

The Establishment of Evaluation Model for Life-City

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Abstract

With rapid social changes and high urbanization, “sustainable development” and “Health City” have become global issues for urban development and management. It is necessary to establish the operable action norms from the core nature of the issues so that the abstract conception of issues could be implemented on practical development. Therefore, the inner values must be clarified first in order to establish good living environment by promoting the quality of life effectively and intensifying the city competitiveness. Hence, this paper attempts to address the direction of “Life-city”. Owing to the fact that the contents of influence on the essences of city life are extensive, this is intrinsically a multiple criteria decision making (MCDM) problem. This paper first reviews relative research and literature on urban environment, quality of life, trend of city development, and existing assessment indicators. Four aspects (objectives) are generalized next: safe protection, sustainable living, social welfare and education, and potential for development. Under the four aspects (objectives) are 42 possible impact factors. Then, fuzzy Delphi method (FDM) is applied to extract explicit criteria for evaluation. An assessment framework is established to integrate these objectives and criteria to assess selected subject cities. Since the assessment involves numerous qualitative cognition of human reception. The fuzzy extent analytic hierarchy process (FEAHP) method, which can integrate experts’ opinions effectively, is employed to transform a subjective and qualitative perception problem into an objective and quantitative evaluation problem. The results not only can transform the abstract conception into a specific assessment model, but also can provide an objective self-examination for the assessed subject cities. In addition, the results can be employed as guidance for future policy making and city development.

Keyword : Life-city; multiple criteria decision making (MCDM); fuzzy Delphi method (FDM); fuzzy extent analytic hierarchy process (FEAHP)