

SOCIOLOGY – DOCTORAL STUDIES

Quantitative Methods in Sociology

The course consists of three different parts: a) repetition of and further studies in quantitative methods (regression analyses, factor analysis, and cluster analysis); b) further development of our ability to analyse and interpret arguments based on quantitative reasoning, and c) further development of practical analytical abilities. We will acquaint ourselves with old and new quantitative techniques, practise their use, and read and analyse quantitative articles.

There is one preparatory meeting (one hour), five two-hour lectures, six two-hour seminars with some elements of lecture, and six two-hour sessions in the computer laboratory.

NB some of the articles may be changed.

INTRODUCTORY BLOCK

2.11. Preparatory meeting: On the background of the students and the goals, methods, and contents of the course. The first seminar task will be given.

READ: Before the course, it is advisable to repeat quantitative methods from books that you have used before or from the literature recommended below.

4.11. Introductory lab session: The SPSS test

READ: Repeat quantitative methods from books that you have used before or from the literature recommended below, especially the parts concerning SPSS.

8.11. Introductory seminar: Discussion on quantitative method use. What quantitative methods are being used in sociology? Presentation of the results of the seminar task 1. The link between method and result.

READING AND PRESENTATION of *Dataclysm* by Rudder

BLOCK 1: REGRESSION ANALYSES

11.11. Lecture 1: The assumptions behind regression analyses

READ: Repeat regression analysis (incl. logistic regression) from books that you have used before or from the literature recommended below.

14.11. Computer lab session 1: Linear and logistic regression analyses

READ: Lecture notes from lecture 1.

18.11. Seminar 1: Statistical methods, societies, and individuals. Presentations of Mäkinen 2006 and Tamosiunas et al. 2005.

BLOCK 2: TIME-SERIES REGRESSION ANALYSIS

21.11. *Lecture 2: Time-series regression analysis*
READ: The article by Skog.

23.11. *Computer lab session 2: Time-series analyses*
READ: Lecture notes from lecture 2.

28.11. *Seminar 2: The analysis of changing phenomena over time.*
READING AND PRESENTATION of Kittel & Winner 2005, Rossow 2001.

BLOCK 3: MULTI-LEVEL REGRESSION ANALYSIS

28.11. *Lecture 3: Multi-level regression analysis*
READ: The article by Blekesaune & Quadagno.

2.12. *Computer lab session 3: Multi-level regression analyses*
READ: Lecture notes from lecture 3.

5.12. *Seminar 3: Factors at several levels: their effects and interactions*
Presentation of Blekesaune & Quadagno.

BLOCK 4: FACTOR ANALYSIS

8.12. *Lecture 4: Factor analysis*
READ: The article by Rummel.

12.12. *Computer lab session 4: Factor analysis*
READ: Lecture notes from lecture 4.

13.12. *Seminar 4: The factor analysis in the service of social science.*
READING AND PRESENTATION of Mäkinen 2007, Bradbury et al. 2009.

BLOCK 5: CLUSTER ANALYSIS

15.12. *Lecture 5: Cluster analysis*
READ:

16.12. *Computer lab session 5: Cluster analyses*
READ: Lecture notes from lecture 5.

16.12. *Seminar 6: Cluster analyses*
READING AND PRESENTATION of Amable 2003 (Chapter 4).

LITERATURE

Amable, B. (2003). *The Diversity of Modern Capitalism*. Oxford: Oxford University Press. [Chapter 4]

Blekesaune, M & Quadagno J (2003) "Public Attitudes toward Welfare State Policies: A Comparative Analysis of 24 Nations." *European Sociological Review* vol. 19, pp.415-427.

Bradbury DA et al. (2009). "Psychosis-Like Experiences in the General Population: An Exploratory Factor Analysis". *Personality and Individual Differences* vol. 46, pp.729-734.

Kittel, B & Winner H. (2005) "How Reliable is Pooled Analysis in Political Economy? The Globalization-Welfare State Nexus Revisited." *European Journal of Political Research* vol.44, pp.269-293.

Levitt, S. & Dubner, S. (2006) *Freakanomics*. William Morrow.

Mäkinen, I.H. (2006) "Suicide Mortality of Eastern European Regions before and after the Communist Period". *Social Science & Medicine* vol.63, pp.307-319.

Mäkinen, I.H. (2007) "The Acceptance of Suicide and Its Concomitants in Eastern and Western Europe in Times of Transition". I: Holyst, B. (ed.): *EuroCriminology* Vol. 20/21. Lodz University Press, Lodz, pp.3-27.

Rosow, I (2001) "Alcohol and Homicide. A Cross-Cultural Comparison of the Relationship in 14 European Countries". *Addiction* vol. 96, pp.77-92.

Rudder, Christian. 2014. *Dataclysm*. New York: Crown Publishers.

Rummel, R.J. (1967) Understanding Factor Analysis. I: *The Journal of Conflict Resolution*, 11, pp.444-480.

Skog, O.-J. (1988) Testing Causal Hypotheses about Correlated Trends: Pitfalls and Remedies. I: *Contemporary Drug Problems* , 4, pp.565-606.

Tamosiunas A.; Reklaitiene R.; Radisauskas R.; Jureniene K. (2005) "Prognosis of Risk Factors and Trends in Mortality from External Causes among Middle-Aged Men in Lithuania". *Scandinavian Journal of Public Health* vol. 33, pp.190-196.

LITERATURE RECOMMENDED FOR SUPPORT

Field A. (2005) *Discovering Statistics Using SPSS*. Thousand Oaks, CA: Sage.

Menard S. (2001) *Applied Logistic Regression Analysis* . Sage University Papers Series on Quantitative Applications in the Social Sciences, 07-106. Thousand Oaks, CA: Sage.

Students who speak Swedish may even use these works:

Edling, C. & Hedström, P. (2003) *Kvantitativa metoder: grundläggande analysmetoder för samhälls- och beteendevetare*. Studentlitteratur.

Wahlgren, L. (2008) *SPSS steg för steg*. Studentlitteratur.

EXAMINATION

📖 The tasks accounted for in the seminars. These are performed individually and constitute a part of the examination. Obligatory attendance for all in seminars! For other occasions, 75% attendance.

📖 Students are expected to read the relevant literature for each seminar. For each text, one student furthermore is expected to present the major findings and to become an expert on how the respective method is applied.

📖 Written assignment: Choose between one of the two following assignments:

1) Replicate a study that uses at least one of the methods discussed in this course. Some of the articles discussed go along with replication data sets or use easily available data.

2) Use an existing dataset, taken at best from your topic area, and apply at least one of the methods discussed in this course to produce new findings.

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