

Determinants of the spatial wage structure in Polish poviats in the light of the NEG models

One of the main implications of the New Economic Geography models is regionally diverse productivity, which results in a specific Spatial Wage Structure (SWS). As Hanson (2005) points out, wages in a given region depend on income in neighboring regions, on the supply of housing resources and on transport costs to these regions. In addition, higher wages in a given region will affect wage increases in neighboring regions. Also, higher production results in an increase in demand for labor in a given region and, consequently, an increase in nominal wages, and furthermore also in housing prices.

The presented study attempts to estimate the Spatial Wage Structure model for 380 Polish poviats. The analysis was carried out on panel data from 1999-2016. Using the estimator of Nonlinear Least Squares, the impact of indicated factors on the average nominal wage was estimated. The nature of the links between different territorial units was also examined. Spatial interactions between poviats were reflected in the model by a matrix of real distances in the form of (1) the length of road connections in kilometers as well as (2) the travel times between the main centers of poviats. The distance matrices were generated from the Google Maps web mapping service.

For comparison, the results of estimating SWS model for 16 voivodships (NUTS2) are also presented. It turns out that the adoption of another level of spatial data aggregation affects the results of the estimation, especially when it comes to the nature of spatial interactions.

Key Words:

NEG models, wages, spatial interactions, Polish regions

JEL: R12, R15, J31, C23,