Part 2 (Ana Gazmuri):

- Dynamic discrete choice and dynamic demand models
- Entry models
- Estimation of productivity and production functions