Quantitative Microeconomics

Academic Year: (2019 / 2020) **Review date: 30-04-2020**

Department assigned to the subject: Economics Department

Coordinating teacher: MORA VILLARRUBIA, RICARDO

Type: Electives ECTS Credits : 6.0

Year : Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

An introductory course in Econometrics. Knowledge of the Econometric software gretl is highly recommended.

OBJECTIVES

This course aims at providing you with the econometric skills used in empirical microeconomic research. You should gain an understanding and working knowledge of using econometric techniques for cross sections and panel data to conduct applied research. The goal is to help you develop not only the ability to do empirical research in economics, but also the ability to critically read published research.

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This goal will be accomplished through classroom lectures, classroom practical sessions, and problem sets.

Specifically, by the end of the course you should be able to:
- Apply quantitative methods in problems of micreconomic choices.
- Use microeconomics to understand empirical analysis.
- Use appropriate software to implement quantitative microeconomics research.

Specific skills you will be able to gain during the course are:
- Understanding data limitations and their consequences in empirical analysis.
- Choosing appropriate empirical strategies for each research question.
- Interpreting results in terms of policy implications both at government and firm level.

General skills you will be able to develop during the course are:
- Understanding the usefulness of alternative quantitative methods
- Programming skills in quantitative research.
- Ability to use flexibly your knowledge of quantitative methods in different research scenarios.

Last, the course should help you in gaining
- Critical thinking in economic research.
- A more open and constructive approach to research based on available information.

DESCRIPTION OF CONTENTS: PROGRAMME

The course tours through a wide selection of microeconometric techniques designed to conduct applied research in microeconomics.

As a reference, the model of labour force participation and human capital will be used to motivate different econometric methods. Throughout the course, other empirical applications will be referred to, highlighting how the techniques learnt in the course can be successfully applied in other research questions. The course is divided in the following major topics:
- Maximum Likelihood and Monte Carlo Simulation.
- Binary choice models.
- Other qualitative dependent variable models: ordered, multinomial, and count data models.
- Corner solutions: censured models.

A more detailed programme will be made available in the web page of the course.

LEARNING ACTIVITIES AND METHODOLOGY

Practice is essential to learning and understanding econometric tools. Therefore, there will be computer practices sessions and exercises as homework. Monte Carlo simulation techniques will help understanding the statistical properties of the estimators.

The course will focus on how the nature of the data available and the research questions lead to the selection of appropriate econometric techniques. Moreover, most of the motivations for all topics dealt with in the course will stress the need to be able to infer policy implications from the results of the research.

There will be lectures, computer sessions, and classes where exercises will be solved. Slides and references are provided to facilitate successful course completion. Students will have access to basic manuals to learn the software chosen in the course. There will be four mid-term exams and four exercise sets.

Each lecturer will announce at the beginning of the term the day, hour, and place where tutorials will be conducted.

ASSESSMENT SYSTEM

To obtain the final mark through the evaluation of the term's workload, students must, at least, hand in two of the four exercise sets, and sit for two of the four midterm exams. The worst mark obtained from the mid-term exams and the worst mark obtained from the exercises will not be included in the evaluation. The final grade will result from the weighted average of all evaluations, the weights being: 60% for the midterm exams, 30% for the exercise sets, 10% for solving exercises in class.

More information on the assessment system will be made available in the web page of the course.

% end-of-term-examination:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

BASIC BIBLIOGRAPHY

- Damodar N. Gujarati, Dawn C. Porter Basic Econometrics, Mc Graw Hill, 2004
- JEFFREY M. WOOLDRIDGE Introduction to Econometrics: A modern approach, Thomson USA, Second Edition