

Quantitative Methods of International Relations

Syllabus (updated version)
Module “Methods of International Relations I”
Spring 2016

University of Mannheim
School of Social Sciences
Chair of Political Science II
Prof. Dr. Thomas König

1 Course Description

This course introduces undergraduate students to quantitative methods used for research in the field of International Relations. The goal is to equip students with the skills necessary to write a successful BA thesis and to train them to do so using the statistical package STATA. The course emphasizes data management, descriptive statistics, graphical analysis, techniques for dealing with both continuous and binary dependent variables and time-series cross-sectional data as well as regression diagnostics. A good working knowledge of statistics is a prerequisite for successful participation in the class.

2 Organizational information

2.1 General Information

The class is taught in English language in two parallel courses. You have been assigned to one of the classes. The content is very similar. You will be awarded five ECTS credits for regular attendance, participation, and successful completion of the three problem sets.

2.2 Dates and Instructors

Course Date: **Friday, 10.15-11.45**

Course Location: **A5, 6 B143**

Instructor: Elena Frech

Office: 415, L13, 15-17

Office Hours: (by appointment)

Mail: frech@uni-mannheim.de

Web: www.elenafrech.eu

Course Date: **Monday, 19.00-20.30**

Course Location: **A5,6 B 318**

Instructor: Sonja Pohle

Office: B 317, A5, 6

Office Hours: Monday, 10.00-11.30

Mail: spohle@mail.uni-mannheim.de

2.3 Course Requirements

Assigned Literature: We ask the students to read the literature assigned. The reading/s marked with an asterisk in the syllabus are mandatory. All reading materials are provided through ILIAS.

Attendance: Attendance is mandatory. In case of sickness (or other compelling reasons for non-attendance) we expect you to notify us as early as possible and at the latest one hour before the class starts. Please note that missing a class without notice may lead to exclusion from the course.

Problem Sets: During the semester, students will receive three problem sets, which they are advised to complete on their own. These problem sets deal with topics covered in our sessions and will be graded. Submission is due until **June 24th, 2016, 23.59pm**. We also ask you to submit your STATA do and log files with the problem set itself.

Grades: The grade is based primarily on the three problem sets. Students get up to two points for their solution to each problem within the problem sets. One point is awarded if the solution provided by the student has minor mistakes. The student receives zero points for a single problem if there are major flaws. Active participation in class can help to improve the final grade. Hence, up to ten percent of the total number of achievable points are awarded for active participation in class.

Note: students with less than 50% of the total number of achievable points fail the course and will not get five ECTS credits. Students who failed the course will have to retake this (or another suitable) course in the next semester.

2.4 Course Materials and Preparation

Laptop: If you have your own laptop, please bring it to class, as we will work with the computer frequently. An advantage of this approach is that you can set up your own computer and learn how to use it for empirical analysis.

STATA: STATA is a software package for statistical computing and data analysis. We will make use of STATA extensively in our class. The University of Mannheim provides home licenses for students free of charge. Please make sure you have a version of STATA installed on your computer by the second session.

2.5 Internet Resources

There are two excellent internet sources to get started with STATA.

- Stata Tutorial by Germán Rodríguez (<http://data.princeton.edu/stata/>)
- idre UCLA (<http://www.ats.ucla.edu/stat/stata/>)

In addition, there is a great probability course taught by Joe Blitzstein (Harvard) that is available free of cost on itunes (<https://itunes.apple.com/us/course/statistics-110-probability/id502492375>). We would recommend you to listen to all or selected lectures if you need to brush up on your statistics/probability knowledge. Several hundred exercises with detailed solutions are also provided.

3 Course Outline

Session 1 (15./19.2.2016): Introduction

Session 2 (22./26.2.2016): Data Preparation

- Kohler & Kreuter 2009. Ch. 2, 5, 8.6, 10*
- Long 2009. Ch. 3, 5, 6
- Pollok 2010. Ch. 3

Session 3 (7./4.3.2016): Descriptive Statistics and Graphical Displays

- Kohler & Kreuter 2009. Ch. 6,7*
- Pollok 2010. Ch. 2, 4, 5

Session 4 (14./11.3.2016): Linear Regression I

- Kohler & Kreuter 2009. Ch. 8.1 - 8.2*
- Kono 2006*
- Pollok 2011. Ch. 7, 8
- Pollok 2010. Ch. 8

Session 5 (4.4./18.3.2016): Linear Regression II

- Brambor, Clark and Golder 2006*
- Kono 2006

Session 6 (11./15.4.2016): Linear Regression III

- Kohler & Kreuter 2009. Ch. 8.3 - 8.6*
- Kono 2006
- Wooldridge 2009. Ch. 6.4, 8.1 - 8.3
- Fox 2008. Ch. 11 - 13

Session 7 (18./22.4.2016): Logistic Regression I

- Kohler & Kreuter 2009. Ch. 9*
- Huth, Croco and Appel 2013*

- Long & Freese 2006. Ch. 4.1 - 4.6

Session 8 (25./22.4.2016): Logistic Regression II

- Long& Freese 2006. Ch. 4.1 - 4.6*
- Huth, Croco and Appel 2013

Session 9 (2.5./29.4.2016): Regression Models for Count Variables

- Long & Freese 2014. Ch. 9.1-9.3*
- Long & Freese 2014. Ch. 9.6-9.7
- Wilson & Piazza 2013

Session 10 (9./13.5.2016): Time-Series Cross-Sectional Data Analysis I

- Beck 2001*
- Plümper et al. 2005*

Session 11 (23./13.5.2016): Time-Series Cross-Sectional Data Analysis II

- Treiman 2009. Ch. 15*

Session 12 (30./20.5.2016): Time-Series Cross-Sectional Data Analysis III

- Beck et al. 1998*

Session 13 (30./27.5.2016): Final Class - Practical Session

- Repetition of selected topics from previous sessions
- Discussion of remaining questions

4 Course readings

- Angrist, Joshua David, and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton UP.
- Beck, Nathaniel/Jonathan N. Katz/Richard Tucker. 1998. "Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable." *American Journal of Political Science* 42 (4): 1260-1288.
- Beck, Nathaniel. 2001. "Time-series-cross-section data: What have we learned in the past few years?." *Annual review of political science* 4 (1): 271-293.
- Brambor, Thomas/William Roberts Clark/Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14: 63-82.
- Clarke, Kevin A. 2001. "Testing Nonnested Models of International Relations: Reevaluating Realism." *American Journal of Political Science* 45(3): 724-744.
- Fox, John. 2008. *Applied Regression Analysis and Generalized Linear Models*. 2nd Edition. SAGE Publications.
- Huth, Paul K./Sarah E. Croco/Benjamin J. Appel. 2013. "Bringing Law to the Table: Legal Claims, Focal Points, and the Settlement of Territorial Disputes Since 1945." *American Journal of Political Science* 57(1): 90-103.
- King, Gary. 1998. *Unifying Political Methodology: The Likelihood Theory of Statistical Inference* The University of Michigan Press.
- Kohler, Ulrich/Frauke Kreuter. 2009. *Data Analysis Using Stata*. 2nd Edition. College Station: Stata Press.
- Kono, Daniel. 2006. "Optimal Obfuscation: Democracy and Trade Policy Transparency." *American Political Science Review* 100(3): 369-384.
- Long, J. Scott. 2009. *The Workflow of Data Analysis*. College Station: Stata Press.
- Long, J. Scott/Jeremy Freese. 2006. "Regression Models for Categorical Dependent Variables Using STATA." 2nd Edition. College Station: STATA Press.
- Long, J. Scott/Jeremy Freese. 2014. "Regression Models for Categorical Dependent Variables Using STATA." 3rd Edition. College Station: STATA Press.
- Nagler, Jonathan. 1995. "Coding Style and Good Computing Practices." *The Political Methodologist* 6(2): 2-8.
- Plümper, Thomas/Vera E. Tröger/Philip Manow. 2005. "Panel data analysis in comparative politics: Linking method to theory." *European Journal of Political Research* 44 (2): 327-354.
- Pollok, Philip H. 2010. *A Stata Companion to Political Analysis*. 2. Edition. CQ Press.
- Pollok, Philip H. 2011. *The Essentials of Political Analysis*. 4th Edition. CQ Press.
- Stock, James H./Mark W. Watson. 2007. *Introduction to Econometrics*. Pearson/Addison Wesley.

Treiman, Donald J. 2009. *Quantitative Data Analysis. Doing Social Research to Test Ideas*. San Francisco: Wiley. Chapter 15: 363-380.

Wilson, Matthew C/James A. Piazza. 2013. "Autocracies and Terrorism: Conditioning Effects of Authoritarian Regime Type on Terrorist Attacks." *American Journal of Political Science* 57(4): 941-955.

Wooldridge, Jeffrey M. 2006. *Introductory Econometrics: A Modern Approach*. 4th Edition. Mason, OH: Thomson/South-Western.