

## **Abstract**

New approaches urban development is to protect the environment and increase the vitality does not allow cities for horizontal expansion. Infill development approach is proposed instead of under constructing the outskirts lands of cities, to put the main concern of this approach on the vacant and damaged lands in cities. Although it may be easiest to fill vacant urban landscapes and considered it as an obvious choice for the most use of existing infrastructure, in fact the infill project is more complex. In order to advance our project in the fourth sector of Zabol city identifying the suitable zone, barriers, and its implementation is necessary. The method is a questionnaire (survey) which is an application development, analytical research and data collection methods, debit documentary data and information. The satellite images were used to estimate the physical growth and images were processed and Analysis for spatial by the Envi 5.1 software. The attribute data, the logical Fuzzy perform and output data for map given out by the GIS with interpolation methods. In addition, the data related to rank the barriers in infill development collected data by SPSS software and for identifying obstacles to the development in urban infill single-sample test (t-test) and the economical, social, cultural, political, and physical environment identified and analyzed by AHP FUZZY methods. The results show that the most important groundwork for infill development zone is part of the center and south of West areas and the most significant barriers to infill development plan are economic indicators.

**Keywords:** Infill development, Zabol city, Economical indicators, AHP FUZZY, Interpolation, Fuzzy Logic.



**University of Zabol**  
Graduate school  
**Faculty of Literature and Human Science**  
Department of Geography

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**Supervisor:**  
Dr. GH. Khammar

**Advisor:**  
Dr. A. Kiani

**By:**  
B. Mohammadi

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