Stockholm University

Department of Sociology

Introduction to Quantitative Research Design

Advanced level, 7,5 ECTS credits

COURSE CONTENT

The main aim of this course is to provide students with the tools to conduct and evaluate basic research. An appropriate research design link between theory and methods is discussed and students learn how to independently evaluate and choose a research question and an appropriate research design. The conceptual bases of sociological research are discussed and described, along with criteria for concept definition and assessment. The difference between sociological description and causality is described and discussed. Students will also receive a brief repetition to basic descriptive analysis along with an introduction to data management with the statistical software Stata. Common sources of error in existing data sets are discussed and investigated using simple sensitivity analysis and simple regression analyses are estimated.

An important goal of the course is to increase interaction among students and promote cooperation. Group work in rotating groups is therefore an important part of the course and participation in group work/discussions is mandatory. In addition to group exercises, the students need to hand in a halfway individual assignment as well as a final exam in terms of a review of a scientific article. The article is chosen after consultation with the course instructor. The written article review is handed in before the seminars concluding the course and at these seminars students will also orally present the chosen article and their review of it to their peers. The oral as well as the written presentation provides students with practical training in understanding and reporting on the research of others in such a way that it become comprehensible to others.

Entry requirements: Bachelor's degree with a major in social sciences, 60 credits in Sociology and English B or corresponding.

LEARNING OUTCOMES

After the course, students are expected to:

- be able to describe the characteristics of a well-founded theory/hypothesis and an empirically testable research question
- be well aware of how to search and find relevant literature and previous research on a given topic
- have good knowledge of the basic concepts of sociological theory and methods
- be able to argue for and assess the advantages and disadvantages of different study designs and methods to answer different research questions
- know and be able to describe the differences between a descriptive and a causal analysis and to recognize a few of the most common statistical analyzes in each area
- critically summarize and evaluate an empirically-based study
- have basic knowledge of simple Stata programming and documentation
- understand and be able to detect basic errors in quantitative datasets
- be able to perform, explain and interpret a few common basic statistical analyzes

COURSE ORGANIZATION

The course is offered full-time over 4,5 weeks. The course is offered in English.

The course will be offered both on campus and via Zoom. Make sure that your camera and microphone is working well in time before each lecture and seminar starts. Mandatory attendance can only be assessed for those with a functional camera and microphone during the entire seminar.

INSTRUCTION AND EXAMINATION

Instruction is given in the form of six lectures and four data labs. Mandatory elements include the submission of all eight assignments and an oral presentation and peer review in the article seminar.

In order to complete the group assignments, attendance in group discussions is mandatory. Those who for any reason cannot attend the group discussions must hand in an individual assignment of the same length as the group assignment *and* a summary of Ultee 2001 (in readings below).

Participation in the article review seminar is mandatory. Those who for any reason cannot attend the article review seminar must submit a manuscript for their presentation, a written peer review of another student's article review *and* a summary of the first three chapters of Goldthorpe 2016 (in readings below).

September 30 at 8:00 is the final date for the submission of assignments. Any assignment that is not passed, or late assignments, can be handed in at the re-examination dates November 13 at 8:00 or March 12, 2021, at 8:00. After these dates assignments will be corrected at examination dates offered in the following semesters.

CRITERION REFERENCED ASSESSMENT

The course is examined on the basis of the submitted assignments and the article seminar (oral presentation and peer review). All assignments except for Assignment 5 (halfway assignment) and 8 (the article review) are assessed according to to a two-point scale (Pass or Fail). Assignment 5 is assessed according to a three-point scale (Pass with distinction, Pass or Fail). Assignment 8 (including the oral presentation of the article) is graded on the basis of the following assessment criteria:

Criteria	**Concepts and basic assumptions**	**The link between theory and method**	**Results and conclusions**	**Approach**
Good	Detailed and critical discussion of concepts and basic assumptions	Clear, detailed and critical description of the link between theory and empirical analysis	Clear and critical description of results and conclusions	Independent approach to the literature
Some shortcomings	Clear description of concepts and basic assumptions	Clear and Detailed description of the link between theory and empirical analysis	Clear description of results and conclusions	Open approach to the literature
Fail	Unclear and/or uncritical presentation of concepts and basic assumptions	Unclear description of the link between theory and empirical analysis	Unclear or incorrect description of results and conclusions	Lacks an independent approach to the literature

In order to pass the course, students must pass all assignments and meet the attendance requirement.

To get **A**, the article review has to be ’good’ on all four criteria and the individual halfway assignment was passed with distinction.
To get **B**, the article review has to be ’good’ on at least three criteria and the individual halfway assignment was passed with distinction.
To get **C**, the article review has to be ’good’ on at least two criteria.
To get **D**, the article review has to be ’good’ on at least one criteria.
To get **E**, the article review has some shortcomings on all criteria.
To get **Fx**, the article fails on at least one criteria and/or the student has not passed the group exercises and/or the individual halfway assignment.
To get **F**, the article fails on at least two criteria and/or the student has not passed the group exercises and/or the individual halfway home assignment.

Students who receive the grade E or higher may not retake the examination to attain a higher grade. Students who receive the grade F or Fx twice by the same instructor are entitled to have another examiner appointed for the next examination, unless there are speical reasons to the contrary. Such requests should be made to the director of undergraduate studies.

READINGS

Required readings

Coursebooks

Gerring, J, Christenson, D. (2017) Applied Social Science Methodology. An introductory guide. Cambridge University Press.

Illari, Phyllis & Russo, Federica. (2014). *Causality: Philosophical Theory meets Scientific Practice*. OUP Oxford. (available as e-book: https://libris.kb.se/bib/3cthvkws18x7szfx)

Resnik, David. (1998). *The ethics of science*. London: Routledge. (available as e-book: https://libris.kb.se/bib/12079573)

Articles

Brines, J. (1994), "Economic Dependency, Gender, and the Division of Labor at Home", *American Journal of Sociology* 100(3): 652–88.

Davis, S. N. and T. N. Greenstein (2009), "Gender Ideology: Components, Predictors and Consequences", *Annual Review of Sociology*, 35: 87-105

In addition to this, students are expected to read at least one article chosen by the student her-/himself in consultation with the instructor.

Recommended readings

Data management in Stata:

Long, J. S. (2009). *The Workflow of Data Analysis Using Stata*. Stata Press (available as e-book: https://libris.kb.se/bib/16604883)

Research ethics:

Swedish Research Council (2017) Good research practice. ISBN 978-91-7307-354-7 (available online: https://www.vr.se/download/18.5639980c162791bbfe697882/1555334908942/Good-Research-Practice_VR_2017.pdf)

Research questions and design

King, G., R. O. Keohane, and S. Verba (1992), *Designing Social Inquiry. Scientific Inference in Qualitative Research*. Princeton (NJ): Princeton University Press.

Goldthorpe, J.W. (2016). *Sociology as a Population Science.* Cambridge, UK: Cambridge University Press. (available as e-book: https://libris.kb.se/bib/19330681)

Becker, H.S. (1998*). Tricks of the Trade: How to think about your research while you're doing it.* Chicago: University of Chicago Press.

Ultee, W. (2001), “Problem Selection in the Social Sciences: Methodology”, International Encyclopedia of the Social and Behavioral Sciences, p. 12110-12117. (available online: https://www.researchgate.net/publication/323838901_Problem_Selection_in_the_Social_Sciences_Methodology)

Additional articles will be used as examples in class. Information about these will become available at course start.

SCHEDULE

Available online:
https://cloud.timeedit.net/su/web/stud1/ri167XQQ535Z50Qv77083gZ6y2Y7206Q5Y65Y3.html

Date	Time	Room	Subject	Readings	Instructor
August 31 (Monday)	10-12	B487	Lecture 1: Causality	G&C 1-2	Helen Eriksson Sunnee Billingsley
September 1 (Tuesday)	10-12	B389	Data lab 1: Introduction to Stata		Klára Capková
September 3 (Thursday)	10-12	B487	Lecture 2: Causality 2	G&C 3-6, Illari & Russo	Helen Eriksson
September 8 (Tuesday)	10-12	B389	Data lab 2. To explore, describe and understand a data set		Klára Capková
September 10 (Thursday)	10-12	E387	Lecture 3: Causal design	G&C 7-10	Helen Eriksson
September 15 (Tuesday)	10-12	B389	Data lab 3: Multiple regression 1		Klára Capková
September 17 (Thursday)	10-12	F315	Lecture 4: Research process	G&C 11-14	Helen Eriksson
September 22 (Tuesday)	10-12	E420	Lecture 5: Research ethics	G&C 16, Resnik	Helen Eriksson
September 23 (Tuesday)	10-12	B389	Data lab 4: Multiple regression 2		Klára Capková
September 24 (Thursday)	10-12	D215	Lecture 6: Statistics	G&C 17-23	Helen Eriksson
September 30 (Wednesday)	9-12	F307	Article seminar 1: Group		Helen Eriksson
September 30 (Wednesday)	13-16	E397	Article seminar 2: Group 2		Helen Eriksson

Assignment deadlines

Assignment	Hand out	Hand in	Type
1	Lecture 1	Lecture 3	Individual
2	Lecture 2	Lecture 3	Group
3 (data 1)	Data lab 2	Data lab 3	Individual
4	Lecture 3	Lecture 4	Group
5 (halfway)	Lecture 3	Lecture 5	Individual
6 (data 2)	Data lab 4	Article seminar	Individual
7	Lecture 5	Lecture 6	Group
8 (article review)	Lecture 5	Article seminar	Individual