SPATIAL ECONOMETRICS IN AGRICULTURAL ECONOMICS
TRAINING SESSIONS
24-27 September, 2018

Within the ENHANCE project, in the period 24-27 September, 2018 at the Faculty of Management, Economic Engineering and Rural Development, Bucharest, Building P, Room 30, will be conducted the fourth and last course given by the partners from BOKU, Austria –Dr. Andreas Niedermayr.

This course provides an introduction to spatial econometric techniques in the context of agricultural economics. In principle, spatial econometric models expand non spatial regression models by including spatial relations between observations in a regression model, which allows one to analyse spatial phenomena in economics such as externalities, interactions or spatial concentration.

Instead of focusing solely on theoretical/methodological aspects (theoretical motivation, models, estimation procedures, test statistics), it is more aimed at covering practical topics like for example differentiating between spatial heterogeneity and spatial dependence, the issue of causality in spatial econometrics, definition of neighborhood and spatial weights, data availability and management, applied modeling examples and pitfalls, when carrying out an empirical analysis.

At the end of this course the participants are expected to be able:

- to provide different theoretical motivations for applying spatial econometric models

- to differentiate between spatial heterogeneity and spatial dependence

- to apply spatial econometric models in R and interpret as well as graphically represent and critically discuss their results.

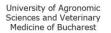- to critically discuss papers that apply spatial econometric methods in agricultural economics

University of Agronomic Sciences and Veterinary Medicine of Bucharest

Faculty of Management, Economic Engineering in Agriculture and Rural Development

Eidgenössisches Departement für Wirtschaft, Bildung und Forschung

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Leibniz-Institut für Agrarentwicklung in Transformationsökonomien

The courses detailed schedule

Day / Hour	Monday, 24 September	Tuesday, 25 September	Wednesday 26 September	Thursday 27 September
09^{00} – 12^{00}	Theory: General introduction of the topic and of participants Theoretical foundations of and other motivation for the use of spatial econometrics	Theory: Introduction to spatial econometrics (what is it? Difference between spatial heterogeneity and spatial dependence, spatial autocorrelation, spatial weights matrix, etc.	Theory: Spatial econometric models for cross-sectional data (SAR, SEM, SLX, SDM, SDEM, GNS, GWR): theoretical motivation, estimation and interpretation of marginal effects	Theory: Presentation and discussion of different papers in agricultural economics that apply spatial econometric models
12^{00} – 13^{30}	Lunch Break			
13^{30} – 16^{30}	R-Lab: Basics in R Basics in Matrix Algebra and linear regression	GeoDa-Lab: Basics in GeoDa (visualizing spatial data, definition of neighborhood and construction of spatial weight matrices, exploratory spatial data analysis - ESDA)	R-Lab: Estimation of different spatial econometric models in R and interpretation of marginal effects	R-Lab: Replication of model results of selected paper(s) with R

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