

The Evolution of Spatio-Temporal Patterns of New-Type Urbanization in the Central Plains Economic Region in China

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Abstract : This paper establishes an evaluation index system for spatio-temporal patterns of urbanization, with the county as research unit. We use the Entropy Weight method, coefficient variance, the Theil index and ESDA-GIS to analyze spatial patterns and evolutionary characteristics of New-Type Urbanization in the Central Plains Economic Region (CPE) between 2000 and 2011. Results show that economic benefit, non-agricultural employment level and level of market development are the most important factors influencing the level of New-Type Urbanization in the CPE; overall regional differences in New-Type Urbanization have declined while spatial correlations have increased from 2000 to 2011. The overall spatial pattern has changed little, however; differences between the western and eastern areas of the CPE are clear, and the pattern of a strong west and weak east did not change significantly over the study period. Areas with high levels of New-Type Urbanization were mostly distributed along the Beijing-Guangzhou and LongHai Railways on both sides, a new influx of urbanization was tightly clustered around ZhengZhou in the Central Henan Urban Agglomeration, but this trend was found to be weakening slightly. The level of New-Type Urbanization in municipal districts was found to be much higher than it was in the county generally. Provincial borders experienced a lower rate of growth and a lower level of New-Type Urbanization than did any other areas, consistently forming clusters of cold spots and sub-cold spots. The analysis confirms that historical development, location, and diffusion effects of urban agglomeration are the main drivers of changes in New-Type Urbanization patterns in CPE.

Keywords : new-type urbanization, spatial pattern, central plains economic region, spatial evolution

Conference Title : ICURS 2017 : International Conference on Urban and Regional Studies

Conference Location : London, United Kingdom

Conference Dates : February 16-17, 2017