Quantitative research methods in business studies
(doctoral course; 7,5 ECTS credits)

Course director
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Learning objectives
The aim of this course is to introduce new doctoral students to quantitative research methods in business studies. On successful completion of the course students are expected to be able to:

- Describe basic ideas, underlying assumptions, and elements of design and implementation of different research approaches, data collection, and analysis techniques available to a quantitative researcher in the field of business studies, e.g., surveys, patent data, hospital and patient data and event studies
- Reflect over contemporary methodological problems and possible solutions
- Understand how to report and read quantitative research in a critical and publishable way
- Be familiar with basic central concepts associated with quantitative methods, such as statistical inference, statistical association and causation among variables
- Be familiar with and able to use basic multivariate data analysis techniques, using computer based statistical packages such as SPSS
Content
The course deals with the following topics:

- Differences between qualitative and quantitative research
- The quantitative research process: models, constructs, measurement, design
- Use of primary data sources such as in survey research
- Use of secondary data sources such as in patent data-, health care hospital and patient data-, bibliometrical- and event studies
- Validity and reliability
- Pooling data across transparently different groups of key informants
- Techniques for improving response rates
- Introduction to SPSS
- Basic statistical analysis: summarizing and describing samples of data
- Statistical inference (from samples to populations): probability; estimation; hypothesis testing for relationships between variables and comparing groups.
- Statistical association and causation among variables
- Key statistical tests of hypothesis: t-tests; Chi-Square, F-test
- Analysis of Variance (ANOVA)
- Regression analysis
- Multiple regression analysis
- Factor analysis
- Cluster analysis

Teaching and learning activities
The course consists of seminars, lectures and exercises. The emphasis is on business studies which for example will be reflected in the reading list for each seminar and the statistical exercises.

There are six parts:

1. Seminar on quantitative research methodology in business studies
2. Seminar on survey research
3. Seminar on patent data- and hospital and patient data studies
4. Seminar on event study methods
5. Lecture and exercise on descriptive statistics
6. Lecture and exercise on multivariate statistics and hypothesis testing
Preliminary reading list (subject to change)

Seminar on survey research


Seminar on patent data- and hospital and patient data studies:


**Seminar on event study methods**


Reference literature for statistical exercises


Examination
The course is examined through active participation in seminars and exercises and through one final assignment. The final assignment consists of three parts:

1. Discussion of how one or more of the approaches to data collection possibly could be adopted in the doctoral student’s own research, eg survey, patent- or patient data and/or event studies. Reflect on advantages and disadvantages with the selected approaches.
2. Selection of a few articles that are based on quantitative research methods in the doctoral student’s dissertation area (eg marketing, finance, accounting, operations management or organization studies) and reflect on key particularities for their field.
3. Using and trying out statistical techniques taught in the course, eg descriptive statistics, regression analysis and factor analysis. A dataset and instructions will be provided by the course director.

The student’s performance in relation to the learning objectives for the course is assessed according to a pass/fail grading scale. Further guidelines and criteria will be distributed in due course.

Schedule
April 12: 09-13
April 19: 09-13
April 26: 09-13
May 3: 09-13
May 8: 09-13
May 15: 09-13

All meetings in room Svante Sköldberg, building no. 15, 3rd floor.