Leiden University
Department of Political Science
MA International Relations & Diplomacy Program

Political Science Methodology
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Office hours: Tuesday and Thursday, 10:00-12:00

Course meetings: Fridays, 4 Nov. – 16 Dec., Pieter de la Court 1A32

Description

This course introduces the foundations of empirical social-science research with an emphasis on quantitative methods. The objective is to provide students with the tools they need to design and complete research projects in which falsifiable hypotheses are tested against evidence.

We begin with descriptive statistics, fundamental distributions, and measures of association. We then move to statistical inference and hypothesis testing, including linear regression and regression models for categorical dependent variables. Finally, we discuss the application of inferential methods to qualitative research designs.

This course is designed in coordination with the course International Organization and Conflict Resolution taught by Madeleine Hosli. There will be some small assignments along the way, but the main assignment is a final research paper (to be submitted, separately, both to me and to Prof. Hosli) that analyzes a question or issue relevant to international organization, negotiations, or conflict resolution using quantitative analysis.

Reading

There is no required textbook for this course. However, it is useful to have a book on your shelf that covers basic statistical concepts. I recommend Andy Field, *Discovering Statistics Using SPSS,* 2nd. edn. The course can be completed successfully using any approximate substitute for this text, or with no text at all. You might find useful my lecture notes at http://www.maxwell.syr.edu/maxpages/classes/psc693/notes/index.html

It is more important that you have a useful statistical reference suitable for your level than that you have this exact book. For some of you the appropriate text might be *Statistics for Dummies* and for others it might be *Estimation and Inference in Econometrics*. I find the Field book to be an effective compromise that also serves as a pretty good SPSS reference.

We will read some online articles, and we will make use of data sets that I will make available to you. I will also make available some photocopied material covering basic statistical concepts.

Assignments

I will give you weekly assignments during the first four weeks of class. The first three assignments are data-analysis exercises to help you learn the concepts and procedures and to learn to interpret statistical results. The fourth assignment is an outline of your research project including the identification of relevant data.

Schedule

4 Nov.	Variables, data sets and descriptive statistics Histograms and distributions Populations and samples The normal distribution and the central limit theorem Distributions derived from the normal distribution (*t* and *F*) Hypothesis testing Correlation and cross-tabulation
11 Nov.	Linear regression
18 Nov.	More linear regression
25 Nov.	Regression for categorical dependent variables
2 Dec.	Applying the concepts of inference to qualitative research designs
9 Dec.	Data management and the presentation of results
13 & 16 Dec.	Presentations of final research projects

Final paper assignment

Choose an issue of interest in the field of international organization, conflict resolution or European integration. Develop a research question on that issue, and turn the question into a testable hypothesis (or set of hypotheses).

Familiarize yourself with the literature surrounding the topic. Your review of the literature does not need to be exhaustive, but it should include a handful of the most directly relevant works.

Collect quantitative data to be used in a test of your hypothesis. Note that you may want to partially reverse this process, by searching for data before or during the process of identifying an interesting question and hypothesis. Your review of the literature should also help point you toward interesting questions and data sources.

Write a paper of around 15 pages in which you:

1. Introduce the subject of the paper, explain the key question you pose in the research, and state the main hypothesis of the paper.
2. Discuss the theoretical approach you take (that is, explain the theory behind your hypothesis).
3. Briefly review relevant literature (this could include required reading but should ideally include some outside sources as well).
4. Introduce the data: the unit of analysis, the variables, their units of measurement, the sources from which they are drawn, the nature of any variables that you construct, etc.
5. State how the analysis will proceed (the method to be used, the models (sets of independent variables) that you will estimate.

6. Report the results. Do this in tables, such as those you see in published papers—don't simply cut-and-paste your SPSS output into your paper.
7. Conclude the paper by briefly summarizing, emphasizing the significance of the findings, and considering what avenues might be suggested for further research.

You will make a presentation of your research in class on Dec. 13 or Dec 16. Please come with some overhead transparencies or a computer presentation (e.g., PowerPoint) to illustrate your research and report your results. Attendance of both sessions is mandatory. We will group paper presentations according to topics chosen.