

Analyzing Urban Livability using the ELECTRE Model Case Study: Gorgan City Regions

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Extended Abstract

1. Introduction

The idea of livable cities is a new approach in which a comfortable urban environment is defined as a place for living, physical activities (urban facilities, infrastructure, spatial planning, etc.), and non-physical aspects (social relationships, economic activities, etc.). Whether living in urban or rural areas, every human being seeks to achieve desirable, satisfactory, and meaningful livelihoods which naturally requires a set of contexts and factors to enable humans make a living for themselves and their society founded on long-term welfare and comfort. Certain authors view such conditions as synonymous to livability or proper conditions for living. In general, the concept points to a set of objective features that transform a place into an environment where people would be willing to live in, both in present and future. Urban livability is concerned with aspects that play a role in increasing quality of life. Increased quality of live would, in turn, influence lifestyle and healthcare conditions, enhancing the sustainability of the built environment. One of the main causes of cities' failure with regards to livability are their lack of identity which may be the result of the absence of many essential activities for urban vitality and enthusiasm as well as the poor quality of urban design and architecture. Gorgan is also facing issues. The expansion of the city of Gorgan has caused many changes and on the other hand, due to the rapid growth and development of the migration and the inefficiency of urban plans, has caused many problems in the economic, social, and environmental aspects that have made the city's viability decline. Gorgan has not resolved these issues. It is then necessary to examine its viability. The main purpose of this research is to investigate the biodiversity of Gorgan.

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2. Theoretical Framework

Since livability is a general concept, it deals with other notions such as sustainability, quality of life, spatial quality and healthy communities. Given the latest theories in urbanism, it can be said that the principles present in many of these theories such as sustainable development, smart growth, new urbanism, and compact cities are close to those with livability and quality of life enhancement. Subsequently, the criteria and indices under the focus of these theories can be applied to increase the livability of cities and urban regions. In other words, livability is multifold, hierarchical concept that may form in different levels as a set of criteria or sub criteria.

3. Method

The present applied research was conducted using a descriptive-analytical method. The total population of the study included the residents of Gorgan city regions. Data were collected using library and document studies while raw data were extracted from Gorgan city land use. The Shannon Entropy technique was employed to assign weights to livability indices used in the study. The ELECTRE model was also used to evaluate the extent of livability in Gorgan city regions.

4. Results and Discussion

Results obtained from applying ELECTRE model to six regions of Gorgan city show that 404.20 hectares of the regions' total area, that is, 11.14% involves very low livability, while 1577.41 (42.02%), 675.2 (18.62%), and 1022.5 (28.20%) hectares involve low, medium and high livability, respectively. The results indicated that the majority of Gorgan city regions are located in low livability areas.

5. Conclusion

In recent years, urban livability has been considered as one of the most important criteria indicating the level of comfort and welfare of societies at various levels; it has also been the focus of urban affair planners and managers. Subsequently, prioritizing and determining the extent of entitlement and deprivation in terms of livability aspects in urban regions are of major importance. In the present study conducted with the purpose of uncovering the status quo of Gorgan city regions, 16 indices were indicated for assessment. The ELECTRE model results showed a drastic difference between various regions of Gorgan city. Regions 7 and 8 involve the highest level of livability compared to other regions. Conversely, certain regions such as 1, 2, and 3 involve fewer facilities compared to regions 7 and 8 despite the fact they accommodate fewer population; these regions have failed to meet the needs of their residents efficiently in terms of livability conditions, being at very poor levels. Consequently, a set of recommendations were posed to enhance the level of livability in Gorgan such as increasing the area of green space per capita and construction of new, large and suitable parks with respect to the presence of unused lands as proper areas to be transformed into green spaces as

well as providing necessary facilities, providing financial services and credits for deprived regions, particularly region 3 of Gorgan.

Keywords: Urban Biodiversity, Sustainability, Quality of Life, Electric, Gorgan

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