

# *Urban sprawl growth and transformations of political divisions (A case study of Qom)*

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*Hosseini, Seyed Ali<sup>k</sup>*

*Mirehei, Mohammad (PhD)<sup>l</sup>*

*Hosseini, Seyed Mohammad (PhD)<sup>m</sup>*

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## **Abstract**

The purpose of this article is to survey and analyze the urban sprawl in Qom with emphasis on the developments of political divisions. The purpose of this study is applied and in terms of a combination of documentary and surveying methods at the exploratory level using a combination of quantitative and qualitative models. The method of data collection is library and field studies. In this study, Holdern model, balanced distribution, aggregation rate, Herfindal concentration index, population density, and Structural Analysis model were used to investigate the effects of political divisions on urban sprawl. The results of the quantitative models showed that after the promotion of Qom to the provincial capital in 1996, urban sprawl has intensified. The results of the structural analysis model also show that developments in political divisions can increase the urban sprawl turnout through factors such as the deployment of government political representatives, increased concentration of funds, state laws and policies, and increased migration rates.

## **Introduction**

The government, by changing the levels of state divisions and injecting more oil money, pushes the city out of its slow and natural growth process and

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□ Ph.D. Candidate of Geog. & Urban Planning, University of Sistan and Baluchestan, Zahedan.

□ Assistant Prof. of Geog. & Urban Planning, University of Tehran College of Farabi, Qom. mirehei@ut.ac.ir

□ Assistant Prof. of Political Geography, University of Tehran College of Farabi, Qom, Iran.

actually contributes to the expansion of cities through some exogenous factors. In our country, as long as urban growth patterns have been organic and determinants of urban growth, endogenous and local factors, urban land has also provided traditional land use. However, since urban development has become an exogenous nature and oil revenues have been injected into the urban economy, increased investment in urban land has caused disruption to the urban land market and adversely affected the horizontal expansion of cities. In fact, the rapid growth and expansion of the city, under the influence of exogenous factors, after changing its position at the level of the national divisions, specially upgrading the city from the city center to the provincial capital, can lead to a sprawling urban trend. Qom province has not been exempt from this phenomenon, after the province's separation from Tehran and the allocation of funds and facilities to it, Qom as a center of this province has been growing and developing this growth is not properly done and there will be fears that this growing growth and development will become a sprawling urban landscape. Given the very negative effects of sporadic urban sprawl, this research seeks to test the following assumptions:

1. It seems that the city of Qom has a urban sprawl phenomenon and horizontal expansion and its urban sprawl rate has increased dramatically since the year of 1996 and it has become the capital of the province.
2. It seems that the developments of the political divisions and the promotion of the position of the city of Qom to the provincial capital have played an important and important role in changing the physical growth pattern of Qom and its sprawling escalation.

#### Materials and methods

The type of research is based on applied-developmental purpose and in terms of nature and analytical-exploratory method. The method of data collection in this study is library studies (note taking and documentary) and field studies (questionnaire and interview). In this study, Helderren's models, equilibrium distribution (Shannon entropy, Gini coefficient), aggregation degree (Moran coefficient, Gray coefficient), Herfindal concentration index and population density were used to investigate the urban sprawl phenomenon. Structural analysis model and Delphi technique have also been used to investigate the effects of political divisions on urban sprawl.

#### Results and Discussion

The results of the studies showed that the highest rate of expansion due to the horizontal growth of the city between different statistical periods was related to 1996 and after. For the period 1995-2005, the rate of expansion due to the horizontal growth of the city reached 61.32%, the highest rate of horizontal growth in Qom. In general, the rate of expansion due to horizontal growth in Qom before 1996 was 6.18% and after conversion to province was 47.03%, which indicates a very strong horizontal growth after Qom 1375 that shows five times growth. The results of the structural analysis model also show that developments in political divisions can increase the urban sprawl turnout

through factors such as the deployment of government political representatives, increased concentration of funds, state laws and policies, and increased migration rates.

### **Conclusion**

The results of this study showed that the developments of political divisions and promotion of the city's status can be the most important factors influencing the emergence and spatial development and sprawl growth of the city. In fact, the results of this study showed that the rapid growth and expansion of the city, influenced by exogenous factors, after changing the position at the level of national divisions, specially upgrading the city from city center to provincial capital, can lead to urban sprawl.

**Keywords:** urban sprawl, urban development, Physical development, Political divisions, Qom city.

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