
Topics in Applied Econometrics

1. Objectives

This is a hands on course intended to develop your knowledge of applied econometrics through the discussion of selected topics related to empirical *research in management*. The tools and techniques that you will be exposed in class are found in papers published in top management journals. After this course you are expected to be able to discuss and implement the techniques presented in class in your own research.

To take this course you must have successfully completed Econometrics I. You should also have developed basic skills in stata.

2. Contents

The topics covered in this course include: *Introduction to the course; Data management using stata; Matching; Difference-in-differences; Regression Discontinuity; Heckman models; Event History Analysis and Marginal effects using stata.*

We will use **Stata 15** in all classes. You must bring your own laptop to class. Stata estimation commands will be introduced during the course.

3. Methodology

Classes will consist of lectures and seminars. Students are expected to prepare in advance and actively participate in each classes. There will be several exercises developed in class related to the application of the tools and techniques discussed during the course. The course instructor will provide the students access to datasets that they will use in assignments and exercises.

A list of readings in addition to those listed in the outline will be made available as the course progresses.

4. Grading

This course will be assessed based on two criteria: Contribution to class learning and two presentations that the students are expected to do during the course.

- Contribution to class learning will be determined by active participation in class discussions and your ability to demonstrate that you have prepared the materials assigned to a particular class (50% of the final grade).

- **Assignment 1:** Prepare a presentation (max 5 minutes) of a research idea that you could develop during your PhD using econometrics. The following information must be included in your presentation:

A research question, how existing papers have approached this question empirically, the dataset that could be used to answer this question, a potential econometric technique could be used, what are the main empirical challenges and limitations that you see implementing this technique.

For this assignment you *should not present* your own empirical analyses or results.

The presentations will happen in our first class. The slides must be sent to the course instructor two days before the course begins (25% of the final grade).

- **Assignment 2:** For the final assignment the students will present the results of a small empirical project that they will develop during the course. The instructor will provide datasets during the course that can be used to develop this project, students can also use their own datasets. *The objective of the final project is not to present statistically significant results.* The assessment criteria will be based on the choice of the econometric technique given the available data and the awareness that the student shows in terms of the advantages and limitations of the chosen techniques (25% of the final grade). Details for the final presentation will be announced in class.

5. Course Outline

Sessions 1 and 2: Introduction to the course

See assignment 1

Bettis, R, Gambardella, A, Helfat, C, & Mitchell, W 2014, 'Editorial: Quantitative empirical analysis in strategic management', Strategic management journal, vol. 35, no. 7, pp. 949-953.

J. Myles Shaver, a 1998, 'Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival?', Management Science, no. 4, p. 571.

Sessions 3 and 4: Data management using stata

Read the help function of the following stata commands:

merge; joinby; egen: min, max, seq, count, total and mean; replace; bysort; duplicates: drop, report and tag; keep: if; drop: if.

Sessions 5 and 6: Matching

Anand, N, & Kannan, S 2016, 'Right person in the right place: How the host country IPR influences the distribution of inventors in offshore R&D projects of multinational enterprises', *Strategic Management Journal*, no. 8, p. 1715.

Matthew, B, Stefano, I, Gary, K, & Giuseppe, P 2009, 'cem: Coarsened exact matching in Stata', *Stata Journal*, no. 4, p. 524.

Sessions 7 and 8: Difference in Differences

He, J, & Tian, X 2013, 'The dark side of analyst coverage: The case of innovation', *Journal of Financial Economics*, vol. 109, pp. 856-878.

Jasjit, S, & Ajay, A 2011, 'Recruiting for Ideas: How Firms Exploit the Prior Inventions of New Hires', *Management Science*, no. 1, p. 129.

Younge, KA, Tong, TW, & Fleming, L 2015, 'How anticipated employee mobility affects acquisition likelihood: Evidence from a natural experiment', *Strategic Management Journal*, vol. 36, no. 5, pp. 686-708.

Sessions 9 and 10: Regression Discontinuity

Bradley, D, Kim, I, & Tian, X 2017, 'Do Unions Affect Innovation?', *Management Science*, vol. 63, no. 7, pp. 2251-2271.

Flammer, C, & Bansal, P 2017, 'Does a long-term orientation create value? Evidence from a regression discontinuity', *Strategic Management Journal*, vol. 38, no. 9, pp. 1827-1847.

Sessions 11 and 12: Heckman models

Certo, ST, Busenbark, JR, Woo, H, & Semadeni, M 2016, 'Sample selection bias and Heckman models in strategic management research', *Strategic Management Journal*, vol. 37, no. 13, pp. 2639-2657.

Sessions 13 and 14: Individual meetings with students to discuss their projects or take doubts about the course content

Sessions 15 and 16: Event History Analysis

Blossfeld H-P, Golsch K, Rohwer G. 2007. *Event History Analysis with Stata*. Lawrence Erlbaum Associates Publishers: Mahwah, NJ US. Chapters: 1 and 2

Leone, MI, & Reichstein, T 2012, 'Licensing-in fosters rapid invention! the effect of the grant-back clause and technological unfamiliarity', Strategic Management Journal, vol. 33, no. 8, pp. 965-985.

Sessions 17 and 18: Marginal effects using stata, Graphing results

No readings assigned, focus the time in preparing the project presentation for the next class

Sessions 19 and 20: Presentation of Students Projects

Presentation of Assignment 2