JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

GGS Gießener Graduiertenzentrum Sozial-, Wirtschafts- und Rechtswissenschaften

Workshop

Time Series Analysis

Organizational details

Instructors:	*Dr. Mehdi Hosseinkouchack (Frankfurt) and Professor Peter Winker (Gießen)*
Date:	January 27, February 4 and 10, 2016, each from 10:00 to 18:00
Locations:	January 27: Großes Sitzungszimmer, Goethestr. 58, 35390 Giessen and PC Pool
	February 04 and 10: Room 601, Licher Str. 66, 35394 Giessen and PC Pool
ECTS:	6 ECTS

Aims

Time series represent an important class of data in different fields of application including macroeconomics, financial market economics, empirical political science, geography and many others. The statistical modelling of these data differs substantially from the analysis of cross sectional data as the explicit temporal structure has to be taken into account. Otherwise, the risk of spurious or nonsense regressions arises.

Active participation in the workshop will result in an overview on some central concepts of time series analysis and its practical application. Participants will be able to judge the appropriateness of empirical models applied to time series both in univariate and multivariate settings. They can interpret findings resulting from time series analysis and might conduct own analyses.

Course Contents

The workshop provides an introduction to the following concepts in time series analysis: ARMA modeling, ARCH and GARCH-mdoels, non stationarity and cointegration, VAR models: estimation, interpretation and forecasting, SVAR modeling, and factor (augmented) models. It will also comprise some practical sessions using the econometric software package EViews 8.

Program

January 27:
10.00 – 11.30 MH: Basics of ARMA modelling including tests of autocorrelation
12.00 – 13.30 MH: Basics of (G)ARCH modelling
14.30 – 16.30 PW: Unit Root Testing
17.00 – 18.00 PW: Cointegration (with application in PC-Pool)

February 4:
10.00 – 11.30 PW: Basics of VAR modelling
12.00 – 13.30 PW: IRFs in VAR models
14.30 – 16.00 MH: Concepts of SVAR
16.30 – 18.00 MH: Application of sign restrictions (with application in PC-Pool)

February 10:
10.00 – 11.30 PW: Forecasting in VAR models
12.00 – 13.30 PW: Practical application of VAR models (with application in PC-Pool)
14.30 – 16.00 MH: Basics of Factor modelling
16.30 – 18.00 MH: Factor augmented VAR (with application in PC-Pool)

Target group

Doctoral candidates and postdoctoral researchers at GGS with basic knowledge in inferential statistics and basic linear regression analysis as well as experience in working with some statistical software. The course intends to provide an introduction to time series analysis with a focus on multivariate linear models.

Course language

English

Registration

Please register by December 20, 2015 via email at info@ggs.uni-giessen.de