Econometrics for Finance

Academic Year: (2021 / 2022) **Review date: 04-07-2020**

Department assigned to the subject:

Coordinating teacher: GONZALO MUÑOZ, JESUS

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Target Audience: This course is adequate for any student in the MSc in Finance. A basic understanding of probability theory and of the properties of the conditional expectation is assumed.

Course Language: English.

The course of Financial Statistics (First Term) should have been completed previously.

Computer exercises will be done using Eviews.

**Professor: Antonio Rubia (Associate Professor Universidad de Alicante)

OBJECTIVES

This course aims at providing the student with basic econometric skills used in empirical economic research. This goal will be accomplished through classroom lectures, practical sessions, and problem sets. Specifically, by the end of the course the student should be able to:
1) Apply basic linear regression techniques in economic problems.
2) Use appropriate software (Eviews) to implement quantitative research.
Skills the student will be able to gain during the course are:
1) Understanding data limitations and their consequences in empirical analysis.
2) Understanding the merits of alternative quantitative methods.
3) Interpreting results in terms of policy implications and prediction purposes.

DESCRIPTION OF CONTENTS: PROGRAMME

Part I: Linear regression models
1.1 Introduction.
1.2 Preliminaries.
1.3 Parameter estimation.
1.4 Regression analysis.
1.5 Departures from the classical assumptions.
1.6 Statistical inference in the linear regression model.

Part II: Panel data analysis
2.1 Introduction.
2.2 Preliminaries.
2.3 Pooled OLS estimator.
2.4 Fixed effects panel estimator.
2.5 Random effects panel estimator.
2.6 Summary.

Part III: Long-run relationships in Finance
3.1 Introduction.
3.2 Preliminaries.
3.3 Unit root testing.
3.4 Spurious regressions.
3.5 Error correction and VAR modelling.
3.6 System cointegration tests.

LEARNING ACTIVITIES AND METHODOLOGY

Learning activities will consist on lectures, computer practice sessions (illustrating the implementation of the econometrics techniques using real economic and financial data), and solving exercises from problem sets. Computer exercises will be done using Eviews.

Practice is essential to learning and understanding econometric tools. Therefore, there will be computer practice sessions and also computer exercises as homework. The course will focus on how to implement basic econometric techniques.

Slides and book references are provided to facilitate successful course attendance. Slides, exercises, and other materials will be available at Aula Global. The chosen software to practice with econometric tools is Eviews.

No late work will be accepted. Students will also be encouraged to attend the office hours in order to receive clarification on material covered in class. Office hours will not be available for checking if answers to homework are correct: Students will be encouraged to compare answers with their classmates for this purpose.

ASSESSMENT SYSTEM

Evaluation of student performance is based on:

(1) Final exam (60% of the final grade).

(2) Continuous Evaluation (40% of the final grade).

Important: A minimum of 4 over 10 in the exam is required to pass the course.
Students that do not meet the minimum passing grade should retake the subject. If the resit is taken, the above grade criteria also apply

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

BASIC BIBLIOGRAPHY

- Brooks, C. Introductory Econometrics for Finance. , Cambridge University Press, 4th edition, 2019
- Greene, W. H. Econometric Analysis, , Pearson 8th edition, 2017
- Wooldridge, J.M Introductory Econometrics: A Modern Approach,, 2nd ed., Thomson South-Western, 2003

ADDITIONAL BIBLIOGRAPHY

- Stock, J. and Watson, M. Introduction to Econometrics, Addison-Wesley, 2003