## **INTRODUCTION**

Scientific problems discussed in this Volume were presented during the 3<sup>rd</sup> International Scientific Conference on Spatial Econometrics and Regional Economic Analysis (SEREA 2014) organised by the Department of Spatial Econometrics at the University of Lodz, Poland (June 9-10, 2014).

Main topics of the 11 published papers were connected with application of selected methods or spatial models in regional economic analyses.

Berna Balci Izgi and Eda Dineri focused on explaining the determinants of market entry behaviour for Turkish firms in manufacturing sector for the period of 1996–2001. While using the Generalised Method of Moments, Authors achieved statistically positive and meaningful results for set of macroeconomic variables.

Spatial analysis of transactions on housing market in Szczecin's housing market was discussed by Barbara Batóg and Iwona Foryś. Reasearch mainly focused on identifying the spatial relationship between transactions in Szczecin, for four districts and thirty-seven housing estates. Distributions of housing characteristics and their spatial concentration were established on the basis of selected indices, e.g. Herfindahl-Hirschman or entropy measure.

Spatial analysis of real estate prices were point of interests for Georgi Zabunov and Georgi Penchev. The Authors proposed an appropriate and approved method for the evaluation and prediction of real estate prices that might be suitable both for businesses and regulatory services from the municipal and state administration. The study focuses mainly on the urban security impact on real estate prices, which is a major determinant in customers' choices, and could benefit citizens and businesses, as well as the administration dealing with urban planning.

Henry Wüstemann also investigated the value of landscape. The Author implemented hedonic pricing approach to explore the effects of environmental variables on housing prices in rural areas in Germany. The data set provided detailed information on several structural variables, allowing to determine the impact of land use on rental prices and to investigate the impact of the distance to the nearest major city on rental prices.

A significant role of commuting in forming the metropolitan areas were signalised by Nina Drejerska and Mariola Chranowska. The Authors focused

on conducting questionnaire interviews in 800 households from 30 municipalities of the Warsaw suburban zone, and by implementing different types of weight matrices, the Authors were able to identify clusters of communes with a similar proportion of commuting respondents, usually from smaller villages to the communal centre.

Gross Domestic Product were investigated by Dariusz J. Błaszczuk. The article focused on the number of targets and its relationship between optimal GDP rate and lack of political stability in the long run. The conclusions resulted on the basis of the Okun's law, the short-term Philips curve and the relationship between the rate of inflation and the rate of GDP and combining of these three concepts into one model.

Daniel Kosiorowski investigated the income distribution and its inequality in accordance to the robustness measures. The most important findings from the analyses pointed that maximal likelihood estimators of the income distribution parameters were not resistant to outliers or inliers and that it is recommended using good robust and/or nonparametric alternatives such as generalised median approach.

On local labour market attractiveness in the West Pomerania region focused Elżbieta Chądzyńska. In the paper, the Author presented the usage of intervening opportunities model in order to generate a distribution of work commuting and to determine the individual attractiveness diversity of jobs offers and positions in transportation network. The analyses covered the area of West Pomerania and its surrounding, while due to specification of the area, the differentiation of the level of development is particularly dependent on the position in geographical space.

Social convergence in terms of reduction of the disparities in the spatial differentiation of living standards between Member States was investigated by Marta Kuc. By taking into account immeasurable spatial factor and Antczak's modification of taxonomy meter, it was possible to approximate living standards, and by understanding the airspace structures to design a new approach in explaining disparities in the analysed phenomenon and to predict better the changes in living standards in the future.

Marcin Baron et al. implemented spatial analysis to identify the linkages between levels of cost and economic and social factors to propose a comparable approach to local public service cost analysis across Central Europe. The research offered a conceptual and empirical solution targeted mainly to national and international statistical agencies as a support in the policy-making processes.

Multidimensional analysis of Lodz's medical clusters was described by Sebastian Twaróg and Anna Ojrzyńska. On the basis of hierarchical grouping and implementing the dividing criteria that characterised competence differences within the groups, it was possible to indicate dissimilarities between hospitals. The results offered premises to initiate co-operation between the entities within established medical cluster.