



APPLIES TO ACADEMIC YEAR 2014/2015

EXC 3506 Research Methods and Econometrics

Programme

Bachelor of Business Administration (2. year)

Responsible for the course

Svein Lund

Department

Department of Economics

Term

According to study plan

ECTS Credits

7,5

Language of instruction

English

Introduction

The course provides an introduction to the research methods of the social sciences and to econometrics. Research methods is important for the understanding of the strengths, limitations and possibilities of applied research in general, and of econometric research in particular. Research methods also provides an insight into which approaches that are most appropriate for a certain research question. Regression analysis, a key component of econometrics, is a powerful and very flexible multivariate data analysis tool that can shed light on a very large number of economic issues.

Learning outcome

Acquired Knowledge

After the course, the students will have knowledge about:

- Important research methodological concepts
- The main principles of scientific thinking
- Knowledge of the main approaches (both qualitative and quantitative) to the collection, processing and analysis of data
- Basic econometrics
- Possibilities and limitations of econometric tools for business uses (research, quality control, forecasting, logistic analysis and control, etc.)
- Limitations in the case where statistical assumptions are violated
- The plurality of interpretation and uncertainty associated with econometric analysis

Acquired Skills

After the course the students will be able to:

- Understand and assess research based on scientific principles
- Evaluate which approaches that best suit the nature of a research question
- Collect, process and analyse data on the basis of scientific research methods
- Conduct econometric analysis by means of modern software
- Conduct and interpret the results of multiple econometric hypothesis testing, also in the cases where the classical assumptions are not fulfilled
- Undertake model selection

Reflection

The students should acquire a conscious and critical attitude towards data, towards econometric analysis, and towards the assessment and interpretation of results from applied research

Prerequisites

EXC 2904 Statistics or MET 2920 Statistics for economists or MET 3431 Statistics or the equivalent.

Compulsory reading

Books:

Easterby-Smith, Mark, Richard Thorpe and Paul Jackson. 2012. Management research. 4th ed. Sage. ch. 2 ; The Philosophy of Management Research

Gujarati, Damodar. 2011. Econometrics by example : adapted for the course MET 3592 Økonometri at BI Norwegian Business School. Palgrave Macmillan

Recommended reading

Books:

Stock, James H., Mark M. Watson. 2012. Introduction to econometrics. 3rd ed. Pearson
Wooldridge, Jeffrey M. 2013. Introductory Econometrics: A Modern Approach. 5th ed., international ed. South-Western, Cengage Learning

Course outline

- Research methods and the philosophy of science
- Research questions, hypotheses and types of data
- Variation in research design, plurality of interpretation and the uncertainty of inference
- Simple and multiple regression
- Variation in functional form
- Regression with qualitative right-hand side variables
- Multicollinearity
- Heteroscedasticity
- Autocorrelation
- Specification error and model selection
- Dynamic models and forecasting
- Qualitative left-hand side variables

Computer-based tools

EViews, Stata, OxMetrics, Gretl or R.

Learning process and workload

The course consists of 42 lecture hours, where the lectures may be combined with the solution of exercises and the use of software

Coursework requirements:

As a means towards learning two obligatory exercises have to be solved and handed in during the semester. Both of these are obligatory and must be passed in order to be allowed to do the final exam. Each of the exercises consist of two parts, one case-based part that requires the use of software, and one part that is not case-based. The publication, solution and handing in of the exercises is done via the current learning platform (It's Learning). Feedback is given either via It's Learning and/or lectures.

Recommended time used:

Activity	Hours
Lectures	36
Instruction on the use of econometric software	6
Solution of exercises	70
Self-study, preparation to lectures and group-studying	60
Obligatory exercises	15
Exam case and exam	13
Total recommended time used	200

Use of hours

36 hours - Lectures

6 hours - Instruction on the use of econometric software

3 hours - Coordination of the learning process on Itslearning

45 hours total

Coursework requirements

In order to be allowed to enter for examination, two obligatory exercises have to be solved and handed in during the semester, see above under learning process and time-use.

Examination

The course ends by means of a three hour individual multiple choice exam that counts 100% of the final grade. The exam questions are partly based on a case that is published two weeks before the exam. The results from the case do not have to be handed in, but are brought along to the exam. In addition to the case results, the exam will also contain questions on the whole syllabus.

Examination code(s)

EXC 35061 - Multiple choice exam that counts 100% with the view of obtaining a pass grade in the course EXC 3506 Research Methods and Econometrics, 7.5 credits

Examination support materials

All support materials are allowed including the exam calculator TEXAS INSTRUMENTS BA II Plus™

Examination support materials at written examinations are explained under examination information in the student portal @BI. Please note use of calculator and dictionary. https://at.bi.no/EN/Pages/Exa_Hjelpemidler-til-eksamen.aspx

Re-sit examination

Re-sit examination is offered at the next scheduled course.

Additional information