



Golestan University



Research Paper

**Spatial Analysis Of Positioning Elements In Peri-urban Areas Of Mashhad
Case Example Of Tus, Mehrgan and Bahonar town**

Mohammad Reza Akhavan Abdollahian^a, Seyed Moslem Seyedalhoseni^{b*}, Toktam Hanaee^b

^a Department of Urban Planning, Golbahar Branch, Islamic Azad University, Golbahar, Iran

^b Department of Urban Planning, Mashhad Branch, Islamic Azad University, Mashhad, Iran

ARTICLE INFO

ABSTRACT

Keywords:

Localization,
Inefficient Context,
Separated Areas,
Suburban,
Mashhad City.



Received:

04 April 2022

Received in revised form:

10 June 2022

Accepted:

06 August 2022

pp. 31-44

In recent decades, the metropolis of Mashhad has experienced a huge horizontal expansion and growth, and the annexation of the surrounding villages to the city has been common. In this regard, the newly urbanized areas are located on the outskirts of the city, which are considered the junction of the suburbs with the city and called Pirashahr in the form of separate development in only three urban areas, including Toos, Shahid Bahonar and Mehregan. The result of the present study is descriptive-analytical and based on documentary and survey methods following the effect of land location in isolated suburban areas in Mashhad on controlling or accelerating the process of dysfunctional tissue and also determining isolated suburban area in Mashhad with more success in the field. Elements of land location elements (including demographic, social and cultural elements-economic elements-administrative, defense and security elements-geographical, natural and environmental elements-spatial-physical elements). The results of the research hypothesis using paired t-test and one-way analysis of variance showed Separate urban sub-districts have improved their economic, quality of life and welfare services after accession. In the field of environment no different is observed compared to the past and in the social field, negative changes have occurred. In the QoL index, Toos area and in the social index, Bahonar town have had a better situation. Also, the results of fuzzy TOPSIS showed that in isolated metropolitan areas, the isolated area of Toos in controlling the growth of dysfunctional tissue and the realization of land location elements had a better performance than Shahid Bahonar town and Mehregan town in order to prevent growth and Expansion of dysfunctional tissues in Shahid Bahonar and Mehregan towns, in the field of planning, considered the necessary measures, especially in the environmental and social fields.

*. Corresponding author (E-mail: seyedolhosseini5930@mshdiau.ac.ir)

Citation: Akhavan Abdollahian, M. R., Seyedalhoseni, S.M., & Hanaee, T. (2022). Spatial Analysis Of Positioning Elements In Peri-urban Areas Of Mashhad Case Example Of Tus, Mehrgan and Bahonar town. *Geographical planning of space quarterly journal*, 12 (2), 31-44.

 <http://doi.org/10.30488/GPS.2022.292180.3424>

Extended Abstract

Introduction

In recent decades, the metropolis of Mashhad has enjoyed enormous expansion and horizontal growth, and the annexation of surrounding villages to the city has been expected. In this regard, the newly urbanized areas located on the outskirts of the city, which are considered to be the connection between the suburbs and the city, and are called Perashahr, have been formed in the form of separate development in the form of three urban areas, including Toos, Shaheed Bahonar and Mehrgan. The most critical problem in these areas is the failure to examine their status in the realization of economic, social, welfare, quality of life and living conditions effective in a location in order to determine the positive and negative effects of their creation in the context of the development of inefficient tissues. Therefore, the objectives of the present research are to address the issue of whether the above isolated peri-urban areas have led to the reduction or inhibition of the development of the inefficient fabric of Mashhad city and the realization of the elements of land location, and which isolated peri-urban areas (Tus, Shaheed Bahonar and Mehrgan) have been more successful in realizing land location elements including demographic, social and cultural elements, economic elements, administrative, defence and security elements, geographic, natural and environmental elements, spatial and physical elements.

Methodology

Therefore, the current research seeks to achieve the above goals with a descriptive-analytical approach based on documentary and survey methods. The statistical

Chaharmahal, Kalateh Bani, Shahr Hasheminejad, Akbar Abad, Islamia, Mardarkshan, Tos Sefli, Mehdi Abad, Haji Abad, Tos Alia, Shams Abad, Esfandian, Shafil, Khatayan, Kalate Seyed Ali Moghim Abad, Thatha Kazem Abad, and Jofrosh) which were investigated mainly by conducting interviews with city managers and completing questionnaires from residents. Data analysis was done with Excel, Spss, Fuzzy Topsis statistical software and analytical methods including paired t-test, one-way variance analysis test, Tukey test and fuzzy Topsis model were used.

Results and discussion

In this regard, economic, social, welfare, quality of life, living conditions and post-event and pre-event questions have been used to measure the status of separate urban areas in Mashhad and the development trend of the inefficient fabric of Mashhad. Moreover, through the paired t-test, the situation of the separated areas before and after the annexation was investigated, and also by using the correlation test and the paired t-test, the ability to generalize the changes before and after the annexation of these areas to the mother society was investigated. On the other hand, the changes made before and after the annexation were analyzed using the one-way analysis of the variance test. In the following, the Tukey test method was used to check the situation of difference with other areas, and finally, to measure which of the separated areas had a better condition, the expert community and the fuzzy TOPSIS model were used.

By analyzing the above cases, it was determined that the separate urban areas under research have obstacles and problems. Therefore, the need to pay attention to location elements in the establishment and definition of detached peri-urban areas in the planning system and its effect in preventing the development of inefficient structures on the outskirts of cities is evident. Therefore, the recognition,

analysis, and promotion of these elements and indicators will lead to the formation of residential areas in connection with the mother city and play an appropriate role in providing and improving the deficiencies.

Conclusion

The results using the paired t-test and one-way analysis of variance showed that the separated peri-urban areas in the economic dimensions, quality of life, and welfare services have enjoyed a better situation after annexation, but there have been negative changes in the environmental and social fields. It has happened that Tos district in the quality of life index and Bahonar town in the social index have had a better situation. Also, the Fuzzy TOPSIS showed that in the isolated peri-urban areas, the isolated Toss area had a better performance in controlling the growth of inefficient tissue and realizing the elements of land location than Shahid Bahonar and Mehrگان isolated towns. It should be done to prevent the growth and The spread of inefficient structures in Shahid Bahonar and Mehran towns; in the planning field, the necessary arrangements were considered, especially in the environmental and social fields. Therefore, it is necessary to examine and analyze the positioning elements in the placement of separate peri-urban areas in Faradast plans and how they are related to the mother city, compiling and approving a comprehensive and detailed plan for each of the areas and giving priority to Mehrگان district and Shahid Bahonar town—paying more attention to the villages around these areas, especially the Mehrگان area, which

are susceptible to becoming a new inefficient structure in the future, and controlling the entry and exit of migration from the surrounding areas, emphasizing more on the environmental and social components in these areas, and improving the level of cultural empowerment. Moreover, the social of the residents, operationalizing and directing investment packages to the areas, especially Mehrگان district and then Shahidbahonar town, strengthening Mehrگان district and Shahidbahonar town in the field of quality of life to control the development of inefficient tissue and also strengthening Mehrگان district in the field of social and service-welfare indicators It was suggested to control the development of dysfunctional tissue.

Funding

There is no funding support.

Authors' Contribution

Authors contributed equally to the conceptualization and writing of the article. All of the authors approved the content of the manuscript and agreed on all aspects of the work declaration of competing interest none.

Conflict of Interest

Authors declared no conflict of interest.

Acknowledgments

We are grateful to all the scientific consultants of this paper.