
HeiKaMEtrics-Seminar

Joint Heidelberg, Karlsruhe and Mannheim research seminar in Econometrics

Some Extensions of Regression Based Cointegration Analysis: Theory for Applications

Prof. Martin Wagner
TU Dortmund

Tuesday, October 4th, 2016, 12:00 - 13:30h

University of Mannheim, Econ Department, L7, 3-5, P 043

Abstract:

The analysis of cointegrating relationships in a regression framework is typically carried out using modified least squares estimators that employ corrections for endogeneity and error serial correlation in order to obtain limiting distributions that allow for asymptotic standard inference. Several such estimation procedures are available in the literature.

In the talk we discuss extensions of such approaches along the following dimensions: First, we consider cointegrating relationships that are linear in parameters, but nonlinear in $I(1)$ variables. Typical examples of such relationships are (environmental) Kuznets curves or translog cost or production functions; polynomial approximations of unknown functions, or specification testing of the RESET type. Secondly, we discuss how also the recently proposed IM-OLS estimator of Vogelsang and Wagner (2014) can be extended to such settings. Third, we consider cointegration analysis based on integrated locally stationary processes rather than stationary processes. For this setting, labelled cointegrated integrated locally stationary (CILS) we discuss localized fully modified OLS estimation. Fourth, throughout we discuss how the analysis can be extended to data sets that also extend in the cross-sectional dimension via seemingly unrelated or classical panel approaches. The talk concludes with an outline on the planned next steps of the research agenda.

The talk gives a survey of research undertaken in Dortmund as well as in cooperation with Robert M. de Jong, Mathias Vetter and Timothy J. Vogelsang.