An introduction to empirical Industrial Organization (with practical applications)

Jordi Jaumandreu, June 2017

This course is an introduction to the modern models and tools of empirical Industrial Organization. The focus is very practical and, ideally, the students will end estimating elementary models of each kind. Examples with real data bases will be provided for each case. The course is organized in six sections of three hours. The first part of each section will be dedicated to introduce the models, the second part to introduce the programing and use of the estimators, and the third to discuss results, practical problems and extensions.

1. Market demand I:

   Demand, products and characteristics

   The basic discrete choice models: Logit and Nested logit

   Estimation of the basic discrete-choice models.

2. Market demand II:

   More consumer heterogeneity. Vertical and horizontal differentiation.

   The random coeffients models. BLP.

   Estimation of random coefficients models.

   Measuring consumer welfare.

3. Production and cost functions I:

   Unobserved efficiency, simultaneity and selection.

   Traditional approaches to estimation: Fixed effects, IV models.

   The Blundell and Bond model.

   Comparing results under different traditional approaches.

4. Production and cost functions II:

   The structural approach to estimating production functions: Olley and Pakes.

   More approaches: variable inputs, parametrics and nonparametrics.

Productivity and endogenous productivity.

Structural estimation.of production functions.

5. Dynamic models I:

   Single agent models.

   Example: Rust discrete choice model.

   Example: dynamics of R&D choices.

   Estimation of discrete choice dynamic models.

6. Estimation of dynamic models II:

   Multiple agent dynamics.

   Example: entry and exit.

   Estimation of a model of entry and exit.

General

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Demand

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Production Function

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Dynamic Models

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