

SUBURBANIZATION MODELING OF OLOMOUC REGION BY GIS TOOLS

Jaroslav Burian, Ondřej Růžička

UP Olomouc

Abstract

The poster deals with the computer model created for the ArcGIS environment with which it is estimated the intensity of suburbanization in Olomouc region. The model is represented by Toolbox Suburban Analyst, which contains two tool sets (Calculate Intensity and Calculate Suburbanization). At first the model defines studied area that has strong precondition to the process of suburbanization. This delimitation is done by FUA (Functional Urban Area). In the second phase was set period in which the population of central city (Olomouc) fell due to population migration. This period of high probability of suburbanization (1996 - 2008) was estimated by data from the Czech Statistical Office through migration balance. To determine the intensity of suburbanization model works with following criteria: the migration intensity, the built-up areas intensity, the housing intensity and the commuting intensity. To calculate the intensity of suburbanization weights of individual criteria were fixed. The most important factor was estimated the migration intensity followed by the housing intensity, the commuting intensity and built-up areas intensity. All reclassified intensities (to values 0-10) are calculated by these weights automatically (the weights can be changed) and finally these values are added together. There exists the slightly different understanding of the concept of suburbanization (impact of immigrants only from the central city or the impact of immigration of all municipalities). That is why the values of suburbanization intensity are calculated by influence of Olomouc city (proportion of cumulative number of immigrants from Olomouc to the cumulative number of all immigrants to the community for the period 1996-2008). If the model considers the influence of all municipalities in Czech Republic the intensity of suburbanization is the most important in following communities: Hlušovice, Bystrovany, Bukovany, Tovéř, Samotíšky and Dolany. If only the influence of Olomouc is considered, the most important intensity of suburbanization is in almost the same municipalities only with a lower final value. This poster was supported by the student project "Research of citizen movement between urban and suburban space in olomouc region of the Palacký University (Integral Grant Agency, project no. PrF_2010_14)."

Autor nedodal plný text příspěvku.

Author did not supply full text of the paper/poster