



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

The thesis Submitted for the Degree of M.Sc (In the Field of Geography and Urban  
Planning)

**Title:**

**Evaluation and ranking of deprivation and development indicators in  
the suburbs of Zabol**

**Supervisor:**

**Dr. Gholam Ali Khammar**

**Advisers:**

**Dr. Mustafa istgaldi**

**By:**

**Nahid Barani**

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## **Abstract**

Marginal settlement is the result of urban settlement. Marginal structures are occupied with unofficial settlements lack sufficient services and urban foundations on the one hand, and lack a favorable environmental condition and are filled with various cultural, social, and economic problems on the other. They, therefore, need empowerment, development, and organization. The present study is concerned with the identification of indicators for deprivation and development in the suburbs of Zabol. The present research follows a descriptive-analytical research methodology and is based on library, documentary, and field studies. SPSS is used for data analysis and chi-square test is used for testing the data. Furthermore, using Artificial Neural Network model (ANN) with a future studies approach, the most influential deprivation and development indicators in the neighborhoods of Zabol are identified and the most probable scenarios with regards to the improvement of the current state of affairs are devised. The results suggest that, from amongst the economic indicators, providing residence and monthly income enjoy the lowest and highest average, respectively. Furthermore, from amongst the physical indicators, recreational facilities, including parks, green space, and the condition of electricity lines, enjoy the lowest and highest average, respectively. Overall, the results suggest that the worst neighborhood indicator in marginal settlements of Zabol is physical indicators and economic indicators are the most important factors in the neighborhoods of Zabol. According to the data gathered from neural network and the predictions resulting from the aforementioned model, it was concluded that, in the future, not only will the condition of deprivation and development in the marginal neighborhoods of Zabol not improve, but also in some cases it will even be aggravated.

**Keywords:** Marginal settlement; Zabol neighborhoods; Economic indicator; Physical indicator; Development.