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## Spatial Analysis of Small Towns in Babol Township Based on Urban Viability Indicators

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## **Extended Abstract**

Objective: The rapid growth of urban centers and the increasing demand for products and services have led to social, economic and environmental challenges that require the development of new areas for housing, welfare, commercial and other urban land uses. Increased data. This situation has led to increased traffic, environmental pollution, reduced green areas and thus reduced quality of life. Thus, it is quite clear that today the world needs cities that have all aspects of it, such as economic, social, cultural, health, environmental and physical, for all residents to perform well. For years, urban theorists and planners have proposed approaches and designs to achieve such cities, one of which is viability, which has been considered primarily since the late twentieth century. In this regard, due to the growth of urbanization rates and increasing the number of small and new cities in our country, it is necessary to pay attention to this approach. Therefore, the present study was conducted with the aim of analyzing the viability of small towns in Babol city in social, physical, economic and environmental dimensions.

**Methods**: The present research is applied and its research method is descriptive-analytical. The statistical population of this study includes small cities of Babol city (Amirkola, Khoshroudpi, Zargar Mahalla, Gulogah and Gotab). After reviewing the relevant theoretical foundations, the research data were organized into 4 dimensions: social, physical, environmental and economic with 30 indicators (Table 1) in the form of a questionnaire. Then 50 questionnaires were distributed among the statistical population (experts and specialists in urban affairs). The validity of these questionnaires was reviewed and confirmed by experts related to the subject using content analysis method. Research data analysis was performed using SPSS and Excel software. In this regard, first the weight and importance of each of the dimensions and indicators of urban viability are obtained through the Shanol entropy model and then the 6 cities studied are ranked by the multi-criteria decision model of ELECTRE based on the amount of urban viability in the studied dimensions. Finally, using the T-Tset test, the desirability of each city in social, physical, environmental and economic dimensions was obtained.

**Results**: The results obtained from the electrode model show that the city of Amirkola with a score of (5) has the highest livability and the cities of Khoshroudpi and Zargarmahleh with a score of (5-) have the lowest livability compared to other cities. T-Tset findings indicate the low livability of the studied cities in physical, social, economic and environmental dimensions, which has the least environmental dimension.

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**Conclusion**: In order to improve the livability of small towns in Babol city, take appropriate measures in environmental (increasing the quality of waste collection, wastewater, surface water and green space inside cities) and social (increasing road safety and security, Sidewalks and passages) is one of the most important necessities.

Keywords: Spatial analysis, Urban viability, Small towns, Babol township.

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