BMAN70211 INTRODUCTORY RESEARCH METHODS for Accounting and Finance
or, in short: Econometrics I
(Prof. Massimo Guidolin)

Basic Information

E-mail: Massimo.Guidolin@mbs.ac.uk (note: Prof. Guidolin is the right way to address mails)
Office hours: Friday 9:00 – 10:00 and 16:00 – 17:00 or email me (where: office M10 Crawford)
Lecture times: Friday, 14:00-16:00 pm, G6 MBS West (but see detailed time table)

Mode of assessment: 100% unseen examination.

NOTE: Attendance at lectures is compulsory. Lectures will cover model implications and provide illustrative examples not covered by the textbook.

Aims

The course provides foundations in statistics and computing techniques which are beneficial for successful completion of other postgraduate courses in Accounting and Finance.

Learning Outcomes

On completion of this unit successful students will have:

- Appreciate the methodology of positive economics and falsification as applied to research in the fields of accounting and finance;
- Understand the fundamental concepts of research design: null versus alternative hypotheses, sample selection issues, basic modelling issues, and parameter estimation techniques;
- Obtain skills and experience in conducting problem-based empirical research and interpreting empirical results.

Assessment

The module is assessed via a two-hour unseen examination.

Main text


Although this text does not fully cover the material delivered in this course unit, it is strongly advised that you purchase this text.

The main reading is given in the syllabus below. Please note that this list is not a fully comprehensive and that additional references may be given in lectures. Teaching materials, handouts, datasets, etc. will be available from the course unit website, on Web CT.
Assumed knowledge
From the beginning of the course unit it is assumed that you have a working understanding of basic concepts in mathematics (e.g., natural logarithms, sums, series, integrals, derivatives and differentials, equations and systems of equations, etc.) and elementary statistics (e.g., means, medians, modes, histograms, various types of charts and graphs). These are covered in virtually every course in mathematics and statistics at introductory levels. The first three hours of the course will be used to review these notions, while notes will be posted. You are warmly invited to make sure you understand all of these pre-requisite concepts.

Syllabus

Section I : Fundamentals of economic methodology; the role of statistical analysis in finance and accounting

Topic I: Why Does a Financial Economist or an Accountant Need Statistics?
Newbold, Carlson, and Thorne, ch. 1.

Topic II: Some Thoughts on Economic Methodology

Section II : Elements of Probability Theory

Topic I : Probability
Newbold, Carlson, and Thorne, ch. 4.

Topic II : Discrete Random Variables and Probability Distributions
Newbold, Carlson, and Thorne, ch. 5.

Topic III : Continuous Random Variables and Probability Distributions
Newbold, Carlson, and Thorne, ch. 6.

Section III : Sampling and Estimation

Topic I : Sampling and Sampling Distributions
Newbold, Carlson, and Thorne, ch. 7.

Topic II : Estimation and Confidence Intervals
Newbold, Carlson, and Thorne, ch. 8.

Topic III : Confidence Intervals for Differences Between Two Normal Populations

Section IV : Hypothesis Testing

Topic I : Simple Testing in a Single Population
Newbold, Carlson, and Thorne, ch. 10.

Topic II : Tests of Differences Between Two Population Means
Newbold, Carlson, and Thorne, ch. 11.1-11.2.
Section V : Regression Analysis

Topic I : Univariate Regression
Newbold, Carlson, and Thorne, ch. 12.

Topic II : Multivariate Regression

Section VI : Violating the Assumptions of the Classical Linear Regression Model

Topic I : Lagged Dependent Variables, Omitted Variables, Multi-collinearity, et al.

Timetable
Week 1: Friday September 28
Lecture: 14:00 – 16:00 G6 MBS West

Week 2: Friday October 5
Lecture: 12:00-13:00, 14:00 – 16:00 G6 MBS West

Week 3: Friday October 12
Lecture: 14:00 – 16:00 G6 MBS West

Week 4: Friday October 19
Lecture: 12:00-13:00, 14:00 – 16:00 G6 MBS West

Week 5: Friday October 26
Lecture: 14:00 – 16:00 G6 MBS West

Week 6: Reading Week

Week 7: Friday November 9
Lecture: 14:00 – 16:00 G6 MBS West

Week 8: Friday November 16
Lecture: 14:00 – 16:00 G6 MBS West

Week 9: Friday November 23
Lab sessions in Crawford House (2 hours, details will follow)

Week 10: Friday November 30
Lecture: 14:00 – 16:00 G6 MBS West

Week 11: Friday December 7
Lecture: 14:00 – 16:00 G6 MBS West

Week 12: Friday December 14
Review session (not compulsory): 14:00 – 16:00 G6 MBS West