Econometrics I Part 2: Time Series Analysis.

Lecture: Fridays 9:30–13:00, HS104, FU Berlin (weekly).
First lecture January, 11th 2018.
Instructor: Lars Winkelmann, lars.winkelmann@fu-berlin.de
Consultation hour: Thursdays 10–11 a.m., Boltzmannstr. 20, 303.
Final exam: 22.2.2019, 9–11 a.m., Ostrom, DIW Berlin.

Tutorials: Mondays 9:00–11:00 a.m., Popper Room, DIW Berlin.
First tutorial: January, 14th 2018.
Instructor: Niels Aka, naka@diw.de

Course description

The course provides a survey of the theory of time series methods in econometrics. We will cover (classic) topics including univariate stationary and non-stationary models, vector autoregressions, vector error correction models and both univariate and multivariate models for volatility. Empirical applications in the course will be drawn from macroeconomics and finance. Special attention will be placed on limitations and pitfalls of different methods, their potential fixes and connections.

Goals

The main objective of this course is to develop skills to do empirical research with time series data. A good theoretical background is the key. The course aims to provide techniques and recipes for specification, estimation and assessment of quality of models with time series data. Computer tutorials will give you the opportunity to make your own experience with data analysis.

Grading

Grades will be based on problem sets (20% weight) and a final exam (80% weight). Your final grade of the Econometrics I course is the equally weighted average of part 1 and part 2. The problem sets and final exam will emphasize different aspects of the course, including theory and estimation procedures. We will test if you understand the main results and underlying intuition, the tools and how they are applied. We will have a final lecture in February before the exam to get you well-prepared.

Textbooks and Readings

The primary text is Hamilton (1994, Time Series Analysis). You can also consult Helmut Lütkepohls book (New Introduction to Multiple Time Series Analysis). Good intuition is also provided in Davidson and MacKinnon (Econometric Theory and Methods) and Davidson (Econometric Theory). A part of the readings of the course are journal articles. The course overviews a large literature, so not all topics are treated in the same depth; papers are additional references (you can find them in the lecture slides) for those who wish to study specific topics in greater detail.