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QUANTIFICATION OF THE SUBJECTIVE URBAN SUSTAINABILITY ASSESSMENT USING LATTICE-VALUED INTUITIONISTIC APPROACH

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Abstract

This paper has a dual purpose. Firstly, it introduces an innovative approach based on Lattice-valued intuitionistic logic for quantifying urban sustainability. Secondly, it explores and analyzes the subjective attitudes of residents towards urban sustainability. Questionnaires were completed by a total of 890 respondents from 7 cities in Central Serbia. The results of the empirical study confirm that the Lattice-valued intuitionistic model offers a suitable and useful method for assessing the influence of relevant parameters on the ecological, economic, cultural, and political aspects of urban sustainability. From a practical perspective, the proposed approach complements objective sustainability measures by quantifying a subjective sense of sustainability in local communities, which could offer further pertinent insights essential for the formulation of effective urban policies.

Key words: fuzzy logic, lattice, subjective assessment, urban sustainability

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