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Analysis of spatial inequalities based on social, economic and physical indices in medium-sized cities (Case study: Miyandoab City)

Shahrivar Roustaie [1], Hossein Karimzadeh [2], Khosro Rahmati [3*]

1. Associate Professor, Department of Geography and Urban Planning, University of Tabriz, Iran
2 Assistant Professor, Department of Geography and Urban Rural, University of Tabriz, Iran
3. M.A. in Geography and Urban Planning, University of Tabriz, Iran

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Expanded Abstract

Introduction

In Iran, after land reform and overflowing dollars from the sale of oil to the urban economy, urbanization has started. This urbanization made different urban groups deprived of having access to services and facilities due to lack of facilities and urban infrastructures tailored to their social situation. Miyandoab city was not an exception. In this city, due to vast rural immigration, integration of villages surrounding to the city, inefficient management, and unplanned urban growth, spatial inequalities have been increased. The present research has been conducted in order to investigate spatial inequalities in Miyandoab city. Therefore, the situation of city blocks in Miyandoab is initially studied in order to assess social, economic, and physical facilities using spatial statistics and hot spot analysis. Then, the distribution pattern of spatial inequality is determined using spatial autocorrelation. Accordingly, the questions of research are:

1. Does Miyandoab have spatial inequality according to social, economic, and physical indicators?
2. How is spatial distribution of these inequalities?

Methodology

In terms of objectives, this is an applied study with a qualitative-analytic research method in terms of the nature and method of data gathering. Library method has been used to gather data. The source citation of used indicators and quantities was the data and information of the statistical blocks of the general population and housing census of Miyandoab in 2011. The GIS maps have been derived from Planning Deputy of Governorate of Western Azerbaijan. Statistical population of this research is all statistical blocks (1660) of Miyandoab in 2011. After theoretical research, 34 social, economic, and physical indicators were selected for investigation of inequality situation and recognizing spatial pattern of the inequality. In the next stage, based on these indicators, Spatial Statistics tools, Hot Spot Analysis, and Autocorrelation Moran's I in

* Corresponding Author: kh.rahmati1987@gmail.com, Tal: +98 9147197800

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ArcGIS software have been used. Indexing has been done in Excel software and the information has been projected in ArcGIS for analysis and mapping.

First, the analysis of Hot Spots on 8 indicators has been done for each social, economic, and physical factor. For each factor, a map entitled Hot Spots analysis on social, economic, and physical indicators has been extracted. At the last stage, these three maps have been overlaid using ArcGIS to create one map. Then, to analyze the spatial inequality of the urban blocks, a combinational map obtained from triple indicators has been prepared using Morris indicators in five levels. Autocorrelation Moran's I has also been used to determine the type of distribution pattern of the inequality.

Results and Discussion

Findings of the research have been obtained in two stages:

1. Analyzing Hot Spots on the indicators used in the research (social, economic, physical), overlaying layers, and determining the levels of spatial inequality in urban blocks of Miyandoab.
2. Identifying distribution pattern of the inequality in Miyandoab in 2011.

The Hot Spot analysis has been done for each sub-indicator of social factors. Then, the layers have been combined to create the map of Hot Spot analysis of social indicators of Miyandoan in 2011 based on the total of social sub-indicators. The same was done for economic and physical indicators. Then, the obtained three layers have been combined to generate the regarded map of Hot Spot analysis of social, economic, and physical factors. At the end, to analyze the situation and understanding the subject in the city, urban blocks were graded according to having the the indicators using maps and Morris development index.

The map of city blocks has been determined in five levels (very deprived, deprived, average, possessed, highly possessed). From total 1660 urban blocks in Miyandoab, 626 blocks are very deprived and 287 blocks are deprived. While 403 blocks have the indicators in average level, 307 blocks are possessed, and the highest value and the lowest numbers of indicators are 37 highly possessed blocks.

The urban blocks are not in an equal situation in terms of possessing, and regarding the quantitative output, the distribution pattern of inequality is cluster type. The deprived and very deprived clusters in the city could be due to integration of rural cores to the city. Average and possessed blocks are also in the center and margins of the city. Meanwhile, highly possessed blocks are the least ones.

Conclusion

The results show that poor and very poor blocks (913) are the most (55 percent), and they have the least values of the indicators. Considerable placement of them in the edge of city is due to the integration of rural cores to the city. A large number of these blocks are seen in districts of the damaged areas of the city, districts behind hospital, Namaz Boulevard, and Rabari alley. There are 403 blocks with average indicators (24 percent). The possessed blocks are mostly located around left side of Zine Rood River, i.e., shoreline where economic and social bases have separated the population groups (307 blocks, i.e., 19 percent). The highly possessed blocks have the highest value of the indicators, but they are the least in numbers (37 cases) and 2.3 percent could not be a desirable result. The findings have shown that the distribution pattern of spatial inequality is cluster type. The deprived clusters are mostly located in the edges of the city and the possessed clusters are located in the center. This situation indicates class differences and duality in urban spaces and difference in having regarded indicators.

Keywords: Miandoab, spatial equity, spatial inequality, spatial statistics, urban blocks.

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References

1. AhmadTozeh, V. (2013). Investigation and Analysis of Urban Spatial Equity in Saghez (A Case Study: Neighborhoods of Saqqez City), MA thesis Geography and Urban Planning, University of Tehran, Faculty of Geography.
2. Asgari, A. (2011). Analyzes of Spatial Data with ArcGIS, Information and Communication Technology Organization Publications of Tehran Municipality, First Edition.
3. Behravan, H. (2007). Preparation of the Culture and Urban Equity in 12 Different Districts of Mashhad, Conference planning and urban management, Mashhad, pp. 1-28.
4. DadashPour, H.; Alizadeh, H.; Rostami, F. (2015). Explaining the Conceptual Framework of Spatial Equity in Urban Planning with a Focus on the Concept of Equity in Islam, Journal of Naghshe Jahan, Vol. 5, No. 1, pp. 75-84.
5. Daneshpour, Z. (2006). Analysis of Spatial Inequality in Rural-Urban Environments (An Effort in the Use of Planning and Strategic Management Approach in Tehran), Journal of Fine Arts, No 28, pp. 5-14.
6. Dehghan, H. (2007). Opportunities and Threats for Education in Dealing with Spatial Inequality in Information Technology and Communications, Journal of Education, Vol. 23, No. 3, pp. 126-163.
7. Farid, Y. (2005). The research method used in urban and rural geography, Tabriz, University of Tabriz.
8. Ghanbari, A. (2009). Analysis of Regional Inequalities in Iran, with Emphasis on Urban Areas of East Azerbaijan, Geography and urban planning doctoral thesis, University of Tabriz, Faculty of Humanities and Social Sciences.
9. Hall, P.; Pfeiffer, U. (2004). Urban Future 21, Spoon Press, London.
10. Harvey, D. (2000). Social Justice and City, Translated by Farrokh Hesamian, Mohammadreza Haeri and Monadizadeh, Behrouz, Processing enterprises and urban planning, Tehran.
11. Harvey, D. (1973). Social justice and the city, Edward Arnold, London.
12. Hewko, Jared N. (2001). Spatial Equity in the Urban Environment: Assessing Neighborhood Accessibility to Public Amenities, University of Alberta, Canada
13. Iveson, K. (2011). Social or Spatial justice? Marcuse and Soja, on the right to the city, City, Vol. 15, No 2., pp. 248-261.
14. Jomepour, M. (2006). Rural development planning, SAMT, Tehran
15. Kalantari, Kh. (2001). Planning and Regional Development, Publications Khoshbin, Tehran.
16. Kanbur, R.; Venables, Anthony J. (2005). Spatial Inequality and Development, Oxford: Oxford University Press.
17. Kaplan, D.H.; Kathleen W. (2004). Research in Ethnic Segregation I: Causal Factors Urban Geography, Vol. 25, No. 6 (August-September).
18. Karam, A.; Mohammadi, A. (2009). Evaluation and Zonation of Land Suitability for Physical Development of the City of Karaj and Surrounding Lands Based on Natural Factors and Analytic Hierarchy Process Method, Journal of Natural Geography, Vol 1, No 4, pp. 59-74.
19. KhalouBagheri, M. (2012). Dealing with Spatial Inequality, in addition to the Application of Planning Based on Improving the Quality of Life, Journal of Urban Economics and Management, No 1, pp. 49-67.
20. Lashgari, A. (2009). Right, Justice and Society, Journal of Economic Research, Vol. 6, pp. 31-57.

www.SID.ir

Archive of SID

21. Latifi, G.; Sejasi Gheydari, M. (2011). Ranking the Level of Social Welfare in towns of Zanjan Province Using TOPSIS Models, Journal of Planning and Social Development, No. 7, pp. 166-189.

22. Liao, Ch.H.; Chang Hsueh-Sheng, K.T. (2009). Explore the spatial equity of urban public facility allocation based on sustainable development, Real Corp,(http://www.corp.a,)pp. 135-144.

23. Liu.c.xu.m, Chen.s.an.jm and Yan.pl (2007). Assessing the impact of urbanization on regional net primary productivity in Jiangyin County, China, Journal of Environmental Management, pp. 597-606

24. Marx, K. (1975). Capitalism, Publication Nour, Tehran.

25. Miandoab city Government, 2014.

26. Mirsendesy, S.M. (1996). Effective Factors For People's Perception from Justice Of Its Relationship Equality (Inequality), The Case Study : Mashhad City, M.S Thesis In Sociology, Tarbiat Modarres University, Faculty Of Human Sciences.

27. Morais, P. (2010). Evaluation of performance of European cities with the aim to promote quality of life improvements; Elsevier, Vol. 39, No. 4, pp. 398-409.

28. Mousavi, M. (2012). The stable form of the City and social justice (Case Study: Miandoab), Human Geography Research, No 80, pp. 177-192.

29. Pacione, M. (2003). Urban Geography: A Golobal Perspective, 2th, New York.

30. Panych, L. (2001). Manifest After 150 Years, Agah press, Tehran.

31. PourFathifar, J.; Emamali, A. (2010). Analysis of Spatial Inequalities of Rural Settlements in Ahar City, Geographical space, Vol. 10, No 32, pp. 95-116.

32. Qadeer, M.A. (2004) Urbanization by implosion, Guest Editorial/ Habit ate International, Vol. 28, pp. 1-12.

33. Rabbani, R.; Kalantari, S.; Hashemianfar, A. (2010). Examining the Relationship between Social Determinants and Inequalities, Vol. 11, No. 41, pp. 267-305.

34. Rahnama, M.R.; Zabihi, J. (2011). Analysis of Distributing the Urban Public Facilities in line with of Spatial Equity with Integrated Access Model in Mashhad, Geography and Development, No 23, pp. 5-21.

35. Sarvar, R. (2004). Using the AHP Method in Geolocation of the Case Study: Locating for Future Development of Miyandoab City, Human geography researches, No 41, pp. 19-38.

36. Shakouie, H. (2013). New thoughts in philosophy, geography, V 1, fifteenth edition, Gitashenasi Publications, Tehran.

37. Sheikhi, A. (2014). City development strategies of Piaranshahr with CDS approach, MA thesis Geography and Urban Planning, University of Tehran, Faculty of Geography.

38. Sohel Rana, M.D. (2009). Status of wateruse sanitation and hygienic condition of urban slums: Astudy on Rupsha Ferighat slum, Khulna, www.elsevier.com, pp. 322-328.

39. Soja, E. (2006). The city and spatial justice, justice spatial/spatial justice, www.jssj.org

40. Tabibian, M.; Shokouhi, M.S.; Arbab, P. (2010). Evaluation of Social Justice from the Urban Landscape, Case Study: Neighborhood of Khoub Bakht, District 15 of Tehran, Journal of Utopia, pp. 111-122.

41. Taghavi, M.; Sarvari, Z. (2003). The impact of liberalism in urban spaces, Journal of Political–Economic, pp. 156-163.

42. Talen, E. (2002). Tthe Social Goals of New Urbanism. Housing Policy Debate, Vol. 13, No. 1, pp.: 165-188.

www.SID.ir

Archive of SID

43. Tsou, K.; Yu-Ting, H.; Yao- Lin, C.(2005). An accessibility-based integrated measure of relative spatial equity in urban public facilities, Cities, Vol. 22 No. 6, pp. 424-435.

44. Vaezi, A. (2005). John Rawls: A Theory of Justice to liberal politics, Publication BagherolOloum, Ghom.

45. Yasouri, M. (2009). Evaluation of regional disparity in Khorasan Razavi, Journal of Geographi and Regional Planning, No 12, Spring and Summer, pp. 201-223.

46. Zadvali, F. (2014). A comparative study of poverty in the city of Tabriz in the period 1385-1375, MA thesis Geography and Urban Planning, Faculty of Geography, University of Tabriz.

47. Zarabi, A.; Mousavi, M. (2010). Spatial Analysis of Population Distribution and Distribution of Services in Yazd City, Journal of Geographical Research, N0 97, pp. 27-46.

48. Ziari, K.; Mahdian Behmoniri, M.; Ali, M. (2013). Review and Assessment of Spatial Equity Benefiting the Urban Public Services Based on Population Distribution and Accessibility in the City of Babolsar, Vol. 13, No. 28, pp. 217-241.

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