

Faculty of Human, Social and Political Science

HSPS Tripos

Soc 5: Statistics and Methods

Course Organisers:

Dr Mark Ramsden (mjr60@cam.ac.uk)

Aims and Objectives

After completing this paper, students will:

- Have learned about a range of quantitative and qualitative methods used in empirical research
- Be able to read critically, and comment on, published research using these methods
- Know how to apply these methods correctly using appropriate software packages, and how to apply statistical tests to assess the validity of results
- Appreciate the limitations of the methods taught, and common mistakes which may be made in empirical research
- Understand the importance of documentation and replicability
- Have experience of writing up the results of empirical research
- Know where to go to find information on more complex research methods

Staff contact details

Dr Mark Ramsden mjr60@cam.ac.uk

Dr Matthew Sparkes ms2268@cam.ac.uk

Dr Darin Weinberg dtw23@cam.ac.uk

Paper content

The course is organised in three modules. The first covers statistical methods: descriptive statistics; bivariate correlation; multivariate linear regression, and factor analysis. Students will read published work employing each of the methods; learn how to implement the method in SPSS with “real” data, and how to test whether results are statistically valid.

The second module covers survey design and methods: students will learn about different ways in which a sample may be selected; the importance of careful sample selection; the implications of using samples based on different designs; weighting; and where to find survey data. The third module covers topics in qualitative research methods: techniques in interviewing, the principles of ethnography, and visual methods.

Prerequisites

None

Lecture List

Quantitative methods			
1	Michaelmas, Week 1	Dr M Sparkes	Introduction/overview: types of data, graphs & frequencies
2	Michaelmas, Week 2	Dr M Sparkes	Descriptive statistics: distributions, central limit theorem
3	Michaelmas, Week 3	Dr M Sparkes	Introduction to inferential statistics: hypothesis testing, statistical significance and confidence intervals
4	Michaelmas, Week 4	Dr M Sparkes	Correlation analysis and chi-square: scatterplots and correlation coefficients, cross-tabulations, causation
5	Michaelmas, Week 5	Dr M Ramsden	Simple linear regression: ordinary least squares, principles,
6	Michaelmas, Week 6	Dr M Ramsden	Multivariate linear regression: principles, assumptions, interactions
7	Michaelmas, Week 7	Dr M Ramsden	Logistic regression I
8	Michaelmas, Week 8	Dr M Ramsden	Logistic regression II
9	Lent, Week 1	Dr M Ramsden	Factor Analysis I
10	Lent, Week 2	Dr M Ramsden	Factor Analysis II
11	Lent, Week 3	To be confirmed	Other methods: (multinomial) logistic regression
12	Lent, Week 4	To be confirmed	Intelligent inference from quantitative methods
Qualitative methods			
1	Lent, Week 1	Dr D Weinberg	Science, Logic and the Real
2	Lent, Week 2	Dr D Weinberg	On Natural Sciences and Social Sciences
3	Lent, Week 3	Dr D Weinberg	What are Qualitative Research Methods?
4	Lent, Week 4	Dr D Weinberg	Qualitative Interviewing, Life History and Narrative Analysis
Survey design and methods			
1	Lent, Week 5	Dr M Sparkes	Collecting your own data: challenges and opportunities
2	Lent, Week 6	Dr M Sparkes	Questionnaire design
3	Lent, Week 7	Dr M Ramsden	Using secondary data
4	Lent, Week 8	Dr M Ramsden	Finding secondary data resources

Mode of teaching

The module on quantitative methods comprises twelve 120-minute lectures. In addition, there are eight compulsory 2-hour lab sessions, in which students will complete guided exercises, and four 1-hour supervisions. Exercises for lab sessions, and topics for the supervisions, will be given out in lectures.

The module on quantitative methods : survey design comprises four 1-hour lectures plus one supervision.

The module on qualitative methods comprises four 1-hour lectures plus one supervision. In addition, students will have two revision supervisions.

Mode of assessment

One 3-hour examination

Reading list

Quantitative Methods

The main reference book for this section of the course is *Discovering Statistics Using IBM SPSS Statistics*, by Andy Field (Sage 2013). There are many older editions of this book, which are also fine to use.

The course also draws on a range of published materials available online; these sources will be given out in the course of the lectures.

Qualitative Methods

Emerson, Robert M.. 2001. *Contemporary Field Research: Perspectives and Formulations*, second edition. Prospect Heights, IL: Waveland Press

Gubrium, Jaber F., and James A. Holstein. 1997. *The New Language of Qualitative Methods*. Oxford: Oxford University Press

Heritage, John. 1984. *Garfinkel and Ethnomethodology*. Cambridge: Polity

Schegloff, Emanuel. 1991. "Reflections on Talk and Social Structure." In *Talk and Social Structure: Studies in Ethnomethodology and Conversation Analysis*. Edited by Deirdre Boden and Don H. Zimmerman. Berkeley: University of California Press

*Weinberg, Darin, ed.. 2002. *Qualitative Research Methods*. Malden, MA: Blackwell

Survey design and methods

This section consists of four lectures - two on surveys in social research and two on secondary data access and analysis. Topics include structured surveys and questionnaire design; sampling and non sampling error; survey strengths and weaknesses in social research; challenges of using secondary data & issues of comparability.

General Readings:

de Vaus, D. A. (2014) *Surveys in Social Research*, 6th Edition, Routledge

Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and Attitude measurement*, London: Pinter.

Schuman, H. and Kalton, G. (1985). 'Survey Methods' Chapter 12 in G Lindzey and E. Aronson (eds) *Handbook of Social Psychology* (vol 1). New York: Random Press.

Foddy, W. 1993. 'Constructing Questions for Interviews and Questionnaires: Theory and Practice' in *Social Research*. Cambridge: Cambridge University Press.

May, T. 2001. *Social Research: Issues, Methods and Design* (see Chapter 5 on Use and Design of Questionnaires). Buckingham: Open University Press. 3rd edition.

Marsh, C. (1991). Problems with Surveys: Method or Epistemology? Chapter 4 in Martin Bulmer (ed) *Sociological Research Methods*. 2nd Edition. Houndmills: Macmillan.

Hakim, C. (1982) *Secondary analysis in social research: a guide to data sources and methods with examples*. London: Allen and Unwin.

Dale, Arber and Procter 1988. *Doing Secondary Analysis*, London: Unwin.

Journal articles:

Smith, Emma. 2008 Pitfalls and Promises: The Use of Secondary Data analysis in educational research in *British Journal of Education* 56(3) 323-339.

Hofferth, S 2005. Secondary data in family research, *Journal of Marriage and Family* 67:891-907.

Survey exemplars:

British Social Attitudes 30th Report, <http://www.bsa-30.natcen.ac.uk/>

Understanding Society , <https://www.understandingsociety.ac.uk/>

European Social Survey,

http://www.europeansocialsurvey.org/docs/findings/ESS1_5_select_findings.pdf

Haller, M et al (ed) 2009. *The International Social Survey Programme: Charting the Globe*. Routledge.

Hansen, Joshi and Dex (eds) *Children of the 21st Century*. 2010. The Policy Press.

Dale, A.; Fieldhouse, E. and Holdsworth, C (eds.) 2000. *Analyzing Census Microdata*. Oxford University Press.

Sample Questions:

1. The development of the survey is based on two things: the usefulness of the question and answer process and the ability to use a sample to generalise to the population of interest. How do these two aspects of survey design intersect?
2. The strength and weaknesses of surveys in social research depends on how well the survey data evidence addresses the research questions posed. Discuss.
3. Drawing on at least two examples, discuss the way secondary analysis of survey data has contributed to social research.
4. Why are large scale social science survey data sets so under-utilised?