SO5032 Lecture 0

Brendan Halpin

January 31, 2024

Outline

SO5032 Course outline

SO5032 Spring 2023/4 – Module outline

Module Code:	SO5032
Module Title:	Quantitative Research Methods II (MA)
Academic Year:	2023/4
Semester:	Spring
Lecturer(s):	Dr Brendan Halpin
Lecture Locations:	Lec Mon 09-1100 P1006, Lab Weds 12-1400 A0060a
Lecturer(s) Contact Details:	brendan.halpin@ul.ie
Lecturer(s) Office Hours:	Mon 1100-1300

Short Summary of Module:

Intermediate quantitative research methods for sociology, following on from SO5041.

Aims and Objectives of Module:

- A continuation of SO5041 – builds on what was learnt there
- A deeper look at methods already covered, especially regression
- Related methods more suited to social science data: methods for categorical and ordinal variables, including logistic regression
- Further use of Stata:
  - Use in a production environment – do-files, logging, reproducibility
  - More complex data handling
  - Further analytic procedures
- Secondary analysis: real research with existing data sets

Learning Outcomes:

- Deeper understanding of methods for analysis of categorical data
- Understanding of the nature of multivariate causality
- Understanding of the theory and practice of multiple linear regression
- An understanding of some methods for regression with categorical dependent variables
- Deeper understanding of sampling practice and theory
- Practical skills for accessing and analysing large-scale data sets
- An ability to read quantitative social research
- Greater competence in Stata, particularly for handling larger projects

Course Structure:

One two-hour lecture per week, one two-hour lab per week.

Detailed outline

- Revisit χ^2, look at methods for more complex analysis of categorical (nominal *and* ordinal) data (chapter 8, Agresti)(1-2 weeks)
- Multivariate causality (chapter 10 from Agresti) (1 week)
- Multiple regression (chapters 11, 14 from Agresti) (3 weeks plus)
- More sampling theory: clusters, strata, weighting (1 week)
- Data sets, data archives and secondary analysis (1 week, ongoing in labs)
- Logistic regression: regression where the dependent variable is binary (or multinomial) rather than continuous (chapter 15 from Agresti) (3 weeks plus)
- Reading statistical research – what gets published and how to read it (1-2 weeks/on-going)

Lecture topics by week

Week beginning	Topic	Lecture Mon 09-1100	Lab Wed 12-1400
1: Jan 29	Categorical data, association in tables	✓	✓
2: Feb 05	Association in ordinal data	*X*	✓ (lecture)
3: Feb 12	Understanding multidimensional causality	✓	✓
4: Feb 19	Introducing multiple regression	✓	✓
5: Feb 26	Further multiple regression	✓	✓
6: Mar 04	Multiple regression: residuals & influence	✓	✓
7: Mar 11	Regression with logged dependent variables	✓	✓
8: Mar 18	Introducing logistic regression	*X*	✓ (lecture)
9: Apr 01	Further logistic regression	*X*	✓ (lecture)
10: Apr 08	Multinomial regression	✓	✓
11: Apr 15	Multinomial and ordinal regression	✓	✓
12: Apr 22	Ordinal regression continued	✓	✓

Texts

- Main text: Agresti, *Statistical Methods for the Social Sciences* – particularly chapters 8, 10, 11, 14 and 15
- Supplementary texts:
  - de Vaus, *Surveys in Social Research*: good on survey methodology
  - Agresti, *Introduction to Categorical Data Analysis*
  - Pevalin and Robson, *The Stata Survival Manual*

Details of Module Assessment:

- Three assignments, weeks 6, 11 and 15.
- The first two assignments are worth 20% each.
- The final assignment is a project, worth 60%, and should be worked on throughout the semester (see below).

Details of Annual Repeats:

A 100% assignment, to be submitted in the examination period.

BrightSpace and Other Classroom Technologies:

- The module will use BrightSpace for submission of assignments and for provision of materials.
- `http://teaching.sociology.ul.ie/so5032` will also be used

IN TERM ASSIGNMENT(S):

- Assignment 1: Homework exercises relating to linear regression.
  - Marks: 20%
  - Deadline: End week 6
- Assignment 2: Homework exercises relating to categorical data analysis.
  - Marks: 20%
  - Deadline: End week 11
- Assignment 3: A project This will involve the use of large-scale survey data, and require the formulation of a research question, and its addressing using statistical analysis.
  - Marks: 60%
  - Deadline: End week 15.

FEEDBACK:

Detailed feedback on assignments 1 and 2 will be given in weeks 8 and 13, by e-mail and on request face-to-face. Feedback on assignment 3 will be provided on request after the semester.

Plagiarism notice

It hardly needs to be said, but all work must be your own. All material drawn from other sources must be clearly attributed. Passing off others' work as your own is considered academic dishonesty, and can be subject to substantial penalties. Please familiarise yourself with the departmental policy on plagiarism and use the coversheet declaration with all assignments (both available at `http://www.ul.ie/sociology/` under Student Resources).

Deadline policy

Please also note the Department's policy on deadlines, also available at `http://www.ul.ie/sociology/` under Student Resources.