

Mini-course "Topics in Empirical Industrial Organization"¹

Instructor: Sebastian Buhai - Swedish Institute for Social Research, Stockholm University Contact details: sebastian.buhai@sofi.su.se, www.sebastianbuhai.com

Synopsis

This crash/ refresh course on Topics in Empirical IO aims to provide the participants with an overview of some of the state-of-the-art econometrics tools for analyzing industrial market outcomes. We will cover the main methodological issues arising in the *estimation of demand systems*, and in the *estimation of production functions*, wrapping up with a bird's-eye view of *the empirical analysis of dynamic oligopoly games*. Applications drawn from the Empirical IO literature will illustrate the methodological discussions.

Schedule/ Format

Schedule: 25 July 2017 (the day preceding the ERMAS 2017 conference); 10.00-13.00 and 15.00-18.00

Format: 2 lectures x 3 hours

Lecture 1. Introduction. Demand estimation.

Lecture 2. Production function estimation. (Glimpse in) Empirical dynamic oligopolies.

Prerequisites

Basic microeconomics, basic econometrics (at master level).

Registration²

Deadline: 20 July 2017, via the host institution's links:

https://econ.ubbcluj.ro/ermas2017/curs.php (RO) or https://econ.ubbcluj.ro/ermas2017/en/curs.php (EN)

Course venue

Faculty of Economics and Business Administration (FSEGA), Babes-Bolyai University (UBB) Teodor Mihali street, no. 58-60 400591, Cluj-Napoca, Romania *Room* **102**

Recommended reading list

Registered course participants will be provided with digital copies of the articles in the far-from-exhaustive set following below. The more red * stars preceding it, the higher priority of reading through that article before the course (more stars indicate reviews/ surveys; one star indicates an application to be discussed).

¹ Initial version at 14-06-2017, final version at 22-07-2017; "Topics in Empirical Industrial Economics" is a *free* mini-course associated to the ERMAS 2017 conference—see http://www.econacademia.net/ermas2017.html or http://www.econacademia.net/ermas2017.html or http://www.econacademia.net/ermas2017.html or https://www.econacademia.net/ermas2017.html or https://www.econacademia.net/ermas2017.html or https://www.econacademia.net/ermas2017.html or https://www.econacademia.net/ermas2017.

² The host institution, UBB-FSEGA, is in charge with registering all the course participants (and publicizing the course). Should the online registration links above malfunction, please email the coordinator of the local organizers at <u>cristian.litan@econ.ubbcluj.ro</u>.



Review of basic Empirical IO concepts

***Ackerberg, D., C. Lanier Benkard, S. Berry, and A. Pakes (2007) "Econometric tools for analyzing market outcomes", Handbook of Econometrics 6: 4171–4276. NB. This article appears listed in all the subsequent course parts from below.
**Einav, L. and J. Levin (2010) "Empirical Industrial Organization: A Progress Report", Journal of Economic Perspectives 24 (2): 145–62

**Reiss, P.C. and F.A. Wolak (2007) "Structural Econometric Modeling: Rationales and Examples from Industrial Organization", Handbook of Econometrics 6: 4277–4415

Estimation of demand systems

***Ackerberg et al (2007) listed above in the Introduction, here specifically for its Section 1.

S. Berry (1994) "Estimating Discrete-Choice Models of Product Differentiation", Rand Journal of Economics, 242-62

*S. Berry, J. Levinsohn and A. Pakes (1995) "Automobile Prices in Market Equilibrium", Econometrica, 841-90

Nevo, A. (2000) "A Practitioner's Guide to Estimation of Random Coefficients Logit Models of Demand," Journal of Economics and Management Strategy, 513-48

*Nevo, A. (2001) "Measuring Market Power in the Ready-to-Eat Cereal Industry," Econometrica, 307-42

**Nevo, A (2011) "Empirical Models of Consumer Behavior," Annual Review of Economics, 3: 51-75

Estimation of production functions

***Ackerberg et al (2007) listed above in the Introduction, here specifically for its Section 2.

**Ackerberg, D. A., K. Caves, and G. Frazer (2015) "Identification Properties of Recent Production Function Estimators", Econometrica, 83: 2411–51.

Bond, S., and M. Söderbom (2005) "Adjustment Costs and the Identification of Cobb Douglas Production Functions", IFS Working Papers W05/04, Institute for Fiscal Studies

*Buhai, I.S., E. Cottini, and N. Westergaard-Nielsen (2015) "How Productive is Workplace Health and Safety?", forthcoming, Scandinavian Journal of Economics

Levinsohn, J. and A. Petrin (2003) "Estimating Production Functions Using Inputs to Control for Unobservables", Review of Economic Studies 70: 317-42

*Olley, S. and Pakes, A. (1996) "The Dynamics of Productivity in the Telecommunications Equipment Industry", Econometrica 64: 1263-95

Estimation of dynamic oligopoly games

***Ackerberg et al (2007) listed above in the Introduction, here specifically for its Section 3.

**Aguirregabiria, V. and P. Mira (2010) "Dynamic Discrete Choice Structural Models: A survey", Journal of Econometrics 156 (1): 38 –67

**Aguirregabiria, V., and A. Nevo (2013), "Recent Developments in Empirical IO: Dynamic Demand and Dynamic Games," in Advances in Economics and Econometrics, eds. D. Acemoglu, M. Arellano, and E. Deckel, New York: Cambridge University Press, 53–122

Bajari, P., C. L. Benkard, and J. Levin (2007) "Estimating Dynamic Models of Imperfect Competition", Econometrica 75 (5): 1331–70

Ericson, R. and A. Pakes (1995): "Markov-Perfect Industry Dynamics: A Framework for Empirical Work", Review of Economic Studies, 62, 53-82

*Ryan, S.P. (2012) "The Costs of Environmental Regulation in a Concentrated Industry", Econometrica, 80 (3): 1019–61