

An Analysis of the Spatial Growth of Informal Settlements and Prediction of its Trend in Iran: (A Case Study: Informal Settlements in the City of Khoy)

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Received: 4 May 2015

Accepted: 28 February 2016

Extended Abstract

1. Introduction

Urbanization is a process which leads to the growth of cities and urban changes due to industrialization and economic development. In other words, urbanization is an inevitable and demographic force and movement which should not be neglected. Informal settlements, which took place in Europe after the Industrial Revolution at the time of the transition from the traditional society to the modern society soon became widely popular in the developing countries. But we can definitely say that this phenomenon was particular related to the developing countries and fell out of fashion in the developed countries. The increasing growth of urbanization rate due to the countries' development in the developing countries led to the formation of informal settlements. Presently, these current settlements are their tangible reality; therefore, theorizing the reason for their growth and development as parts of the environment is of great importance.

2. Theoretical Framework

There are three main theories regarding the informal settlement in the developing countries: first, the theory of Chicago School in 1930 which considers informal settlements as a separation from residential

regions due to the difference in the levels of income and the ethnic and racial groups competing to acquire more proper and valuable lands in urban areas. The second approach, Alonso's neo-liberal theory, considers informal settlements a response to the housing needs of urban residents who cannot afford to buy a formal settlement because of discriminatory laws; finally the third theory, the postmodern theory of urban/ecological perspective considers that informal settlements formed as the result of separating professions among the urban spaces and that urban residents are housed according to their profession and social statuses.

We can point out four main theories regarding the formation of informal settlements in the developing countries, including land management, colonial heritage, economic inequality, and imbalance of supply and demand. The first school believes that city officials' inefficiency and weakness in land management and insufficient urban plans leads to informal settlement. The second perspective links the development of informal settlements to historical and political factors, especially colonialism, pre-colonialism actions and civil and political instability. The third view refers to the new economic system which plays a significant role in the development of informal settlements. This theory interprets the city

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businesses, and class and income differences resulting in the residential separation and social deprivation. The fourth theory relates the advent of informal settlements to the imbalance in the supply and demand process of urban merchandises (land, services, and substructure). This theory attempts to stabilize the informal settlements and recover them.

Generally speaking, there are several different and contradictory theories for informal settlements. But as for the ecological theory apart from its being a simplistic perspective, a type of social Darwinism can be seen. As for the theory which considers the colonial and capitalist factor worthy of blame, it should be added that it has shunned the responsibility and has failed to consider the role of internal factors.

3. Methodology

The goal of the present research is applied, which is of descriptive-analytical kind in terms of its nature and approach. In order to study the spatial growth trend of informal settlements in the city of Khoy, the present research used Land Sat TM5 of the years 1976, 1989, 2000 and 2011 while it used CA-Markov Model for the prediction of its growth.

4. Results and Discussion

The formation and trend of spatial growth of informal settlements in Khoy in the time

span under study indicates that it follows a pattern similar to other cities in the country which is confirmed by the results of other studies. Along similar lines, Sarvar (2009) studied informal settlements in Tehran and concluded that the constant growth of informal settlements due to the population and migration growth the and slow nature of structural reforms are effective factors in the development of informal settlements in a metropolis such as Tehran at least until 2025.

5. Conclusion and Suggestions

The results of the study show that the core issue in the formation of informal settlements in the city of Khoy was formed in its northern district (Jamshid Abad) with the area of 31.84 hectares between the years 1975 and 1976. The process of growth in the areas of informal settlement suggests that it was increased in 1976 with the area of 31.84 hectares to 174.78 hectares in 1989 to 670.86 hectares in 2000 and to 913.05 in 2012. Also, the prediction of spatial growth of informal settlements in Khoy was used by means of combining Markov Chain and cellular automata (CA), which shows that the area of these settlements will increase up to 1036.35 hectares in 2026.

Keywords: Informal settlements, Khoy City, spatial growth, prediction

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How to cite this article:

Maboodi, M. T., & Hakimi, H. (2016). An analysis of the spatial growth of informal settlements and prediction of its trend in Iran: (A case study: Informal settlements in the city of Khoy). *Journal of Geography and Urban Space Development*, 3(1), 67-84.

URL <http://jgusd.um.ac.ir/index.php/gud/article/view/46497>

ISSN: 2322-2832