
The Spatial Analysis of Sport Spaces and Their Service Domain in Zanjan

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1. Introduction

Nowadays, developed nations are well aware of the important educational role of sports and its significant impacts on the social health, promotion of efficiency, national unity, and the proper use of spare time. At the transnational level, sport is an effective means for establishing appropriate relationships between different societies. Therefore, given the evident and influential features of physical activities, providing sport services is one of the most important challenges of a government. On the other hand, the distribution of sport facilities is very important in terms of the social justice and the equal distribution of sport opportunities. The geographical location of some areas of Zanjan and the lack of observation of urban development principles in the past have blocked the way for an equal distribution of the sport facilities in different districts. Therefore there is an urgent need for the uniform establishment and the fair distribution of sport spaces in the city. Thus, this research is an attempt to consider and analyze the distribution of the population and the sport service centers in Zanjan with the goal of directing the attention of the city officials toward this challenge to solve the problem.

2. Theoretical Framework

If the urban land use planning, and the spatial organization of human activities and functions is defined in terms of the needs of urban societies (Pourmohammadi, 2006), planning the spare time schedule is closely associated with the urban planning, specifically, the urban land use planning. This is because the spatial organization and the provision of spare time facilities are majorly dependent upon the quality and the quantity of urban spaces and facilities (Mahdizadeh, 2007). Meanwhile, spare time planning by developing sport spaces with the goal of

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reaching a happy and healthy life has received the least attention on the part of urban managers and city officials (Rastegar, 2010).

The most important point that should be noted by urban planners is the fulfillment of people demands and requests in the urban designing and planning. At the present time, one of the most important demands of people is the increase of sport spaces and the ease of access to these spaces in a city. This arises from the fact that many of the problems in our present society have been caused by the physical-spatial expansion of cities, the lack of easy access to the sport spaces and the lack of participation in the social events. Planning with the purpose of preparing and equipping metropolises in order to increase sport activities reminds us of the necessity to take heed of a type of identity in metropolises called sport identity (Khoshrooy, 2008). Therefore, policy development is required to conform to sport identity. Urban sport strategies, derived from the cities' requirements and gaps, should organize planning and development and establish the relationship between the strategic sport planning and the urban land use planning (Nejati, 2008).

3. Methodology

This is an analytical-descriptive study. This research is grounded in the field data, gathered from sport spaces which led to the determination of the level of per capita sport spaces in the urban hierarchies of Zanjan (neighborhood, area, district, and city). This is determined based on the standards, gaps, and the needs for sport spaces in Zanjan. Finally, using network analysis model, the present study aims at analyzing the domain of sport services in Zanjan at different urban levels. By using Moral model and G-test statistics, the distribution of sport spaces in Zanjan is analyzed and finally the output maps of this model are proposed.

4. Discussion and Conclusion

Sport spaces are considered as one of the most important land uses in cities while taking a significance portion of urban spaces. The studies show that the sport spaces per capita in the urban hierarchy is not proportionate to the increase of population and expansion of the city. The proper area for sport spaces in neighborhoods is 55 hectares, in zones 51 hectares, in districts 51 hectares and in the cities 68 hectares. The spatial distribution of the sport spaces is not in proportion to the demands of the different city parts (neighborhoods, districts, zones) as it does not conform to the standards proposed by the Organization of Housing and Urban Development. Therefore, the present distribution pattern of sport spaces is not in proportionate to Zanjan population. As a result, some of the sport spaces in this city are very busy and some are used improperly due to the erroneous planning. This study considered the distribution of the sport spaces using

Moral model and G-test statistic. The findings show that the distribution has been random with no observation of the principles and criteria for the urban planning.

5. Suggestions

- Each sport service provider is capable of giving service to a particular number of people in a specific area. Therefore, the positioning of sport spaces should be done in the light of the threshold population.
- To promote the level and the quality of mental and physical health it is necessary to observe the suggested per capita sport land use in Zanzan urban designing.

Keywords: Sport spaces, Spatial autocorrelation, Geographic Information Systems (GIS), Zanzan

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