

ANP with BOCR applied to project selection of district revitalization and regeneration

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Abstract

A district's sustainable development should not focus on the external demolition and construction, but should stress on manifesting internal local values and identities (revitalization) and creating renaissance and competitiveness of regional development (regeneration). In order to fulfill the abstract concepts of revitalization and regeneration to actual district development effectively, the transformation of subjective and qualitative perception and expectation into objective and quantitative project evaluation is necessary. Nevertheless, there exist many complex influence factors, which have simultaneous interaction of positive or negative impacts, such as benefits versus costs and opportunities versus risks. It would simply make perplexity for project selection and decision. Hence, in this study, the meaning of the district revitalization and regeneration is clarified by literature reviews first. Then, the related possible impact factors under benefits, opportunities, costs and risks clusters are generalized by integrating the concept of BOCR. Thereafter, fuzzy Delphi method (FDM) is applied to extract the criteria for the foundation of evaluation. Since there is complex interaction and interdependence among clusters (criteria) and alternatives, the method of analytic network process (ANP) with BOCR is employed. An objective and practicable project selection model can then be established. The results show that the model can transform complex positive or negative impacts and interrelationship into simple quantitative values for objective and effective evaluation. The empirical results not only can provide innovative thinking for district reviving, but also can be guidance for practical project development selection in the future.

Keyword : Project selection, District revitalization and regeneration,
Fuzzy Delphi method (FDM), Analytic network process (ANP) with BOCR