

BUSINESS RESEARCH METHODS

Academic Year: 2014/15

Semester: 1st

Instructor(s): Raffaele Conti, Miguel Godinho de Matos and Manuel Leite Monteiro

Course Description:

This course introduces quantitative models for business decision-making. A great emphasis is put on practical applications of models, and on the use of statistical software packages to analyze real-world datasets.

Course Content (preliminary):

Part I - Applied Statistics (18h+9h)

1. Data collection:
 - (a) Different types of data (quantitative vs. qualitative; primary vs. secondary data)
 - (b) Avoiding biases in data collection (e.g., selection bias, recall bias, survivorship bias)
2. Statistical Inference
 - (a) Sampling distributions and Central Limit Theorem
 - (b) Point and interval estimation
 - (c) Hypothesis testing
3. Introduction to Regression Analysis
 - (a) Ordinary Least Squares Model
 - (b) Estimation
 - (c) Inference
4. Building and Interpreting Linear Models
 - (a) Log-linear, Linear-Log and Log-log models
 - (b) Dummy variables, Non linear effects and Interactions

Part II - Econometric Methods (18h+9h)

1. Causality vs. correlation
 - (a) Instrumental Variables
 - (b) Sample selection models
 - (c) Fixed Effects and First Differences
2. Making sense of different data formats
 - (a) Cross-Section
 - (b) Panel data
 - (c) Independently Pooled Cross-Section
3. Limited Dependent Variables
 - (a) Maximum likelihood estimation
 - (b) Logit and Probit; Ordered Probit and/or Multinomial Logit
 - (c) Poisson Regression
4. Other models (e.g., survival models)



Course Objectives:

After taking this course you should be able to:

- Construct a database in order to address real-world problems related to business
- Know the basic concepts of statistics that are heavily relied upon in econometric analysis
- Distinguish different types of data formats (cross section, panel data, etc.) and how they can be analyzed
- Have hands-on experience with using econometric models to analyze real-world datasets

Grading:

The final grade is based on

- Individual Class Participation
- Homework and Class Project
- Written Final Exam

Bibliography:

In this class we will use the following textbooks:

- JWB: Jeffrey Wooldridge, *Introductory Econometrics: A Modern Approach*, 4 ed. Thomson
- SLTB: Mark Saunders, Philip Lewis and Adrian Thornhill, *Research Methods for Business Students*, 3 ed. Prentice Hall

We will complement the book with discussions of applications, cases, research articles and demonstrations. Whenever relevant, we will hand out lecture notes.

Biography:

Raffaele Conti is Assistant Professor of Strategy at the Católica Lisbon School of Business & Economics, Universidade Católica Portuguesa. He received a Ph.D. in Management from Bocconi University. His research interests include the organization of R&D activity, the impact of uncertainty on firm decisions and performance, and the relationship between government regulation and firm strategy. He is member of the Research Committee of the Business Policy and Strategy (BPS) Division of the Academy of Management (2013-2015), and sits on the editorial board of *European Management Journal* and *Strategic Management Journal*.

Miguel Godinho de Matos is visiting Assistant Professor of Information Systems and Management at Católica Lisbon School of Business & Economics. He is also a visiting scholar at the Heinz College from Carnegie Mellon University. He received a Ph.D. in Telecommunications Policy and Management and a M.Sc. in Engineering and Public Policy from Carnegie Mellon University. Miguel's research interests focus on the analysis of social networks and peer influence on consumer behavior and the impact of digitization on consumer search and choice. Miguel has published his work in top journals and top peer-



reviewed research conferences such as Management Information Systems Quarterly, the International Conference of Information Systems, IEEE Conference on Social Computing and the Economics of Digitization Seminar Series of the National Bureau of Economic Research.

Manuel Leite Monteiro is Assistant Professor of Economics. He holds a PhD in Economics, Université catholique de Louvain, Belgium and a Licenciatura in Economics, CATÓLICA-LISBON. He teaches several courses at the Undergraduate, Masters, MBA and Executive Education Programs. His main areas of teaching are Statistics and Public Economics. He has participated in several applied studies, namely using quantitative methods applied to economic and business data. His scientific research has been focused on Public Economics and on studies of the Portuguese economy, and he has articles published in international refereed journals.

Contact(s) and Office hours:

Raffaele Conti: will teach only on the 2nd semester of 2014/15

Miguel Godinho de Matos: tba

Manuel Leite Monteiro: tba
