

Empirical Industrial Organization

Course title - Intitulé du cours	Empirical Industrial Organization
Level / Semester - Niveau /semestre	M2 / S1
School - Composante	Ecole d'Economie de Toulouse
Teacher - Enseignant responsable	DURRMEYER - BONTEMPS
Other teacher(s) - Autre(s) enseignant(s)	
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	Anglais
TA and/or TP Language - Langue des TD et/ou TP	

Teaching staff contacts - Coordonnées de l'équipe pédagogique :

Christian Bontemps (T518), email: christian.bontemps@tse-fr.eu, Office hours to be determined. Preferred mean of interaction: meeting by appointment. Pr. Bontemps teaches the second part.

Isis Durrmeyer (T686), email: isis.durrmeyer@tse-fr.eu, Office hours to be determined. Preferred mean of interaction: meeting by appointment or zoom until mid-November. Pr. Durrmeyer teaches the first part.

Course's Objectives - Objectifs du cours :

This is a course in the Graduate Industrial Organization sequence. We aim to give a solid grounding in understanding the structure of markets, and the strategic behavior of firms and their consumers. The objective of the course is to familiarize students with the structural econometric methodologies 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 carry out an empirical research project. The course will be devoted to the study of demand modeling in IO and their applications, to the analysis of structural estimation of auction models, to regulation, asymmetric information models and entry models.

Beyond academic careers, there are clear policy issues (on antitrust and regulation) and commercial implications (reflected by the growing economics consulting sector, which is based primarily around IO issues including pricing and competitive analysis). In addition to the economics discipline, estimating demand, understanding product positioning, pricing, the communication, gathering and use of product information, merger analysis, reputation and the other topics that we cover are central concerns in the literatures on marketing, strategy and information systems.

The course will consist of two parts:

Part I: Demand modeling in IO and applications, taught by Isis Durrmeyer

Part II: Five applied Topics in IO (entry models, productivity and production function, cost frontier estimations, estimation of auction models, models of regulation (if time permitted)) taught by Christian Bontemps

Prerequisites – Pré-requis :

Knowledge of linear and non linear econometric methods, generalized method of moments is required.

To perform the assignments, you will need to use Matlab and/or R

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

Readings marked with one asterisk (*) are mandatory.

Grading system - Modalités d'évaluation :

First part (50% of final grade): in class or take-home exam between November 1st and November 15th

Second part (50% of final grade): The students have to do a small empirical essay groups of two. You'll have the opportunity to discuss progress during office hours.

Bibliography/references - Bibliographie/références :

References:

Part I. Demand for differentiated products and IO applications

Introduction

1. Differentiated products demand

1.1. Theory and estimation on micro data

McFadden D. and K. Train (2000) "Mixed MNL Models for Discrete Response" Journal of Applied Econometrics, 15, 5, 447-470.

Train K. (2009) Discrete Choice Methods with Simulation, Cambridge University Press

Petrin A. and K. Train (2010) "A Control Function Approach to Endogeneity in Consumer Choice Models" Journal of Marketing Research, 47, 1, 3-13

1.2. Theory and estimation on aggregate data

Berry, S. T. (1994) "Estimating discrete-choice models of product differentiation", RAND Journal of Economics, 25, 2, 242-262

Berry S. T., J. Levinsohn, and A. Pakes (1995) "Automobile prices in market equilibrium", *Econometrica*, 63, 4, 841-890

Nevo, A. (2000) "A practitioner's guide to estimation of random coefficients logit models of demand", *Journal of Economics & Management Strategy*, 9, 4, 513-548

Knittel C. R. and K. Metaxoglou (2014) "Estimation of Random Coefficient Demand Models: Challenges, Difficulties and Warnings", *Review of Economics and Statistics*, 96, 1, 34-59

2. Measuring market power and merger analysis

2.1 Market power estimation

Nevo, A. (2001) "Measuring Market Power in the Ready-to-Eat Cereal Industry", *Econometrica*, 69(2), 307-342

Miravete E., K. Seim, and J. Thurk: Market Power and the Laffer Curve, *Econometrica* 86(5), 2018

2.2. Merger analysis and simulation

Nevo, A. (2000) "Mergers with Differentiated Products: the Case of the Ready-to-Eat Cereal Industry", *RAND Journal of Economics*, 31, 395-421.

Miller, N. H. and Weinberg, M. C. (2017), Understanding the Price Effects of the MillerCoors Joint Venture. *Econometrica*, 85: 1763-1791

3. Measuring consumer welfare

Petrin (2002) "Quantifying the Benefits of New Products: The Case of the Minivan," *Journal of Political Economy*, 110:705-729

Fan Y. and C Yang (2016) "Competition, Product Proliferation and Welfare: A Study of the US Smartphone Market", *American Economic Journal: Microeconomics*

Durrmeyer, I. (2022) "Winners and Losers: the Distributional Effects of the French Feebate on the Automobile Market", *Economic Journal*

4. Industry regulation

Durrmeyer I. and M. Samano (2018) "To Rebate or not to rebate: Fuel Economy Standards versus Feebates" *The Economic Journal*

Brenkers R. and F. Verboven (2006) "Liberalizing a distribution system: the European Car Market" *Journal of the European Economic Association*

Nurski L. and F. Verboven (2016) "Exclusive Dealing as an Entry Barrier - Evidence from the Car Market", *Review of Economic Studies*, 83, 3, 1156-1188

5. Consumer demand with limited information and advertising

Dubois P., R. Griffith, M. O'Connell (2017) "The Effects of Banning Advertising in Junk Food Markets" Review of Economic Studies

Sovinsky-Goeree, M. (2008) "Limited information and advertising in the us personal computer industry" *Econometrica* 76 (5), 1017-1074.

6. Vertical relations in retail markets

Bonnet C. and P. Dubois (2010) "Inference on Vertical Contracts between Manufacturers and Retailers Allowing for Non Linear Pricing and Resale Price Maintenance" *RAND Journal of Economics*, 41, 1, 139-164

Villas-Boas, S. B. (2007) "Vertical Relationships between Manufacturers and Retailers: Inference with Limited Data," *Review of Economic Studies*, 74, 2, 625-652

7. New models of price determination

Crawford G., O. Shcherbakov & M. Shum (2018) "Quality Overprovision in the Cable Television Markets" *American Economic Review*

Dubois P. and L. Lasio (2018) "Identifying Industry Margins with Unobserved Price Constraints: Structural Estimation on Pharmaceuticals" *American Economic Review*

D'Haultfoeuille X., Durrmeyer I., P. Février, (2018) "Automobile Prices in Market Equilibrium with Unobserved Price Discrimination", *Review of Economic Studies*

Grennan, M. (2013) "Price discrimination and bargaining: Empirical evidence from medical devices", *American Economic Review* 103(1), 145--177.

Part II

Topic 1 - Entry models

(*)Berry, S. (1992), "Estimation of a Model of Entry in the Airline Industry", *Econometrica*, 60, 889-918.

Bresnahan, T. and P. Reiss (1991), "Entry and Competition in Concentrated Markets", *Journal of Political Economy*, 99, 977-1009.

(*)Bresnahan, T. and P. Reiss (1990), "Entry in Monopoly Markets", *Review of Economic Studies*, 57, 531-553.

Cleeren, K., Verboven, F., Deekimpe, M.G., Gielens, K. (2010), "Intra- and Inter- Format Competition Among Discounters and Supermarkets", *Marketing Science*, 29, 456-473.

(*)Mazzeo, M.J. (2002), "Product Choice and Oligopoly Market Structure", *Rand Journal of Economics*, 33, 221-242.

Seim, K. (2006), "An Empirical Model of Firm Entry with Endogenous Product-type Choices", *Rand Journal of Economics*, 37, 619-640.

Topic 2 - Productivity and production functions

(*)Blundell, R., and S. Bond (2000), "GMM Estimation with persistent panel data: an application to production functions", *Econometric Reviews*, 19:3, 321-340

Christensen, L.R., D.W. Jorgenson and L.J. Lau (1971), "Conjugate Duality and the Transcendental Logarithmic Production Function", *Econometrica*, 39, 255-256.

Diewert, W.E. (1971), "An Application of The Shephard Duality Theorem: A Generalized Leontief Production Function", *Journal of Political Economy*, 79, 481-507.

Greene, W. P (1997), "Frontier production functions" in *Handbook of applied econometrics*.

(*)Levinsohn, J., and A. Petrin (2003), "Estimating Production Functions Using Inputs to Control for Unobservables", *Review of Economic Studies*, 70, 317-342.

(*)Olley, G. Steven, and Ariel Pakes (1996), "The Dynamics of Productivity in the Telecommunications Equipment Industry", *Econometrica*, 64, 1263-1297.

Topic 3 - Cost and production frontiers

(*)Aigner, C. A. K. Lovell, and P. Schmidt, "Formulation and estimation of stochastic frontier production function models," *Journal of Econometrics*, 6, 21–37, 1977.

(*)Meeusen and J. van den Broeck, "Efficiency estimation from Cobb-Douglas production functions with composed error", *International Economic Review*, vol. 18, no. 2, pp. 435–444, 1977.

S. C. Kumbhakar and C. A. K. Lovell, *Stochastic Frontier Analysis*, Cambridge University Press, Cambridge, UK, 2000.

S. C. Kumbhakar and E. G. Tsionas, "Estimation of stochastic frontier production functions with input-oriented technical efficiency," *Journal of Econometrics*, vol. 133, no. 1, pp. 71–96, 2006.

Schmidt P. (1984), "An error structure for system of translog cost and share equations", Department of Economics, Michigan State University.

(*)Schmidt P. and C.A.K. Lovell (1979), "Estimating technical and allocative inefficiency relative to stochastic production and cost frontiers", *Journal of Econometrics*, 9, 343-366.

Topic 4 - Empirical models of auctions

Athey, S., and P. Haile (2002): "Identification of Standard Auction Models", *Econometrica*, 70, 2107-2140.

(*)Guerre, E., I. Perrigne and Q. Vuong, 2000, "Optimal Nonparametric Estimation of First Price Auctions", *Econometrica*, 68, 525-574.

(*)Haile, P., and E. Tamer (2003), "Inference with an Incomplete Model of English Auctions", *Journal of Political Economy*, 111, 1-51.

Hendricks, K., J. Pinkse, and R. Porter (2003), "Empirical Implications of Equilibrium Bidding in First-Price, Symmetric, Common-Value Auctions", *Review of Economic Studies*, 70, 115-145.

Laffont, J. J. (1997), "Game Theory and Empirical Economics: the Case of Auction Data", *European Economic Review*, 1-36.

Laffont, J. J., and Q. Vuong (1996), "Structural Analysis of Auction Data", *American Economic Review, Papers and Proceedings*, 86, 414-420.

Li, T., I. Perrigne, and Q. Vuong (2000), "Conditionally Independent Private Information in OCS Wildcat Auctions", *Journal of Econometrics*, 98, 129-161.

(*)Li, T., I. Perrigne, and Q. Vuong (2002), "Structural Estimation of the Affiliated Private Value Auction Model", *RAND Journal of Economics*, 33, 171-193.

Topic 5 - Empirical models of regulation

(*)Gagnepain, P. and M. Ivaldi (2002), "Incentive Regulatory Policies: The Case of Public Transit Systems in France", *RAND Journal of Economics*, 33:4, 605-629.

Gagnepain, P., M. Ivaldi and D. Martimort (2013), "The Cost of Contract Renegotiation: Evidence from the Local Public Sector", *American Economic Review*, 103, 2352-2383.

Miravete, E. J. and Lars-Hendrik Röller (2004), "Estimating Markups under Nonlinear Pricing Competition", *Journal of the European Economic Association*, 2, 526-535.

(*)Miravete, E. J. (2002), "Estimating Demand for Local Telephone Service with Asymmetric Information and Optimal Calling Plans", *The Review of Economic Studies*, 69, 943-971.

Perrigne I. and Q. Vuong, (2011) "Nonparametric Identification of a Contract Model With Adverse Selection and Moral Hazard", *Econometrica*, 79, 1499-1539.

(*)Wolak F. (1994), "An Econometric Analysis of the Asymmetric Information, Regulator-Utility Interaction", *Annales d'Economie et de Statistique*, 1994, 13-69