

Abstract

This thesis analyses the results of the Czech Parliamentary election in 2021 and attempts to explain the voting support of major political subjects by using aggregate data from Czech municipalities. Since the data evince spatial autocorrelation, it is necessary to specify a suitable spatial model. The thesis provides both empirical and economic evidence for the Spatial Durbin Error Model, which enables distinguishing the direct and indirect effects of particular independent variables and accounts for the spatial dependence of error terms. This method shows that variables describing the socio-economic characteristics of inhabitants, such as the share of entrepreneurs or people with university education, play the most significant role in explaining voting results and evince mostly the direct effects. On the contrary, variables describing municipalities, such as public spending or infrastructure, are more likely to impact the election result indirectly. Subsequently, the analysis is replicated using two tree-based machine learning algorithms and all models are evaluated based on their ability to predict the election results from unseen data. Even though machine learning methods estimate only relative variable importance instead of standard coefficients, this approach represents a perspective complement to the established field of spatial analyses.