DATA JUGGLING!
QUANTITATIVE METHODS & SKILLS

Professor: **Jan ROVNY**
Session: **July 2023**
Language of instruction: **English**
Number of hours: **8h**

Objective of the workshop

Learn basic concepts and strategies of quantitative data description. Learn basics of statistical inference, and data visualization. Apply these concepts to analyze social scientific datasets in the program R.

Summary

The course aims to prepare students to intelligently apply basic statistical methods for the purposes of empirical analysis. The workshop consequently combines simple exposition to statistical theory with practical use of statistical modeling. The course will alternate between short lectures and practical programming sessions where students are encouraged to apply the material while learning to program in the statistical software R.

Organization of the workshop

Session 1

Descriptive statistics

- Learn to describe your dataset and learn about its content and qualities

Getting to know R

- Download, install, and get started with one of the most widely used programing languages

Session 2

Inference

- Learn how we can learn about unobserved populations from samples of data

Learn to assess relationships in R

- Cross-tabulation and correlation

Session 3

Regression

- Learn to model relationships between variables

Application in R

- Learn how to apply and visualize this in R

Session 4

Regression warnings

- Learn to overcome typical pitfalls of modeling

Regression application in R

- Learn to summarize results and present them graphically

Requirements for validation

Validation for the Summer School workshops is based on participation.
A student who attends all four sessions and actively participates in the activities will be awarded 1 ECTS credit.

Professor's Biography

I am an associate professor at Sciences Po, Center for European Studies (CEE). After studies in Canada and Belgium, I received my PhD in Political Science from the University of North Carolina at Chapel Hill, United States. In the past I taught in the United States, the Czech Republic, Germany and Sweden.

My research concentrates on political competition in Europe with the aim of uncovering the ideological conflict lines in different countries. My projects address the interplay between political issue dimensionality, party strategies and voter responses. One research area examines the

dimensional structure of public opinion and the associated party strategies across Europe. Another area focuses on party competition in Central and Eastern Europe, and seeks to explain the variance in party competition and voting patterns across the ex-communist block. The final research area focuses on new developments in welfare policies in Europe and how these affect individual political preferences and voting behavior.

Besides these substantive interests, I teach applied quantitative methods in social sciences. I am also one of the principal investigators of the Chapel Hill Expert Survey on party positioning -- the most comprehensive survey assessing ideological placements of political parties in Europe.