

Metropolis Explosion and Sprawl of Tehran within the Framework of Urban Decline Theory

Hamid Reza Talkhabi¹, Mohammad Soleimani^{2*}, Ahmad Saeidnia³, Ahmad Zanganeh⁴

1. PhD Student of Geography and Urban planning, Kharazmi University, Tehran, Iran

2. Associate Professor, Department of Geography, Kharazmi University, Tehran, Iran

3. Assistant Professor of Urban Planning, Faculty of Fine Arts, University of Tehran, Tehran, Iran

4. Assistant Professor of Geography, Kharazmi University, Tehran, Iran

Received: 24 February 2018 Accepted: 04 August 2018

Extended abstract

Introduction

Urbanization is considered as a profound transformation in the economic and social life of mankind. Patterns, stages and processes of urban development have been studied by many researchers. Various ideas are emerged in this field. The theory of was introduced Urban Decline by Berg et al. (1982) in in four stages including urbanization, suburbanization, de-urbanization and re-urbanization. This model is based on demographic changes within urban areas and population changes in the metropolitan region. Urbanization stage occurs when the growth of the main areas surpasses the rings, while the daily urban system is growing. The suburbanization stage occurs when the growth of the rings surpasses the main areas, while daily urban system is still growing. The de-urbanization stage occurs when the growth of the rings is greater than the growth of the main regions, while the daily urban system is declining. The re-urbanization stage occurs when the growth of the main areas is greater than the growth of the rings, while the daily urban system is declining. The study of Tehran Metropolitan urbanization proved that "Metropolis Explosion" phenomenon and modern suburbanization are based on the intense political focus and service-industry activities followed by the imposed restrictive policies of the city. The objective of this stage is the growth of middle cities in the periphery of the Tehran Metropolis.

Methodology

Tehran Metropolitan Region is selected as the study area of this research. This research studies the process of explosion of the metropolis and the emergence of urban decline in the main city and urban sprawl as an objective reflection of the development of the city's periphery from 1976 to 2016. This research has a retroductive strategy and fundamental in terms of purpose, and analytical in terms of its method. This research has applied meta-analysis method and has used secondary population data of the Center of Statistics as a measure of scale and information of outreach schemes. It has used the traditions of quantitative and qualitative method. To analyze the data, we have used the directional trends (Standard Deviational Ellipse), global and local Moran Spatial Correlation model, Hot Spot Analysis (Getis-Ord G_i^*). We have used Shannon and Holdren entropy models in the ArcGIS10.3 to investigate the growth of the city in the studied periods.

* Corresponding Author, Email: m_soleimani_mehr@yahoo.com

Results and discussion

Results of population statistics (1976-2016) have indicated that Tehran has experienced an exponential growth since 1950s. This has been influenced by peripheral development policies. The survey of demographic data shows that the peripheral population of Tehran has experienced a growth from 14.73% in 1966 to 54.67% in 2016. Evidence suggests that Tehran Metropolitan region has experienced a Suburban expansion until 1986 with the growth of middle cities as its main feature, but from this time it has an onward Exurban development. This expansion (the completion of the second stage) is characterized by the emergence, development, and rapid growth of small cities. The results of the global and the local Moran Spatial Correlation models and the general Getis-Ord Gi statistics indicate the formation of several cluster patterns of the population outside the Tehran Metropolitan Region. The results of the Shannon model shows the increase of Shannon's value in the peripheral cities and development from the center to the periphery during the second (2000), third (2006) and fourth (2016) periods, while the main spatial development of the cities in the second and third periods (suburbs) has occurred in the second ring. In the fourth period (2016), the density of the Shannon coefficient has also reached the third ring (out of the suburban area). Based on the Holdren model, urban sprawl development has occurred in 25 of 43 cities with more than 30 percent in 19 cities.

Conclusion

The research findings indicate that "Tehran Metropolitan Region" has begun its modern-day suburban stage since the 1970s and after the 1990s it faced the process of de-urbanization (decline). The spatial representation of these two processes has been manifested in a sprawl. The results of the global and the local Moran Spatial Correlation models and the general Getis-Ord Gi statistics indicate the formation of several cluster patterns of the population outside the Tehran Metropolitan Region. The results of the Shannon entropy and Holdren models state that the development of urban areas has occurred in the second ring (Suburban) and the third ring (Exurban) since the 1990s. The result of this research suggests that the phenomenon of urban decline in the Tehran metropolitan Region follows the urbanization processes experienced in the American-European countries. The adaptation of the empirical findings of this study to Berg et al. (1982) illustrates that Tehran Metropolitan Region also follows the same pattern, and multiple stages of urban development and urbanization have emerged in this area. The findings of this research are consistent with the results of Berry (1970), Beale (1977), McCarthy and P. Morrison (1977) and Sternleib and J. Hughes (1977), Vining and T. Kontuly (1978), Hall and Hey (1978), Fielding (1982), Berg and et al. (1982), Saeid nia (1375), Nazari (2008), Zanganeh (1392), and Rajai (1394). Urban development processes in both developed and developing countries follow a fairly similar set of rules on a global scale. This is the reason behind the similarity of urban development spatial patterns.

Keywords: urban decline, suburban development, metropolis explosion and sprawl development, metropolitan region, Tehran.

Reference

1. Arabi, Mehdi, 2008, Organizational and physical-spatial development of Tehran metropolis with an emphasis on the role of urban privacy, phd thesis of geography and urban planning, Kharazmi University, Tehran
2. Asadie, Iradj; Zebardast, Esfandiar, 2013, Analysis of sprawl pattern in Tehran metropolitan region: with focus on impacts of decision-making and growth control fragmentation, Journal of architecture and urban palnning, Volume & Issue: Volume 6, Issue 11, autumn 2013, Page 89-106.
3. Beleiki, Norman, 2014, Designing Social Research, Translator, Hassan Chavashian, Ninth Edition, Publishing.
4. Bradbury, K, I, et al, 1982, Urban Decline and The future of American Cities. The booking Institution, Washington D.C.

5. Castells, Manuel E, 2000, the rise of the network society. Oxford: Blackwell Publishers.
6. Center for Urban and Architectural Studies and Research, 2000, Summary of the Report on the Design of Urban Complex of Tehran and its Towns, Ministry of Housing and Urban Development. Tehran.
7. Chaychian, Mohammad Ali, 2012, City and Village in the Middle East, Iran and Egypt in the Transition to Globalization, 1800-1970, Translated by Hamid Reza Parsi and Arezoo Platani, Second Edition, Tehran University Press.
8. Dadashpour, Hashem, Miri Lavasani, Seyed Amir Reza, 2015, Analysis of Spatial Patterns of Sprawl in Tehran Metropolitan Region, Journal of Spatial Planning, Vol. 5, No. 1, Successive No. 16, spring, pp. 123- 146.
9. Daneshpour, Abdolhadi, sarrafi, Mozaffar, Taktom, 2016, The Evolution of Peri-Urbanization in Tehran Metropolitan Fringe in 1996 to 2006 towards a constructive development or a dispersed growth? Letter of Architecture and Urbanism, Journal of architecture and urban palnning, Volume 8, Issue 16, winter and spring. Page 5-34.
10. Downs, Anthony, 2000, How Is Suburban Sprawl Related To Urban Decline? March2, 2000, [Http/Anthonydowns.Com](http://Anthonydowns.Com)
11. Forman, R. T. T., Sperling, D., Bissonette, J. A., et al, 2003, Road Ecology: Science and Solutions. Washington, DC: Island Press
12. Ghadiri, Mahmoud, Dasa, Farzaneh, 2016, Analysis of the Pattern of Spatial-Spatial Growth in Tehran Metropolis, Journal of Geographic Research, Thirty-first, No 1, Spring, Successive 120, pp. 30-44.
13. Gillham, O., 2002, the Limitless City: A Primer on the Urban Sprawl Debate, Washington, D.C.: Island Press.
14. Glaeser, E. L., & Kahn, M. E, 2004, Sprawl and Urban Growth. Handbook of Regional and Urban Economics, Cities and Geography (Chap. 56, Vol. 4, pp. 2481-2527). Amsterdam: Elsevier.
15. Hajipour, Khalil, 2008, investigating the Causes and Factors Affecting the Formation and Development of Metropolitan region, Journal of Honar haye ziba, Vol. 34, summer, pp 37-48.
16. Hamilton.k. David, 1999, Governing Metropolitan Areas: Response to Growth and Change in a Networked Age. 2nd Edition
17. Iranian Statistics Center, Population and Housing Census Data Years 1966 -2016.
18. Mansourian, Hossein, 2016, population dynamics and landcover patterns in the Tehran metropolitan region, Journal of Urban Planning Geography Research, Volume 4, Number 4, winter, pp. 613-633.
19. Meshkini, Abolfazl, Zanganeh, Ahmad, Mahdnezhad, Hafez, 2014, introduction on Urban sprawl, Publication of Jahad Kharazmi University, First Edition.
20. Mieskowski, peter. Mills S. 1993, the causes of metropolitan suburban isation-journal of economic perspective – volume 7, number 3-summer 1993, pp.134-147.
21. Nazrian, Asghar, 2008, urbanization or urban sprawl, and its spatial reflection in the emergence of metropolises (a new look in the urban networks of the world), Thought 1, Interdisciplinary Articles of City and Architecture, Center for the Study and Research of Urbanism and Architecture, Ministry of Housing and Urban Development, Spring.
22. Pacione, Michael, 2005, Urban Geography a Global Perspective, Second edition 2005 by Routledge.
23. Pazhuhan Mousa, 2013, Analysis of Spatial Structure of Tehran Metropolitan region, Phd thesis of Geography and Urban Planning, Faculty of Geography, University of Tehran.
24. Peterson, paul, 1985, New Urban Reality, Brookings Institution Press.
25. Rahnemaei, Mohammad Taghi, 1990, Tehran Development and Transformation in Rural Areas, Journal of Geographic research, No. 16, pp. 24-53.
26. Rajaei, Seyyed Abbas, 2015, Spatial Analysis of Urbanization Processes in Tehran's Metropolitan Region, Journal of Urban and Regional Studies and Research, seventh year, No. 27, summer.

27. Renne Short, John, 2017, Introduction to Urban Geography, Translated by Mohammad Soleimani, Ahmad Zanganeh and Hamid Reza Talkhabi, Publication of Jahad Kharazmi University, First Printing, Tehran.
28. Rodrigue, Jean-Paul, Claude Comtois, and Brian Slack, 2006, The geography of transport systems: Routledge.
29. Saeidnia, Ahmad, 1997, An incompatible structure of Tehran, Journal of Architecture and Urban Development, Volume 6, No. 6 & 7, Successive, No. 36 & 37, pp. 40-43.
30. Sarrafi, Mozaffar, Turanian, Fazilat, 2004, A review of the theoretical views of metropolitan management, with emphasis on institutional aspects, Journal of Urban Management Urban Management, Volume 17, Spring. Tehran.
31. Smolka, M, 2008, Informality and poverty in Latin American urban policies. In: Martine, G, et al. (Eds.), The New Global Frontier: Urbanization, Poverty, and Environment in the 21st Century, Earthscan, London, pp.99-114.
32. Soja, E., 2000, Postmetropolis: Critical Studies of Cities and Regions. Oxford: Basil Blackwell.
33. United Nations, 2016, The World's Cities in 2016, Data Booklet.
34. van den Berg, L.; Drewett, R.; Klaassen, L.; Rossi, A.; Vijverberg, C. 1982, A Study of Growth and Decline (Pergamon Press, Oxford).
35. Webster, Frank, 2007, Theories of the Information and Society, London and New York: Routledge,
36. Zahedpour, Saber, 2015, The Identification and Analysis of Implement Spatial-Activity Patterns in Tehran Metropolitan Region, Master's Thesis for Regional Planning, Tarbiat Modares University, Tehran.
37. Zanganeh, Ahmad, 2013, Urban Decline, Vocabulary Dictionary of Environmental h, Volume I, Scientific Pole, Spatial Analysis of Environmental hazards, Jahad-e Kharazmi, Tehran.

Spatial Analysis of Urban Hierarchy Based on the Formation of Urban Stair System in Iran

Esmail Aghaeizadeh*

Assistant Professor of Geography and Urban Planning, Faculty of Geography, University of Guilan, Iran

Received: 24 September 2017 Accepted: 11 September 2018

Extended abstract

Introduction

Cities accept different roles and functions based on their characteristics with different power and influences. More attention is paid to some cities. This leads to reduction of the importance of other cities and finally, this leads to development of urban primacy phenomenon. Urban hierarchy as one of important subjects in urban studies includes several topics such as stair system of urban hierarchy. Along with development of urban primacy in this system, a kind of internal order is developed among the cities and a hierarchical system is created. These groups are formed via population gap on a linear curve. This urban hierarchy system is faced with some questions on the relationship between spatial pattern of urban groups, pervasiveness of the stair system, the number of cities, the number of urban population, the urban primacy coefficient and the number of urban groups. This paper investigates these issues in Iranian urban hierarchical system.

Methodology

The present article is conducted via descriptive analytical method with documentary and library studies. In order to answer the research questions, first of all the status of the cities in urban hierarchy was examined using rank-size model and then the stair system in national and regional scale. In the next phase, spatial dispersion of the cities was displayed using the GIS to investigate the relationship among the cities in a group and their spatial dispersal. Census studies were also carried out by Iran's Statistical Center in 2010. Finally, the aim of this research is based on spatial distribution analysis of cities in stair system of urban hierarchy, the average of nearest neighborhood, multi-distance spatial cluster analysis and standard deviational ellipse methods. At the end of the research, Spearman test was used to understand the relationship between the numbers of urban population with the number of groups in the stair system. The statistical population of the present study is all the cities of the country at national and regional scale. Out of 30 provinces, 10 provinces were studied as the research sample.

Results and discussion

Findings showed that different regions of Iran are very different in terms of the number of cities and population. Among them, Khorasan Razavi province has the greatest number of cities (72 cities) and Yazd Province has the lowest number of cities. In terms of population, the urban population in different regions has fluctuated from 800 thousands to more than 11 million people; as Tehran and Khorasan Razavi have had the highest number of population and Hormozgan and Yazd have had the lowest number of population in the sample. On the other

* Email: aghaeizadeh@guilan.ac.ir

Tel: +989127181579

hand, based on the studies, West Azerbaijan with 9 groups and Chaharmahal-o-bakhtyari with 5 groups, have been ranked as the first and the last of urban groups in regional scale, respectively. It is interesting that the lowest number of urban groups is seen in the national scale. Based on the above mentioned cases, urban system in Iran at both national and regional level is faced with stair system of urban hierarchy. This characteristic comes from the urban primacy. On the other hand, the group-mate cities in this system, not only are not in the same area, but also they are dispersed in the region without any specified pattern. Group-mate cities don't create isochromatic zones in the region based on urban groups' dispersion map. Accordingly, it is not possible to determine a border for group-mate cities. Therefore, cities contrary to the stair system on the diagram don't follow any order geographically. There are significant differences in this field between urban groups. Most important of them are stair system is not visible in low population urban groups in some regions (Yazd and Mazandaran). In some regions urban groups have very low members (2-3 members), some regions in terms of the number of groups and city frequency are in balance and the provincial capitals are the most regular. Results show that there is no relation between dependent variables including number of cities, number of urban population, urban primacy coefficient) and independent variables, number of urban groups. This means that the increase or decrease in the dependent variables have no effect on the number of city groups as independent variable.

Conclusion

Investigation about urban network of Iran in both national and regional level shows that there is no harmony with rank-size model in urban hierarchy. This indicates undesired relations between cities. Thus, urban primacy is a dominated phenomenon in Iranian urban system. However, this phenomenon appears in different patterns named as stair hierarchy. Study of urban system in Iran confirms the existence of stair system in urban hierarchy at both national and regional levels. This system divides the urban hierarchy into several urban groups. The group-mate cities are separated from upper and lower level cities due to the population gap. It seems that they make a new form of urban hierarchy. In this system, the cities could be classified into several groups and each of them developed more homogenous hierarchy system compared with the whole urban system in the region. One of the most important issues in this area is identification of the main factors, because the variables have been studied in this research are not the main factors in the development of the stair system. Study of this system and mechanism of its function can lead to the identification of new dimensions of urban hierarchy system at the other scales. This research can achieve better results, provided that it is done as a comparative study at different scales ranging from regional, trans-regional and international scales.

Keywords: urban stair system, urban groups, spatial distribution, spatial analysis.

References

1. Aghaeizadeh, E., Zanganeh, A., Zanganeh, A., & Amirhajlou, E. (2015). Review the Urban Changes and Hierarchical Patterns in Gilan Urban System. *Geography And Development Iranian Journal*, 13(39), 127-146. doi: 10.22111/gdij.2015.2009
2. Andersson, C., Hellervik, A., & Lindgren, K. (2005). A spatial network explanation for a hierarchy of urban power laws. *Physica A: statistical Mechanics and its Applications*, 345(1-2), 227-244.
3. Anthony, R. M. (2014). Bringing up the past: political experience and the distribution of urban populations. *Cities*, 37, 33-46.
4. Asgari, A. (2011). *Spatial Statistical Analysis with ARCGIS (First ed.)*. Tehran: Tehran Municipality Information and Communication Technology Organization.
5. Azimi, N. (2002). *dynamics of urbanization and Principles of urban system*. Mashhad: Nika.

6. Azimi, N., molaei, n., baghaei, h., & hosseini amini, h. (2010). The Transformation of Traditional Urban System to Daily Urban System (DUS) in Guilan Central Region. *Journal of Studies of Human Settlements Planning(JSHSP)*, 5(10), 11-36.
7. Bastaminia, A., Safaeepour, M., Maleki, S., Tazesh, Y., & Omidipour, K. (2017). The trend of Urban Hierarchy Development in Khuzestan Province: a five decades analysis (1956-2006). *Scientific Journal Management System*, 10(36), 47-68.
8. Beguin, H. (1979). Urban Hierarchy and the Rank-Size Distribution. *Geographical analysis*, 11(2), 149-164.
9. Berry, B. J. L. (1964). Cities as systems within systems of cities. *Papers in regional science*, 13(1), 147-163.
10. Drennan, R. D., & Peterson, C. E. (2004). Comparing archaeological settlement systems with rank-size graphs: a measure of shape and statistical confidence. *Journal of Archaeological Science*, 31(5), 533-549.
11. Faraji, S. J., Qingpinga, Z., Valinoorib, S., & Komijanib, M. (2016). Urban primacy in urban system of developing countries; its causes and consequences. *Europe*, 65(22), 36.
12. Guérin-Pace, F. (1995). Rank-size distribution and the process of urban growth. *Urban Studies*, 32(3), 551-562.
13. Heidari, j. (2014). A survey of the urban hierarchy in Bushehr province Emphasis on the role of Pars Special Economic Energy Zone. *Urban Regional Studies and Research*, 6(24), 129-152.
14. Kalantari, M., & Qezebash, S. (2009). Identification of urban crime centers using statistical models of basic graphics and geographic information systems(GIS), Case study: Theft in Zanjan. *crime prevention studies*, 4(11), 77-91.
15. Konishi, Y., & Nishiyama, Y. (2009). Hypothesis testing in rank-size rule regression. *Mathematics and Computers in Simulation*, 79(9), 2869-2878.
16. Pumain, D. (2006). Alternative explanations of hierarchical differentiation in urban systems Hierarchy in natural and social sciences (pp. 169-222): Springer.
17. Rahnamaee, M., Manouchehri, A., & Ebrahim Poor, A. (2011). Evolution of Urban primacy and Regional Urban System of Azerbaijan (1335-1385. *Town and Country Planning*, 3(5), 5-31.
18. Seifoldini, F., Mansourian, H., Pourahmad, A., & Darvishzadeh, R. (2013). Spatial- Temporal Dynamics of Iran's Urban System (1956-2011). *Geographical Urban Planning Research (GUPR)*, 1(1), 21-42. doi: 10.22059/jurbangeo.2013.50550
19. Statistical-Center-of-Iran. (2016). Population and Housing Census. Tehran: Center for Statistics of Iran.
- Zipf, G. K. (1949). *National Unity and Disunity*, Bloomington, Ind., 1941. Martin J. Beckmann Cowles Foundation for Research in Economics Yale University.

Spatial Analysis of Security in Parks of Tehran

Hossein Nazmfar^{1*}, Saeideh Alavi², Ali Eshghi³

1. Associate Professor of Geography and Urban Planning, University of Mohaghegh Ardabili, Ardabil, Iran
2. PhD Candidate in Geography and Urban Planning, University of Mohaghegh Ardabili, Iran
3. PhD Candidate in Geography and Urban Planning, University of Mohaghegh Ardabili, Iran

Received: 21 November 2017 Accepted: 16 May 2018

Extended abstract

Introduction

Increased urbanization and increasing population density have made security as one of the basic human needs in urban life. For this reason, throughout history, human beings do not feel safe. In fact, one of the criteria for urban development is the sense of security, as a measure of the effectiveness of urban development programs that influence citizen's behaviors and, consequently, urban dynamics. Many factors affect the removal of urban security that threaten or reduce the security of the cities. Some urban spaces, especially public spaces such as parks, are considered as one of the main threats to the security of the cities. For many reasons, they are safe spaces for unlawful and abusive activities. Parks are one of the most important urban utilities that make a significant contribution to the realization of leisure and recreational functions for residents of urban spaces and attract many people every day. Attention to security in the parks is because of the fact that these spaces do not have security factors and users will not be welcomed, so there are problems like lack of socialization and sense of belonging in these places. Use of these spaces as insecure areas does not lead to a serious decline in the quality of the environment, but also is in contradiction with the principle of citizenship. In fact, the sense of security of people in urban spaces greatly affects the individual and collective behavior of users. In other words, if space is not used because of insecurity, it loses its dynamism, which may provide a favorable ground for its crime due to the reduction of social supervision. Providing security of the parks is one of the most urgent categories of society. Therefore, city policemen have the duty to ensure the safety of the people in these places because the number of families in parks and recreation centers for leisure time and the use of nature increase once providing their safety and comfort. The sense of security in Tehran parks differs from other cities in the country, and the flow of social life of its inhabitants is challenged. This is due to social, economic and even socially-based activities that provide more favorable conditions for the emergence and exacerbation of insecurity. The continuation of such an issue in the near future may cause the capital of the country with severe problems. Therefore, due to the importance and safety of parks, the present study was conducted with the aim of assessing and measuring security in the parks of Tehran. We have used 24 indicators to assess and measure the security of parks in Tehran. The following are the most important research questions.

- What is the status of Tehran's parks in terms of security?
- Which factors have the greatest role in the insecurity of the studied parks?

* Corresponding Author, Email: nazmfar@uma.ac.ir

Methodology

The statistical sample of the research is 41 parks of Tehran city. The security of the parks was evaluated by 24 indicators. Data were obtained from the performance statistics and arrests of the Tehran Municipality Protection Unit at the parks level. The importance of each of the indicators was determined with the help of the Network Analysis Model (ANP). The data analysis was performed using the Promethean model and the toolboxes in the GIS. After analyzing the data, the parks were classified into five groups with high, moderate, low, very low security and no security. The results of this stage are mapped into the GIS software environment. Different layers have been overlaid in GIS. Then, the information on the descriptive table of the layer was added. Using the kernel density estimation interpolation model, the zones with the greatest insecurity factors were identified and displayed on the map.

Results and discussion

In 2014, among the 41 selected parks in Tehran, 6 parks have the great security. The 6 parks are Sahand, Al-Ghadir, Saadatabad, Cestag, Shafagh and 22 Bahman parks. The parks with moderate security are including Niavaran, Thought, Miyad, Flight, Bahman, Shariati, Jamshidieh, Saeed, Razi, Narges, Fadak, Basij, Darband, Ghaem, Koohsar, Knowledge, Mahdi and Darabad. The parks of Baharan, Beast, Mellat, City, Derek, Tochal, Laleh, Persian Gulf and Nahjolbalagheh had low security. The security of Azadegan, Daneshjo, Velayat and police parks was very low, and Lovzan, Chitgar and Sarkhahsar had no security. Out of the 24 security indicators, the most important are including addict, deceptive, impostor, suspect, robber, thieves, hijab and alcoholic beaters, cold and hot arms, CD sales, automobile violations and vehicle seizure mainly in the east and west parts of Tehran. In fact, these indicators are the main causes of insecurity in the parks located in the west and east Tehran. According to the distribution map of the dispersion side, the most insecurity factors in the parks of Tehran are located in the east and west. The directional distribution circle also suggests that most of the insecure parks are centered in the eastern and western parts of Tehran.

Conclusion

The Sahand Park with the Phi value of 0.416 is in the first rank and the Sorkheh Hesar Park with the value of -0.728 is in the last rank. In Sahand Park, we can observe the least amount of arrests of drug addicts, coffers and alcoholic beverages, the perpetrators of conflict, social corruptors and wicked people, and denial of bribes. On the contrary, the Sorkheh Hesar Park is the worst in arresting of the deceiver, force majeure, suspect, thief, and the thug and illegal sale of CDs. In 2014, a total of 17,883 crimes were committed in the designated parks.

Keywords: security, park, Tehran, PROMETHEE.

References

1. Abdi, Tohid. Sharaftipour, Jafar. Sajjadi, Gholamreza. (2009). The Effect of Police Performance in Increasing the Satisfaction of Citizens Referring to Tehran Gardens, *Journal of Police Management Studies*, 4, 587-600. [In Persian].
2. Alavi, Seyed Ali., Hosseini, Seyyed Mostafa., Mohammadi Hamidi, Somayeh. Sarkhkumal, Kobra. (2016). Evaluation of factors affecting the sense of security in urban neighborhoods, case study: Yazd city, *Social Security Studies*, 48, 149-172. [In Persian].
3. Alizadeh, Katayoun. Anbar, Seyyed Hossein. (2017). The role of urban defenseless spaces in crime with emphasis on parks in area 9 of Mashhad, *Urban Research and Planning*, 29, 141-160. [In Persian].
4. Balyani, Yadollah. Hakim Dust, Yasser. Alijani, Bahlul. (2014). Principles and Basics of Spatial Data Processing Using Spatial Analysis Methods, Azad Pima Publishing. [In Persian].
5. Bani Assad, Saeed. (2015). Sensation of security in parks in Tehran city, by Separate Surveyors of Tehran's Police Command, *Social Security Studies*, 1(41), 83-110. [In Persian].

6. Boozan, Barry. (1999). People, Governments and Panic, First Edition, Translator Institute for Strategic Studies, First Edition, and Tehran: Strategic Studies Institute Research. [In Persian].
7. Ghanizadeh, Jahan. Kalantari, Mohsen. (2012). The pathology of order and security in Tehran's parks using principles and strategies for crime prevention through environmental design, discipline and security law enforcement, 19, 77-106. [In Persian].
8. Hamidifar, Alireza. Abbasi, Ghodratoolah. (2016). the Study of the Relationship between Fear of Crime and Paranoid Thoughts with Public Safety, Social Security Studies, 48, 199-219. [In Persian].
9. Hosseini Ghiasvand, Abolfazl Karbala'i., Zabihi, Hossein. (2016). An Analytical Model for the Prevention of Crime (robbery) of Residential Buildings in Respect to the Crime Prevention Approach through Design (CPTED) (Case Study: District 1 of Qazvin Municipality), Social Security Studies, 47, 139-172. [In Persian].
10. Feizizadeh, B., Blaschke, T., Nazmfar, H., Rezaei Moghaddam, M. (2013), Landslide susceptibility mapping for the Urmia Lake basin, Iran: a multi-criteria evaluation approach using GIS. Int. J. Environ. Res. 7, 319e336. <http://ijer.ut.ac.ir/>
11. Feizizadeh B, Blaschke T, Nazmfar Z, Akbari E, Kohbanani (2012c) Monitoring land surfacetemperature relationship to land use/land cover from satellite imagery in Maraqeh County, Iran. J Environ Planning
13. Manag. doi:10.1080/09640568.2012.717888.
14. Jahanbakhsh Ganjeh, Sadegh. Taheri, Zahra. Mozaffarinia, Sohrab. Ghasemipour, Maryam. (2016). Effect of crime experience on feeling of security, Social security studies, 47, 53-79. [In Persian].
15. Kozeghar, Lotfali. Zarghami, Saied. Aghaei, Parviz. (2014). Measurement of the sense of social security in public spaces. Case study: Tehran Mellat Park, Police Geography Research Center, 7, 139-156. [In Persian].
16. Lotfi, Sedigheh. Bardi Anamradanejad, Rahim. Vahidy, Haidar. (2015). Evaluation of the physical components of public spaces and its effect on the sense of social security of citizens of Babolsar, Security and Social Order Strategic Studies Journal, 1, 131-152. [In Persian].
17. Matkan AA, Shakhiba A, Poor AliS H, Nazmfar H. (2008), locating suitable sites for landfill using GIS (study area: the city of Tabriz), Journal of Environmental Sciences, 2008, (2), 121-132.
18. Moeyedi, Mohammad. Ali Nejad, Manouchehr. Navia, Hossein. (2013). Investigating the role of urban landscape components in improving the sense of security in urban public spaces (Case study, Evin district of Tehran), Social Security Studies, 35, 159 -191. [In Persian].
19. Mousavi, Mirnjagh. Visian, Mohammad. Mohammadi Hamidi, Somayeh. Asghari, Maryam. (2015). Sensation of security in urban spaces Case: Sarakhs city, Geography, 45, 185-202. [In Persian].
20. Nazmfar, H. (2017). Urban development predictions direction of using a combination GIS and Bayesian the probabilistic model (case study: Ardabil), Human Geography Research Quarterly, 49, 357-370.
21. Nazmfar, H., Roshan Roodi, S. (2015). Assessment of Development Sustainability Level in 9th District of Mashhad District Based on Hierarchy Models and Network Analysis. Journal Management System. 5(15): 49-68.
22. Nazmfar, H., Beheshti. B. (2016). Application of Combined model analytical network process and fuzzy logic models in Landslide susceptibility zonation (Case Study: chellichay Catchment). Journal Geography and Environmental Planning. 27 (1): 53-68.
23. -Nazmfar, H. (2012). An analysis of urban system with emphasis on entropy model (CaseStudy: the cities of East Azerbaijan Province), Indian Journal of Science and Technology. Volume 5, Issue 9, p. 3340 -3344.
24. Peyvastegar, Ya'qub. Heidari, Aliqakr. Keyani, Maryam. (2017). Analysis of Urban Park Space in Terms of Criminology through "Space Syntax" Technique (Case Study: Laleh Park in Tehran), Urban Study, 6 (22), 17-28. [In Persian].

25. Poorezat, Ali Asghar., Baghestani, Hooriyeh. Nejati, Mostafa. (2007). Logical Model of the Charter of Citizenship Rights Based on Existing Documents, *Social Welfare*, 26, 131-160. [In Persian].
26. Pourahmad, Ahmad. Mehdi, Ali. Mehdian Behnamiri, Masoumeh. (2013). Urban Security Public Spaces A Review and Survey of Security Levels in Parks of Qom's Second District, *Security and Social Order Strategic Studies Journal*, 2 (1), 1-24. [In Persian].
27. Rahnama, Mohammad Taghi., Hosseini, Seyyed Mostafa. (2016). Study of the feeling of security in parks in area 4 of Mashhad, *Social Security Studies*, 47, 229-253. [In Persian].
28. Sajjadi, Jila. Jangi, Hasan. (2016). Measurement of the Crime of Paradise in Urban Parks Based on the Combined Model, *Human Geography Research*, 2, 297-312. [In Persian].
29. Sajjadian, Nahid. Oruki, Parivash., Nemati, Mortaza., Shojaeen, Ali. (2015). Evaluation of the role of clientelism in the sense of social security (Case study: Izeh city), *Sepehr Geographical Information Center*, 94, 59-76. [In Persian].
30. Sajjadian, Nahid. Oruki, Parivash. Nemati, Morteza. (2016). the Study of Social Security and its Influential Factors (Case Study: Izeh City), *Geography and Urban Space Development*, 2, 87-105.
31. Salehi, Ismail. (2008). Environmental Features of Secure Urban Spaces, Tehran, Center for Urban and Architectural Studies. [In Persian].
32. Saremi, Hamid Reza., Saremi, Masoud. (2011). Investigation and analysis of effective factors in the manifestation of safe city from Islamic point of view, *Urban management*, 9, 7-18. [In Persian].
33. Shahriyan, Mohsen. Sohrabzadeh, Mehran. Sadat Hosseini, Narjes. (2016). Measure the sense of social security of women in the public spaces of new cities Case Study: Parand, *Social Security Studies*, 48, 173-198. [In Persian].
34. Shakouri Asl, Shideh. (2016). Fear of crime in women in urban spaces Case study: Special Neighborhoods and Health, *Women's Research Journal*, 2, 85-108. [In Persian].
35. Shakouri Asl, Shideh. (2016). Identification of Environmental Features Affecting Women's Safety in Urban Spaces. Case Study: Special Neighborhood and Health, District 11 of Tehran, *Urban Studies*, 21, 77-91. [In Persian].
36. Shariati Manesh, Mohammad Reza. (2015). The study of the effect of marginalization on the sense of social security of citizens of Jahrom city in 2015, *Journal of Social Partnership and Development*, 1(2), 42-61. [In Persian].
37. Soltani, Layla. Bikmohammadi, Hasan. Heidari, Somayeh. (2016). Spatial Analysis of Sense of Security in Different Urban Areas (Case Study: Qods City), *Security and Social Order Strategic Studies Journal*, 3, 104-87. [In Persian].
38. Tabari Kumaksaraei, Saeed. Leghaee, Hasanali. Hosseini, Seyyed Mohsen. (2012). Evaluation of Urban Parks in Qaem Shahr and Optimization of Their Usability for Citizens, *Environmental Planning*, 19, 75-98. [In Persian].
39. Taziki, Talaat. (2014). Factors Affecting Increasing Women's Sense of Safety in Parks of the City (A Case Study of Women 18-50 Years in Bojnourd), *Northern Journal of Law, Northern Khorasan Quarterly*, 111-136. [In Persian].
40. Tekyeh KHah, Jaehdeh. Vermesyar, Mehdi. Rahmani, Shirin. Mojaradi, Hamid Reza. (2013). Pathology of Parks and Recreational Green Spaces in Sanandaj, *Security and Social Order Strategic Studies Journal*, 2 (2), 131-144. [In Persian].
41. Trif, Terry. (2004). *New Security Studies*, Translated by Alireza Tayyib and Vahid Bozorgi, First Printing, Tehran: Strategic Studies Institute Research. [In Persian].
42. Yaghfour, Hossein. Paydari, Abuzar. Sanjari, Amir. (2015). Distribution of parks and their quality assessment in urban areas using the VIKOR model (case study: Amberabad city, Kerman province), *Environmental education*, 31, 123-145. [In Persian].
43. Yearbook of Tehran City, 2014. [In Persian].

44. Zivyar, Parvaneh. Rajabi, Azita. Azimi, Azadeh. (2015). Women's sense of security in tourist cities with an emphasis on urban design, *Women's Research Journal*, 6 (13), 81-102. [in Persian].
45. Arisoy, Ozlem (2007)integrated Decision Making in Global Supply Chains and Network, Doctoral Dissertation, university of Pittsburgh, school of Enginnering
46. Bogdanovic, Dejan. Nikolic, Djordje., Ilic, I. (2012). Mining method selection by integrated AHP and PROMETHEE method, *Anais da Academia Brasileira de Ciências*, 84(1), 219-233.
47. Brans, J., Mareschal, B. (2005). PROMETHEE method cited at: *Multiple Criteria Decision Analysis: State of the Art Surveys*, Springer, and New York.
48. Brans, Jeanpierre. Mareschal, Bertland. (1994).The PROMCALC & GAIA decision support system for multicriteria decision aid, *Decision Support Systems*, 12, 297-310.
49. Brans, Jean.Pierre., Vincke, Ph. (1985). A preference ranking organization method, *Management Science*, 31, 647-656.
50. Brans, Jean.Pierre. Vincke, Ph., Marechal, Bertland. (1986). How to select and how to rank projects: The PROMETHEE method, *European Journal of Operational Research*, 24, 228- 238.
51. Brownlow, Alec. (2005). A Geography of Men's Fear, *Geoforum*, 36, 581-592.
52. De Leeneer, Isabelle. Pastijn, Hugo. (2002). selecting land mine detection strategies by means of outranking MCDM techniques, *European Journal Operational Reasearch*, 139 (2), 327-338.
53. Gilliams, Sven. Raymaekers, Dries. Muys, Bart., Orshven, Jos Van. (2005). comparing multiple criteria decision methods to extand geographical information system on afforestation, computer and electronic in agreclture, 49 (1), 142-158.
54. N. Caterino, I., Iervolino, G. Manfredi., E. Cosenza. (2008). A COMPARATIVE ANALYSIS OF DECISION MAKING METHODS FOR THE SEISMIC RETROFIT OF RC BUILDINGS, *The 14th World Conference on Earthquake Engineering*, October 12-17, 2008, Beijing, China.
55. Omisakin, I. S. (1998). *Crime Trends and Prevention Strategies in Nigeria, A Study of Old Oyo State*, Monograph Series, Niser Ibadan, 9.
56. Roaf, S. (2010). *Designing high-density cities for social and environmental sustainability*. London: Earthscan, 384 page.
57. Valenta, Riccardo. (2013). Social Insecurity and Perception of Insecurity in Barcelona, *Procedia – Social and Behavioral Sciences*, 140, 462 –466.
58. Valera, Sergi. & Guàrdia, Joan. (2014). Perceived Insecurity and Fear of Crime in a City with Low Crime Rates, *Journal of Environmental Psychology*, 38, 195-205.
59. Zender, Lucia. (2007). Book Review, *Democracy, Society, and the Government of Security*, *Theoretical Criminology*, 11.

Analysis of Decision Areas in Cultural-Led Urban Regeneration with Tourism Approach in Historical Neighborhoods (Case Study: Zahir Abad)

Musa Pazhoohan^{1*}, Nabi Moradpoor², Reza Qashqaei³, Mahboobe Ashoori Shadehi⁴

1. PhD of Geography and Urban Planning, University of Tehran, Iran

2. PhD Candidate in Geography and Urban Planning, University of Tehran, Iran

3. PhD of Architecture, Gachsaran Branch, Islamic Azad University, Gachsaran, Iran

4. MA in Urban Planning, Islamic Azad University, Tehran Markaz Branch, Tehran, Iran

Received: 04 February 2018 Accepted: 02 November 2018

Extended abstract

Introduction

The emergence of changes in national and international economies in the last two decades of the twentieth century as well as the need to modulate urbanization interventions based on local needs have been challenging traditional tools to rebuild cities. The changes in the views from large-scale, project-driven, and state-centered interventions to local rehabilitation based on internal capacities is a central feature of urban regeneration. Cultural tourism has become a catalyst for urban regeneration as an efficient and sustainable approach. It has regarded as an important policy consideration in broadening the tourist offerings of tourist destinations. Accordingly, from the last two decades of the twentieth century, many regeneration plans, especially in European countries, have used culture as an accelerating factor to promote urban historical areas and cultural rehabilitation. It has been a successful approach in intervention of declining historical centers. In Britain, As Basset (1993) argued, from the early 1980s onwards cities such as London, Birmingham, Glasgow, and Newcastle launched a series of new cultural strategies to apply arts in urban policy. These new strategies were marked by a radical widening of the concept of 'culture' and the virtual erasure of the traditional distinction between high art and popular entertainment. Over time, these strategies grew in complexity, covering more and more activities, but typically including some combination of the following themes;

(1) A concern with opening up traditional institutions such as museums and theatres to wider public use, by increasing access and encouraging more involvement in the local community.

(2) An expanded program of support for community arts, ethnic minority cultures, and socially and culturally deprived neighborhoods;

(3) A new focus on the infrastructure necessary for cultural production, embracing investment in studios, workshops, marketing and support organizations, and the planning of 'cultural districts';

After decades experiencing various paths of urban regeneration through culture, cultural-led urban regeneration both as tool and as a rehabilitation approach is an activity that introduces the appropriate path to urban regeneration process through the use of cultural resources. In this activity, culture is considered as the main means of urban regeneration, because the culture uses efficient ways that are effective in helping to promote the economic and social conditions of the deprived historic urban areas. In Iran, the history of intervention in the deteriorated urban areas back to more than 50 years ago. But intervention policies in the areas with historical values are implemented regardless of their cultural potentials. It has led to a distortion of their cultural and

* Corresponding Author, Email: mpanahandehkhah@ut.ac.ir

historical identity. The main purpose of this paper is to explain the relationship between cultural tourism and urban regeneration using the analysis of decision areas method in the development of cultural tourism in the Zahir Abad, one of the historical districts of Tehran.

Methodology

This research with a qualitative method has used a questionnaire tool for collecting data. The questionnaire designed for the residents of Zahir Abad neighborhood was based on the application process of analysis of decision areas. It includes questions in four categories of following characteristics including identification of the issues and the reasons for their emergence, identification of residents' views on how to solve problems in associating with cultural tourism potentials and identification of important cultural and cultural spaces to be used in planning of urban regeneration with the cultural tourism approach. In order to measure the reliability of the designed questionnaire, Cronbach's alpha has been calculated for questionnaires using SPSS. The value of 0.81 for the alpha was acceptable. Questions are designed using the Likert scale on a scale of five degrees of answers from 1 to 5 based on the agreement of the respondents.

The region 20 of Tehran municipality was developed about 6,000 years ago, and the Zahir Abad neighborhood in this region, despite its historical and cultural significance, has problems in reducing the productivity of economic activities, insecurity, reducing the motivation of residence, the process of identity loss, gradual weakening of the functioning cultural spaces and their replacement with commercial and administrative functions.

Results and discussion

Today, based on the successful experiences of the world, the process of urban regeneration using cultural resources, by adopting a cultural and historical approach to tourism, is a more sustainable and wise path to achieving the rehabilitation and modernization of historical neighborhood in old cities. The nature and method of planning and how to combine the objectives of cultural-led regeneration with the tools and requirements of cultural tourism can be crucial in achieving this goal. This combination is done in this article using analysis of decision areas method. The results show that this method has the ability to broadly connect with a range of factors influencing the process of rebuilding and that the economic strengthening and management structures of the neighborhood which are in the top priority for initiating the rehabilitation planning of the neighborhood.

Conclusion

The application of the analysis of decision areas method to the Zahir Abad neighborhood showed that strengthening the local economy infrastructure by strengthening the infrastructure of cultural and entrepreneurial tourism, along with the strengthening of community-based management structures and the provision of social security, were the most important initial options for cultural-led regeneration activities. This can be used to direct the budgeting of related organizations in this area.

Keywords: cultural-led urban regeneration, cultural tourism, analysis of decision areas, Zahir Abad neighborhood, Tehran.

References

1. Azizi, M. M., (2000), Evolution of Intervention Policies in Urban old neighborhoods in Iran, "Fine Arts Magazine, No. 7, pp. 46-37.
2. Bassett, K., (1993), Urban Cultural Strategies and Urban Regeneration: A Case Study and Critique, Environment and Planning A: Economy Space
3. Blessi, G.T., (2012), New trajectories in urban regeneration processes, Cultural capital as source of human and social accumulation- Evidence from the Case of Tohu in Montreal", cities

4. Boom Sazegan Consulting Engineers., (2006), Structural-Strategic Development Plan of Tehran City, Ministry of Housing and Urban Development-Tehran Municipality.
5. Rogerson, C. M., (2012), Urban tourism, economic regeneration and inclusion: Evidence from South Africa, : The Journal of the Local Economy Policy Unit, 1–15.
6. Middleton, C, and Freestone, P., (2008), The Impact of Culture-led Regeneration on Regional Identity in North East England , Regional Studies Association International Conference The Dilemmas of Integration and Competition Prague, Czech Republic 27-29 May 2008
7. Law, C.M., (1992), Urban Tourism and its Contribution to Economic Regeneration, urban studies
8. Murphy, C, and Boyle, E., (2006), Testing a Conceptual Model of Cultural Tourism Development in the Post-Industrial City: A Case Study of Glasgow, Tourism and Hospitality Research.
9. CoMedia., (2003), Releasing the cultural potential of our core cities: culture and the core cities (www.culturenet.cz/res/data/004/000569.pdf)
10. Dekker, J.F. (1978), “what A Multi – Level Application of strategic Choice at the sub- Regional Level”, The Town Planning Review, Vol. 49(2): 149-162.
11. Evans, G. (2005), “Measure for Measure: Evaluating the Evidence of Culture’s Contribution to Regeneration”, Urban Studies, Vol. 42(5): 959-983.
12. Grecia, B., (2005), “Deconstructing the City of Culture: The Long- term Cultural Legacies of Glasgow 1990”, Urban Studies, Vol.42 (6):
13. Herrero-Prieto, L. C, and Gómez-Vega, M., (2017), Cultural resources as a factor in cultural tourism attraction Technical efficiency estimation of regional destinations in Spain, Tourism economics.
14. Hudec, O, and Džupka, P., (2014), Culture-led regeneration through the young generation: Košice as the European Capital of Culture, European Urban and Regional Studies
15. Monclus, J, and Guardia, M., (2016), Culture, Urbanism and Planning (Heritage, Culture and Identity.), Ashgate, Burlington, VT, Routledge; 1 edition,
16. Joaquim, R, U., (2014), Culture and authenticity in urban regeneration processes: Place branding in central Barcelona, Journal of urban studies
17. Kearns, G. and Philo, C., (2006), Selling places. The city as cultural capital, past and present. Oxford: Pergamon Press
18. Mehrazan Consulting Engineers., (2006), Study of urban development issues in district 20 of Tehran municipality, Joint Unit responsible for comprehensive and detailed plans of Tehran.
19. Mumford, L., (2006), Culture of the Cities, Translation by Aref Aqvami Moghaddam, Age Publishing.
20. Smith, A, and Strand, I, K., (2010), Oslo’s new Opera House: Cultural flagship, regeneration tool or destination icon? European Urban and Regional Studies
21. Steven M, and Ronan, P., (2005), Introduction: The Rise and Rise of Culture-led Urban Regeneration, urban studies
22. Wickens, E., (2016), The consumption of cultural experiences in city tourism, Tourism and Hospitality Research.
23. Ulldemolins, J, R., (2014), Culture and authenticity in urban regeneration processes: Place
24. branding in central Barcelona, Urban Studies
25. Doucet, P. (2006) Territorial Cohesion of Tomorrow: A Path to Cooperation or Competition? European Planning Studies, 14, (10), 1473-1485
26. Sasaki, M., (2007), Urban Regeneration through Cultural Diversity and Social Inclusion, (www.cujucr.com/downloads/Individual%20Articles/2/vol2%20Masayuki%20Sasaki.pdf)
27. Evans, G and Shaw, P., (2004), The contribution of culture to regeneration in the UK: a review of evidence, A report to the Department for Culture Media and Sport, London Metropolitan university.

28. Miles, R and Paddison, R., (2005), The Rise and Rise of Culture-Led Urban Regeneration, *Urban Studies* 42(6):833-839
29. Guachalla, A., (2016) Perception and experience of urban areas for cultural tourism: A social constructivist approach in Covent Garden, *Tourism and Hospitality Research* 18(3).

Impacts of Civil Rights on Urban Management in Ilam City

Seyed Eskandar Sidaïy^{1*}, Rasoul Darab Khani², Ibrahim Jahangir³, Javad Amini³

1. Associate Professor of Urban Planning, University of Isfahan, Iran

2. PhD in Geography and Urban Planning, University of Tehran, Iran

3. MA in Geography and Urban Planning, Isfahan, Iran

Received: 18 January 2018 Accepted: 08 December 2018

Extended abstract

Introduction

Urban issues are of general interest in contemporary world and they have attracted the attention of many social and political scientists in different courses. Structural and functional changes of social and political systems and creation of different grounds in managing urban affairs from one perspective and Islamic bases of Iranian law from the other hand have created different perspectives toward citizen rights and duties.

Growing procedure of urbanization in Iran and different cultures and groups' companionship with each other and turning rural affairs to urban ones highlights the necessity of redefining the activists' interactions with each other and with urban institutions in urban society suitable with update legal criteria, which have strong executive guarantee.

City is considered as a development source and urban management in development and improvement urban settlements plays a very important and determinative role. Management of favorable process of urban life can play the most important role on human settlements and stability of urban growth. The civil program authorization and regulating factor arises from practicability of urban management.

Ilam city has have experienced a hasty and ungovernable growth and an inappropriate population growth, and physical transformations. These events resulted in extreme immigration reception.

Population growth and immigration from rural areas and adjacent cities has resulted in a growth in unemployment rate, social problems, land and housing anxiety, urban dissociation (vacant lots in town), urban landscape ravages, city development to potentially dangerous areas, ugly and ungovernable growth (hasty skeletal developmental growth), crowding city traffic (accumulation of city traffic), changing agricultural lands to residential spaces, improper urban construction, and noncompliance of urban infrastructure neighborhood. Moreover, it raises this question that if the awareness of citizens about different civil rights has a relationship with urban management programming? In addition, how much effects do the awareness of citizens about different civil rights components has on urban management programming?

Methodology

This is an applied research by a descriptive analytical methodology. Statistical population of the research is all the people of Ilam city. We have selected 200 subjects as statistical sample. The questionnaire tools has been used for data acquisition. The reliability of the tool is tested through Cronbach's alpha. The value of the alpha has been obtained 75 % and 74% for questionnaires of civil rights and urban management, respectively. For the validity of

* Corresponding Author, Email: s.seidaïy@geo.ui.ac.ir

questionnaire, the face validity has been used. This shows the validity of the research. Finally, all data were analyzed using SPSS.

Results and discussion

The results of examining the hypothesis of this research through Kolmogorov–Smirnov and t-regression test indicated that civil rights are not meaningful for majority of people and being aware of civil rights in citizen's urban management.

Nowadays people talk about the active collaboration of citizens in urban programs on urban governing. Practical ways of answering to citizen's requirements by the local decision makers can be helpful to determine different aspects of collaboration. The social justice in urban level is the responsibility of urban management in modern systems from social and economical to cultural and political systems. In complicated urban system, civil rights perform this function. Urban management system contains 3 levels of management including political-social, institutional and planning and performative and technical management. . Citizen unawareness and lack of knowledge has caused many problems and has put civil society and management in hardship. Diversity of institutions and responsible structures in Ilam's city and their separate performance according to their own criteria, financial deficiencies for urban management, lack of instructions based on citizen's collaboration in urban management, has caused ignoring citizen's collaboration in managing urban affairs.

The purpose of this study is to study the effects of components of the civil rights on urban management in Ilam.

Keywords: city, civil rights, Ilam urban management.

References

1. Holy Quran
2. Afrough, E., 2006, *Total Essays of the First Urban*, Society and Religious Thought Conference in Shiraz. (In Persian)
3. Ahmadi Tabatabaie, M. R., 2010, *Civil Right with Emphasis on Republic Islamic Constitutional Law*, Rahyaf Enghelab Quarterly Research Periodical, 8th Issue. (In Persian)
4. Arfania, B., 1996, *Private International Law*, First Edition, Aghigh Publishing, Tehran. (In Persian)
5. Demain, J. et al., 1996, *Beyond Communitarianism*, Macmillan.
6. Gharakhhu, M., and Omranzadeh, B., 2006, *The Legal Status of Government and Mayoralty Interactions in Iran*, Iran's Geographical Association of Research-Science Journal, New Period, Vol. 3, No. 6 and 7, PP. 49-68. (In Persian)
7. Hajzadeh, M., and Mansouri, A., 2014, *Examining the Level of General Awareness of Civil Rights in Northern Khorasan Province*, Youth Studies Sociology Magazine, 12th Issue. (In Persian)
8. Hashemi, F., 1999, *Civil Right and Planning Rules*, Ministry of Housing and Urban Planning, Iran's Urban Planning and Architecture Research and Studies, Tehran. (In Persian)
9. Holy Quran. (In Persian)
10. Hossein Zadeh Delir, K., and Maleki, S., 2009, *Explaining Urban Region's Stability Indexes with Sustainable Development in Ilam City*, Geography and Planning Magazine, Vol. 13, No. 26. PP. 29-60 (In Persian)
11. Karimiyan Pour, F., 2011, *Studying the Status of Citizen Partnership in Mashhad City's Management (With Emphasis on the Role of City Counselor)*, MA Thesis of Geography and Urban Management, Ferdosi Mashhad University, Supervisor Ezatollah Mali.
12. Lees, A. et al., 1976, *The Urbanization and Economic Development in Germany 1815- 1914 in: Town in Societies*, Essays in Economic History and Historical Society (P. Abrams and E. A. Wrigley, Eds.) Cambridge Univ, Press.

13. Lotfi, H., 2010, *Urban Management and It's Status in Raising Civil Rights*, Human Geography Science-Research Quarterly Journal, Vol. 1, No. 2, PP. 101-110.
14. Madani, J., 1995, *Basic Rights of Political Institutions of Islamic Republic of Iran*, Hamrah Tehran Press. (In Persian)
15. Masti, M., and Falahi, A., 1999, *A View of Civil Rights Regarding Judicial Perspectives*, Bar Association, New Period, 17th and 18th Vol. (In Persian)
16. Mehrpour, H., 1994, *Human Rights in International Documents and Islamic Republic of Iran's Position*, Etelaat, Tehran. (In Persian)
17. Mukomo, S. I., 1996, *On Sustainable Urban Development in Sub-Sahara Africa*, Cities, Vol. 13, No. 4, PP. 265-271.
18. Nazariyan, A., and Shouhani, N., 2012, *Strengthening Urban Management System According to Citizenship Oriented Pattern in Ilam*, Geographical Perspective Magazine (Human Studies) Vol. 6, Vol. 16, PP. 134-151 (In Persian)
19. Paknezhad, F., and Shakouri, H., 2000, *Studying the Necessity of Teaching Civil Rights in Iran*, Development and Citizenship Culture Approaches, Mohebban Publishing, Isfahan. (In Persian)
20. Parvin, F., 2014, *Law Aversion and Mutual Civil Rights Violation*, Islamic Social Research Magazine, 19th Year, Second Issue (Consecutive 97). (In Persian)
21. Rabani, R., Esmaeli, M., and Haghigatian, M., 2007, *Studying Social, Cultural and Awareness Level of People About Civil Rights (Isfahan City in 2007)*, Social Science Magazine (Azad University of Shoushtar), The Journal Social science (Islamic Azad University, Shoushtar), Vol. 27, No. 1, PP. 147-168. (In Persian)
22. Rahmani, M., 2013, *Metropolis, Characteristics and Implications*, Omid Engelab Publishing, First Edition.
23. Ruber, P., 1990, *Citizen and Government*, Abolfazl Ghazi Translation, Tehran University Press, Tehran. (In Persian)
24. Safari Rad, A., Tahvildari, M., 2016, *An Analysis of Civil Management and Its Role in Civil Rights Awareness and Civilization; Case Study of Langroud City*, National Conference of Civility and Architecture with an Approach on Sustainable Development. (In Persian)
25. Sarafi, M., and Abdollahi, M., 2009, *Conception of Citizenship's Analysis and Appraising It's Status in Country's Civil Management Law*, Geographical Research Magazine, Vol. 40, No. 63, PP. 134-115. (In Persian)
26. Seif, H., 1999, *Civil Society and Ways of Reaching to that*, Javanane Movafagh Publishing, Tehran. (In Persian)
27. Sharifiyan Sani, M., 2002, *Civil Cooperation, Civil Governing and Civil Management*, Civil Management Journal, 8th Vol. 2, No. 8, PP. 42-55. (In Persian)
28. Shia, E., 2002, *Necessity of Civil Management Change in Iran*, Geography and Development, Vol. 1, No. 1, PP. 37-62. (In Persian)
29. Shiani, M., 2010, *An Analysis of Civil Situation in Tehran City: A Review of Civil Management*, Iran's Social Studies Magazine 8th Vol. 3, No. 2, PP. 31-45. (In Persian)
30. Statistical Center of Iran, *General Census of Population and Housing*, 2007.
31. Ziari, K. A. 2012, *Assessing the General Awareness of Piranshahr Citizen of Civil Rights and Laws*, Civil Planning Geography Research Magazine, Vol. 1, No. 1, PP. 59-77.

Effects of Spatial and Temporal Land Use Changes and Urban Development on the Increase of Land Surface Temperature Using Landsat Multi-Temporal Images (Case study: Gorgan City)

Saman Nadizadeh Shorabeh¹, Saeid Hamzeh^{2*}, Majid Kiavarz², Seyed Karim Afsharipoor¹

1. MA Student in Remote Sensing and GIS, Faculty of Geography, Tehran University, Iran

2. Assistant Professor of Remote Sensing and GIS, Faculty of Geography, University of Tehran, Iran

Received: 23 July 2018 Accepted: 06 November 2018

Extended abstract

Introduction

More than 50% of the world population lives in urban areas. It is predicted the value will be increased to 69.6% by 2050. In recent decades, urban population is rapidly increasing due to the natural growth of cities, the migration from villages to cities, climate change, reduction of water resources, loss of agricultural lands, animal husbandry and other factors. These factors have led to physical expansion of the cities and the subsequent destruction and reduction of green spaces and forests, and increase of streets, buildings and asphalt roads. These changes in land use and land cover in urban areas cause many environmental problems and warming of the temperature of the city and its surroundings. Gorgan city as one of the northern cities of Iran is noticeable in urban physical expansion and land use change mainly due to conversion of agricultural land use and green space into built-up areas. These reasons have created a special climatic condition in terms of air temperature, humidity and precipitation. The purpose of this study is to investigate the increase in temperature as a result of changes in the various land use and the impact of each land use on the increase in surface temperature and identifying effective land use to better management.

Methodology

In the present study, we have used Landsat satellite images in 1992, 2001, 2009 and 2015 in the sensors of TM5, ETM+, and OLI/TIRS. In order to complete the input parameters for mapping the surface temperature using satellite images, we have used MODIS water vapor product. To provide control points, we have used field views, Google Earth images, and topographic maps prepared by "Iran National Cartographic Center".

After providing Landsat time series, we applied preprocessing steps including atmospheric and geometric correction. Then, the images were classified by Support Vector Machine method. They were classified into four classes including built up, fallow, agriculture and green space. After classifying the control points, the accuracy of the images was calculated. In the next step, we have used the Mono Window algorithm to obtain surface temperature for each image. At the end, we investigated the changes between different images and their relationship with the Earth's surface changes.

* Corresponding Author, Email: saeid.hamzeh@ut.ac.ir

Results and discussion

The results of landuse changes in Gorgan indicated that during the first period (1992-2001), the extent of fallow and green space increased 48.55% and 31.95%, respectively. The agricultural and green spaces decreased 68.68% and 5.9%, respectively. This is the most important cause of this decline in agricultural landuse during this period in the fallow landuse. In the second time period (2001-2009), the area of green, agricultural and built up landuse increased by 17.1%, 86.59% and 14.51%. The fallow landuse because of cultivation decreased about 18.68%. Also, in the third time period (2009-2015), the extent of the built up and fallow landuse was increased by 12.24% and 7.84%, respectively. The area of the green spaces and agriculture landuse is decreased by 0.72% and 29.49%, respectively. The use of green space due to its particular geographic location, including special topographic conditions, has not changed during the study period.

The highest temperature related to the fallow landuse, because of this increase in temperature for the fallow is the thermal capacity and low heat transfer capacity of the dry soil. Also, the highest temperature is related to green space landuse. This is resulted from evapotranspiration for reducing the temperature for the green space landuse.

The variation in temperature classes is different. The very cold temperate class has a faster rate of reduction, so that the area of 5875.51 hectares in 1992 changed into an area of 1260.1 hectares in 2015. Also the normal and hot temperatures class in these years had the growing trend. The area of the warm class was zero in 1992. It increased by 319.73, 1226.91, and 1686.13 hectare in the years 2001, 2009 and 2015, respectively.

Conclusion

The results of the image classification in the research indicate a positive effect of the NDVI index and the LST map to increase the accuracy of image classification. Landuse changes indicated that the most changes were observed between the agriculture and fallow landuse. If this trend continues, other landuse will undergo fundamental changes. The trend of temperature changes in the earth surface is an increasing and the highest temperature is related to the fallow and built up landuse. Also, the highest increase in temperature is related to the changes in the green space to fallow landuse. Investigating the relationship between the characteristics of vegetation density and the earth surface temperature indicates that different classes of land use/cover, the presence of vegetation could decrease the surface temperature during study period. It was found that surface temperature in dense urban areas were higher than those in other areas. Hence, it can be noted that the role of vegetation in reducing the surface temperature of the city was important. With studying the temperature classes in the study area, it showed that cold temperatures classes have decreasing trend and warm temperature classes have increasing trend because of the changes occurred in landuse.

Keywords: spatial-temporal monitoring, land use, urban extension, surface temperature, Gorgan.

References

1. Alavipanah, S. K. 2008. Thermal remote sensing and its application in the earth sciences, Tehran university press, Tehran
2. Alavipanah, S. K., Hashemi Darrehbadami, S., Kazemzadeh, A. 2015. Spatial- Temporal Analysis of Urban Heat- Island of Mashhad City due to Land Use/ Cover Change and Expansion, Geographical Urban Planning Research (GUPR), 3(1), 1-17.
3. Amiri, R., Weng, Q., Alimohammadi, A., and Alavipanah, S. 2009. Spatial-temporaldynamics of land surface temperature in relation to fractional vegetation coverand land use/cover in the Tabriz urban area, Iran. Remote Sensing of Environment,113: pp. 2606–2617.

4. Bokaie, M., Zarkesh, M. K., Arasteh, P. D., and Hosseini, A. 2016. Assessment of Urban Heat Island based on the relationship between land surface temperature and land use/land cover in Tehran. *Sustainable Cities and Society*, 23: pp. 94-104.
5. Boori, M. S., Balzter, H., Choudhary, K., Kovelskiy, V and Vozenilek, V. 2015. A Comparison of Land Surface Temperature, Derived from AMSR-2, Landsat and ASTER Satellite Data. *Journal of Geography and Geology*, 7(3), pp. 61-69.
6. Chander, G., and Groeneveld, D. P. 2009. Intra-annual NDVI validation of the Landsat 5 TM radiometric calibration. *International Journal of Remote Sensing*, 30(6): pp. 1621-1628.
7. Chander, G., Markham, B. L., and Helder, D. L. 2009. Summary of current radiometric calibration coefficients for Landsat MSS, TM, ETM+, and EO-1 ALI sensors. *Remote sensing of environment*, 113(5): pp. 893-903.
8. Chen, Q., Moghaddas, S., Hoppel, C. L., and Lesnefsky, E. J. 2006. Reversible blockade of electron transport during ischemia protects mitochondria and decreases myocardial injury following reperfusion. *Journal of Pharmacology and Experimental Therapeutics*, 319(3): pp. 1405-1412.
9. Chudnovsky, A., Ben-Dor, E., and Saaroni, H. 2004. Diurnal thermal behavior of selected urban objects using remote sensing measurements. *Energy and Buildings*, 36(11): pp. 1063-1074.
10. Daz, B. S., Guilan, A. GH., & Khavarian, H. 2016. Land cover changes in Gorgan city using Landsat satellite images. *First International Conference on Water, Environment and Sustainable Development, Ardebil*, University of Mohaghegh Ardabili.
11. Ding, H., and Shi, W. 2013. Land-use/land-cover change and its influence on surface temperature: a case study in Beijing City. *International Journal of Remote Sensing*, 34(15): pp. 5503-5517.
12. Effat, H. A., and Hassan, O. A. K. 2014. Change detection of urban heat islands and some related parameters using multi-temporal Landsat images; a case study for Cairo city, Egypt. *Urban Climate*, 10: pp. 171-188.
13. Firozjaei, M. K., Kiavarz, M., Alavipanah, S. K., Lakes, T., & Qureshi, S. 2018. Monitoring and forecasting heat island intensity through multi-temporal image analysis and cellular automata-Markov chain modelling: A case of Babol city, Iran. *Ecological Indicators*, 91, 155-170.
14. Gago, E. J., Roldan, J., Pacheco-Torres, R., and Ordoñez, J. 2013. The city and urban heat islands: A review of strategies to mitigate adverse effects. *Renewable and Sustainable Energy Reviews*, 25: pp. 749-758.
15. Giannini, M. B., Belfiore, O. R., Parente, C., and Santamaria, R. 2015. Land Surface Temperature from Landsat 5 TM images: comparison of different methods using airborne thermal data. *Journal of Engineering Science and Technology Review*, 8(3): pp 83-90.
16. Gu, B., and Sheng, V. S. 2017. A Robust Regularization Path Algorithm for ν -Support Vector Classification. *IEEE Transactions on neural networks and learning systems*, 28(5), 1241-1248.
17. Huang, C., Davis, L. S., and Townshend, J. R. G. 2002. An assessment of support vector machines for land cover classification. *International Journal of remote sensing*, 23(4): pp. 725-749.
18. Hu, Y., and Jia, G. 2010. Influence of land use change on urban heat island derived from multi-sensor data. *International Journal of Climatology*, 30(9): pp. 1382-1395.
19. Jiang, J., and Tian, G. 2010. Analysis of the impact of land use/land cover change on land surface temperature with remote sensing. *Procedia environmental sciences*, 2: pp. 571-575.
20. Jiménez-Muñoz, J. C., & Sobrino, J. A. 2003. A generalized single-channel method for retrieving land surface temperature from remote sensing data. *Journal of Geophysical Research: Atmospheres*, 108(D22).
21. Kato, S., and Yamaguchi, Y. 2005. Analysis of urban heat-island effect using ASTER and ETM+ Data: Separation of anthropogenic heat discharge and natural heat radiation from sensible heat flux. *Remote Sensing of Environment*, 99(1): pp. 44-54.

22. Kavzoglu, T., and Colkesen, I. 2009. A kernel functions analysis for support vector machines for land cover classification. *International Journal of Applied Earth Observation and Geoinformation*, 11(5): pp. 352-359.
23. Landsat Project Science Office, 2002. *Landsat 7 Science Data User's Handbook*. Goddard Space Flight Center, NASA, Washington, DC, cited from: http://ltpwww.gsfc.nasa.gov/IAS/handbook/handbook_toc.html.
24. Latif, M. S. 2014. Land Surface Temperature Retrieval of Landsat-8 Data Using Split Window Algorithm-A Case Study of Ranchi District. *Int J Eng Dev Res (IJEDR)*, 2: pp. 3840-3849.
25. Li, J., and Zhao, H. M. 2003. Detecting urban land-use and land-cover changes in Mississauga using Landsat TM images. *Journal of Environmental Informatics*, 2(1): pp. 38-47.
26. Li, X., Li, W., Middel, A., Harlan, S. L., Brazel, A. J., and Turner, B. L. 2016. Remote sensing of the surface urban heat island and land architecture in Phoenix, Arizona: Combined effects of land composition and configuration and cadastral-demographic-economic factors. *Remote Sensing of Environment*, 174: pp. 233-243.
27. Lu, D., and Weng, Q. 2005. Urban classification using full spectral information of Landsat ETM+ imagery in Marion County, Indiana. *Photogrammetric Engineering & Remote Sensing*, 71(11): pp. 1275-1284.
28. Mantero, P., Moser, G., and Serpico, S. B. 2005. Partially supervised classification of remote sensing images through SVM-based probability density estimation. *IEEE Transactions on Geoscience and Remote Sensing*, 43(3): pp. 559-570.
29. Matkan, A., Nohegar, A., Mirbagheri, B., Torkchin, N. 2014. Assessment relations of land use in heat islands using time series ASTER sensor data (Case study: Bandar Abbas city). *Journal of RS and GIS for Natural Resources*, 5(4), 1-14.
30. Mirsanjari, M., Abedian, S. 2018. Investigation of Demographic Change and its Impact on Land Use Changes (Case Study: Gorgan City). *Environmental Researches*, 8(16), 3-14.
31. Molashahi, S., Sadeghi, A., Kamyab, H. R., & Lotfi, Y. 2015. Detection of land use change and land cover (case study: Gorgan). *The first national conference on modern topics in Civil Engineering*, Bandar Gaz, Islamic Azad University of Bandar Gaz.
32. Mountrakis, G., Im, J., and Ogole, C. 2011. Support vector machines in remote sensing: A review. *ISPRS Journal of Photogrammetry and Remote Sensing*, 66(3): pp. 247-259.
33. Nadizadeh Shorabeh, S., Hamzeh, S., & Afshari, S. Y. 2017, Spatial-temporal monitoring of urban heat island changes and its relation to land use and land cover changes by integrating optical and thermal data from remote sensing. *Geomatics National Conference*.
34. Nemmour, H., and Chibani, Y. 2006. Multiple support vector machines for land cover change detection: An application for mapping urban extensions. *ISPRS Journal of Photogrammetry and Remote Sensing*, 61(2): pp. 125-133.
35. Otukey, J. R., and Blaschke, T. 2010. Land cover change assessment using decision trees, support vector machines and maximum likelihood classification algorithms. *International Journal of Applied Earth Observation and Geoinformation*, 12: pp. S27-S31.
36. Pal, S., and Ziaul, S. 2017. Detection of land use and land cover change and land surface temperature in English Bazar urban centre. *The Egyptian Journal of Remote Sensing and Space Science*, 20(1): pp. 125-145.
37. Qin, Z., Karnieli, A., and Berliner, P. 2001. A mono-window algorithm for retrieving land surface temperature from Landsat TM data and its application to the Israel-Egypt border region. *International Journal of Remote Sensing*, 22(18): pp. 3719-3746.
38. Rehman, Z. U., Kazmi, S. J. H., Khanum, F., and Samoon, Z. A. 2015. Analysis of Land Surface Temperature and NDVI Using Geo-Spatial Technique: A Case Study of Keti Bunder, Sindh, Pakistan. *Journal of Basic and Applied Sciences*, 11: pp. 514-527.

39. Rose, A. L., and Devadas., M. D. 2009. Analysis of land surface temperature and land use/land cover types using remote sensing imagery a case in Chennai city, India. The seventh International Conference on Urban Climate, 29 June - 3 July 2009, Yokohama, Japan.
40. Rumpf, T., Mahlein, A. K., Steiner, U., Oerke, E. C., Dehne, H. W., and Plümer, L. 2010. Early detection and classification of plant diseases with support vector machines based on hyperspectral reflectance. *Computers and Electronics in Agriculture*, 74(1): pp. 91-99.
41. Seto, K. C., Woodcock, C. E., Song, C., Huang, X., Lu, J., & Kaufmann, R. K. 2002. Monitoring land-use change in the Pearl River Delta using Landsat TM. *International Journal of Remote Sensing*, 23(10), 1985-2004.
42. Sobrino, J. A., Jiménez-Muñoz, J. C., and Paolini, L. 2004. Land surface temperature retrieval from LANDSAT TM 5. *Remote Sensing of Environment*, 90(4): pp. 434-440.
43. Sobrino, J. A., Jiménez-Muñoz, J. C., Sòria, G., Romaguera, M., Guanter, L., Moreno, J., and Martínez, P. 2008. Land surface emissivity retrieval from different VNIR and TIR sensors. *IEEE Transactions on Geoscience and Remote Sensing*, 46(2): pp. 316-327.
44. Srivastava, P. K., Majumdar, T. J., and Bhattacharya, A. K. 2009. Surface temperature estimation in Singhbhum Shear Zone of India using Landsat-7 ETM+ thermal infrared data. *Advances in space research*, 43(10): pp. 1563-1574.
45. United Nations. 2010. World urbanization prospects: The 2009 revision population database. <http://esa.un.org/unpd/wup/index.htm>.
46. Valor, E., and Caselles, V. 1996. Mapping land surface emissivity from NDVI: Application to European, African, and South American areas. *Remote Sensing of Environment*, 57(3): pp. 167-184.
47. Vlassova, L., Perez-Cabello, F., Nieto, H., Martín, P., Riaño, D., and de la Riva, J. 2014. Assessment of methods for land surface temperature retrieval from Landsat-5 TM images applicable to multiscale tree-grass ecosystem modeling. *Remote Sensing*, 6(5): pp. 4345-4368.
48. Wang, F., Qin, Z., Song, C., Tu, L., Karnieli, A., and Zhao, S. 2015. An improved mono-window algorithm for land surface temperature retrieval from Landsat 8 thermal infrared sensor data. *Remote Sensing*, 7(4): pp. 4268-4289.
49. Weng, Q., Liu, H., and Lu, D. 2007. Assessing the effects of land use and land cover patterns on thermal conditions using landscape metrics in city of Indianapolis, United States. *Urban ecosystems*, 10(2): pp. 203-219.
50. Wukelic, G. E., Gibbons, D. E., Martucci, L. M., and Foote, H. P. 1989. Radiometric calibration of Landsat Thematic Mapper thermal band. *Remote Sensing of Environment*, 28: pp. 339-347.
51. Xian, G., and Crane, M. 2006. An analysis of urban thermal characteristics and associated land cover in Tampa Bay and Las Vegas using Landsat satellite data. *Remote Sensing of Environment*, 104(2): pp. 147-156.
52. Yuan, F., Sawaya, K. E., Loeffelholz, B. C., & Bauer, M. E. 2005. Land cover classification and change analysis of the Twin Cities (Minnesota) Metropolitan Area by multitemporal Landsat remote sensing. *Remote Sensing of Environment*, 98(2-3), 317-328.
53. Zareie, S., Khosravi, H., and Nasiri, A. 2016. Derivation of land surface temperature from Landsat Thematic Mapper (TM) sensor data and analyzing relation between land use changes and surface temperature. Manuscript under review for journal *Solid Earth*, 22: pp. 1-8.
54. Zheng, B., Myint, S. W., Thenkabail, P. S., and Aggarwal, R. M. 2015. A support vector machine to identify irrigated crop types using time-series Landsat NDVI data. *International Journal of Applied Earth Observation and Geoinformation*, 34: pp. 103-112.

Effects of Development Projects on the Surrounding Urban Textures (Case Study: Shahrekord Twin Towers)

Yones Gholami^{1*}, Zahra Momenbeik²

1. Assistant Professor of Geography and Urban Planning, University of Kashan, Kashan, Iran

2. MA in Geography and Urban Planning, University of Kashan, Kashan, Iran

Received: 19 July 2018

Accepted: 22 December 2018

Extended abstract

Introduction

Urban development projects have special economic, social, and environmental effects on urban textures. Increasing high-rise building activities in recent years has raised concerns that can be led into serious problems and crises. Fundamental issues related to the high-rise buildings are including (1) economic effects: the impact of tall buildings on building density and land use and cost of construction of high-rise buildings. (2) social effects: a lack of consistency with adjacent cultures, lack of neighborhood life and community groups, ethnic, national and racial impacts of high-rise buildings, non-compliance with high population density and households, security issues, disaster problems such as earthquake, wind, fire, and identity issues. (3) Climate and environmental effects: air and environment pollution and also the light and the sun status.

Shahrekord Twin Towers, in Chaharmahal va Bakhtiari province, is under construction in the northwest Basij square on Shariati Street in an area of 6 thousand square meters. The project will be built on 25 floors. Locating the project in one of the most crowded city streets (Shariati), in the proximity to the largest and most important hospitals the health clinic, medical center, and sports complex faced the construction project with many problems. There is also intense discontent among residents. Thus, this study is to define present problems of the project and reduce its harmful effects in the future.

Methodology

This is an applied research with descriptive and analytical method. The data have been collected through the survey documents and field studies using a questionnaire and analyzed by SPSS and Amos software. The study population is all the residents in the surrounding areas of the project. According to the Cochran formula with unknown study population and 95% confidence level, the sample size in this study was 96. Reliability of the 96 completed questionnaires using Cronbach's alpha was confirmed in 0.767.

Results and conclusion

The present study is to evaluate the effects of the construction of Shahrekord Twin Towers. According to the study objectives, four hypotheses were examined. About every four hypotheses we answer the following questions: 1- Does the construction of the Twin Towers lead to economic changes in the region? 2- Does the construction of the Twin Towers lead to physical changes in the region? 3- Does the construction of the Twin Towers lead to environmental changes in the region? 4- How much the construction of the Twin Towers can lead to social changes in the region? The effectiveness of each variable was tested using

* Corresponding Author, Email: yonesgholami@ymail.com

Tel: +989155339370

structural equation modeling and Amos software. The outcome variables showed that p values for the variables are less than 0.05, it is meaningful and acceptable. Therefore, the hypotheses of this research are confirmed. We conclude that even in the earlier stages of the project before its completion, it leads to higher prices of land and property in surrounding districts, decline in production, and dissatisfaction of business people due to lower sales. Implementation of the project will also lead to the loss of esthetic values in urban landscape in the region. It also greatly reduced available lands around the region, particularly for hospital and made heavy traffic on the busy streets. However, this project at the current location improved the renewal and improvement of the abandoned areas in the vicinity. Construction of the project at the current location greatly increased air pollution, destroying the image of the city, leading to a lot of pollution for residents. Nevertheless, construction of the project has positive aspects. It increased tourism in the region and reduced migration to big cities because of its features.

Conclusion

The Twin Towers project is now under construction with unsuitable site selection, without planning and regarding urban design. The project is enormous heterogeneity within the context of a small town. A heterogeneous glass with high-rise building in the middle of a small town make the surrounding buildings look like slums, while one of the reasons for building this tower is to be a municipal and provincial symbol.

It can be suggested to supply the required infrastructure in the region, improve pathways development of urban transportation networks to reduce traffic load, finance the residents of the project due to financial problems, predict how to design garbage collection and reduce environmental impacts, forecast pedestrian access to the Tower, supply the appropriate number of parking around the tower in a suitable location for outside parking, strengthen the role of Shahrekord in the tourism and hospitality services with an emphasis on urban capacities.

Keywords: Shahrekord Twin Towers, environmental effects, social effects, physical effects, Amos.

References

1. Amin Zadeh, B., 1997, *Tall Buildings and the Urban Environment*, Proceedings of the First National Congress of Tall Buildings on Iran, University of Science and Technology, Iran, PP. 25-29. (In Persian)
2. _____, 1997, *Physical Impacts or Volume of a Tall Building*, High-Rise Buildings in the Proceedings of the Conference, , Vol. 1, University of Science and Technology, Iran, PP. 23-54. (In Persian)
3. Azizi, M., 1997, Congestion on Urban Projects: Theoretical Perspectives in Understanding the Problem, Causes and Effects, *Journal of Fine Arts*, College of Fine Arts, Tehran University, The Second Issue, PP. 32-24. (In Persian)
4. Azizi, M., 1998, Evaluation of the Spatial Effects of Building a Tower in Tehran; Farmanieh and Kamranieh Neighborhoods, *Journal of Fine Arts*, Vol. 1, No. 4 and 5, PP 33-46. (In Persian)
5. Azizi, M., and Malekmohammad Nejad, S., 2007, *A Comparative Study of Two Residential Complex Pattern (Conventional and High)*, *Fine Arts Magazine*, Vol. 7, No. 32, PP. 27-38. (In Persian)
6. Burton, E., 2000, *The Compact City: Just or Just Compact*, A Preliminary Analysis, *Urban Studies*, University of Glasgow. (In Persian)
7. Deputy Municipal Planning and Research of Shahrekord, 2012, *Shahrekord Statistics of The Year 1391*, Vol. Land, Water and Air, PP. 11-25. (In Persian)
8. Farhoodi, R., and Mohammadi, A., 2001, *The Impact of Tall Buildings on Urban Land Case Study Regions of 1, 2 and 3 in Tehran*, *Journal of Geographical Studies*, Vol. 10, No. 41, PP. 71-82. (In Persian)

9. Ghomami, M., 1992, Considerations on the Policy of Increasing Density in Cities, Abadi Magazine, Vol. 2, No. 5, PP. 54-57. (In Persian)
10. Hyraskar, J. k., 1997, *In the Introduction to Urban Planning*, Translated by Mohammad Soleimani and Colleagues, University of Teacher Education. (In Persian)
11. Manaam, M., and Zarabian, F., 2007, Physical and Spatial Effects of High Rise Buildings in the City (Case Study of Hamadan), Municipalities Magazine, Vol. 8, No. 82, PP. 102-108. (In Persian)
12. Mir Haydar, M., and Kalantari, I., 1997, *High-Rise Buildings: Some Basic Criteria*, Towns Magazine, Vol. 5, No. 18, PP. 42-46. (In Persian)
13. Mousavi, M., 2014, Mehr News Agency Reported On. (In Persian)
14. Najafi Shahroudi, M., 2012, The Effect of the Construction of High-Rise Buildings on Urban Land (Case Study Ghaemshahr), Master's Thesis, Payam Noor University of Sary. (In Persian)
15. Nasri, M., 1995, *Housing Vertical, Horizontal Culture*, Proceedings of the Seminar on the Development of Housing Policies in Iran, p. 207, Tehran, Iran. (In Persian)
16. Sadooghian Zadeh, M., 1991, *High-Rise Building and Urban Space*, Urban Planning Master's Thesis, Faculty of Fine Arts, Tehran University, Tehran. (In Persian)
17. Shahriari, A., 1997, *Firefighters Can Cope with Fire Towers*, Proceedings of the First National Congress of Tall Buildings in Iran, , Vol. 1, Iran University of Science and Technology, PP. 271-274. (In Persian)
18. Shohoodi, S., 1995, Tall Building in Tehran and Need Special Regulations and to Prevent Its Damaging Effects, Journal of Architecture, Vol. 6, No. 6 and No. 7, PP. 109-117. (In Persian)
19. Taheri, F. et al., 1996, *High-Rise Building Issues*, Selected Latest Book of Wolfgang Schuler and Articles of the Fourth World Conference on Tall Buildings (1990 First Edition), Tehran, Publication Center for Urban and Architectural Studies and Research. (In Persian)
20. Vahidi, M., 1991, The Effect of Height on the Cost of Construction and Urban Land Use, Abadi Magazine, Vol. 2, No. 7, PP. 60-65. (In Persian)
21. Yuen, B., 2005, *Romancing the Highrise in Singapore*, Cities, Vol. 22, No. 1, PP. 3-13. (In Persian)
22. Zarivani, M. R., 1993, *Leaving Aside the City Cannot Build a Modern City*, Abadi Journal, Vol. 4, No. 18, PP. 28-31. (In Persian)

Investigation of Privacy of Houses in Line with Islamic-Iranian Life Style (Case Study: Old and New Texture of Yazd City)

Hasan Hekmatnia*

Associate Professor of Geography and Urban Planning, Payam Noor University, Iran

Received: 08 November 2017 Accepted: 11 July 2018

Extended abstract

Introduction

One of the most important principles in the traditional Iranian architecture, especially after Islam, is the principle of confidentiality. This is the best applied in all small buildings and large public buildings from residential buildings to public spaces. The aim of this study is to measure the level of confidentiality in old and new home (houses) in Yazd and compare their comparative approach in order to formulate strategies for moving towards the pattern of Islamic life in urban areas. Today, the growth of urbanization and industrialization of urban communities and the expansion of apartment life has led communities to quickly move away from beliefs and traditions. The growth of luxuries and decorations in urban houses of the world became ever more apparent in communities away from adherence to the principles in the patterns of housing of the traditional tissues of cities under the title of "privacy", "no aristocracy", and so on.

Methodology

According to the research objectives and the components, the type of research is applied and its method is descriptive-analytic. Indicators of research are house forms in old and new textures. In this regard, 15 home forms have been selected based on random sampling. In order to analyze the data to find significant relationships among variables, we have used inferential statistics such as multi-regression coefficient, analysis of variance, and strategic planning of SWOT.

Results and discussion

The study of these principles of Islamic cities in the old neighborhoods of Yazd shows that the same facades of houses, sanctity and veil, elements designed in buildings such as oars, cries, corridors and high walls, three major private, semi-private and public spaces can represent the confidentiality. On the contrary, in the new neighborhoods of the city, the semi-private space has been lost and the residents have communicated directly with the public space. This has led to the disappearance of the principle of privacy in homes. But modern neighborhoods are influenced by modern architectures, such as observing the height of buildings, the lack of aristocracy of houses, the consideration of privacy spaces, and hierarchical observance have not been taken into consideration. In the Yazd Architecture, hanging and hijab is considered a principle. The privacy of the family has a special respect. Houses with veils and private realms are far from audiovisual rape. No original Yazd home can be found with non-Islamic view. An interesting point in designing the doors of the traditional houses is identification of the gender of the people by the placement of two cubes with different sounds of the Bam (a man named Kobe-clone on the left) and below (the female-ring-ring on the right). This has indicated the

* Corresponding Author, Email: ehsanhekmatnia@gmail.com

Tel: +989133517578

importance of confinement from the religious dimension. Given the level of confinement of houses in the old texture and the new Yazd texture area, it can be said that most of the buildings in the old texture have the principles of spatial hierarchy, because most houses have a certain height and also penthouses, corridors, and central courtyards. Thus, you can easily observe the atmosphere of strict confidentiality. However, the new neighborhoods of Yazd, as newly built neighborhoods, are also on the path to urban development. They have been under the influence of modern architecture elements such as height of buildings, the areas of confidentiality, and the hierarchy. The streets of these neighborhoods are multi-storey houses next to one-story houses so that if you look out the window, you can see all the neighbor's courtyards. If the stairway windows on the stairs of the apartments look outside, in addition to the courtyard of the neighbors' house, room space is also visible.

Conclusion

The results show that in most of the houses of the old textures in Yazd, all the principles of confidentiality have been taken into consideration, so that the main private, semi-private and public spaces are clearly appeared. These principles are influenced by the residential patterns of foreigners in new neighborhoods. These houses and the semi-private spaces are not affected by outsourcing architecture. The results of the regression coefficient show a direct and strong correlation between the patterns of new homes and the respect of the confinements of the houses relative to each other. In spite of not considering the principles of Islamic Housing in the new textures of Yazd, the visual, audio, accessibility, smell and social interactions of residential units have been greatly forgotten in the patterns of new homes. This situation, in the SWOT analysis model, expressed the clarity. In this regard, the most important strategies in this field are the enforcement of the guarantee of the principle for confidentiality in new construction, the hierarchy of spatial inputs of homes, increase in the interior spaces per capita in the houses in new structures.

Keywords: confidentiality, space hierarchy, lifestyle, Islamic cities, Yazd City.

References

1. Altman, I., Vinsel, A., & Brown, B. B. (1981). Dialectic Conceptions in Social Psychology: An Application and Privacy Regulation. *Advances in Experimental Social Psychology*, 14
2. Arjmandi, Ibrahim (2012), Liberal Architecture; Islamic Architectural Criticism; Asia Newspaper; Cultural Section; Code 120391
3. Balkhari, Hasan (2005), Under the Shadow of Meaning, The Conceptual and Spiritual Identity of the Islamic City, Attached to the Newspaper Hamshahri, No. 77
4. Barghi, Hamid and Ahmad Taghdisi (2008), a Study on the Formation of Islamic Cities and Its Features, the First Islamic Ideal Conference, Isfahan University.
5. Bomanian, Mohammad Reza, Nasim Gholami Rostam and Janet Rahmat Panah (2010), Identity Elements in the Traditional Iranian House of Architecture "A Case Study of the House of Rasoolian Yazd", *Islamic Art Studies Quarterly journal*, No. 13.
6. Ebrahimi, Gholamreza, Hossein Soltanzadeh and Ghazal Karamati (2017), A reflection of Western culture in the evolution of lifestyle and architecture of late Qajar houses in Hamadan, *Bagh-e-Noze journal*, vol. 14, No. 47
7. Emad, Seyyed Ali and Abbasali Sanaie Rad (2008), Components of Islamic city, The first conference of Islamic ideal, Isfahan University.
8. Erzhem, Mahmoud and Somayeh Khani (2012), The role of privacy in the architecture of the Iranian house, *Quarterly Journal of Iranian-Islamic Studies*, No. 7.
9. Fazel Ghaneh, Hamid (2012), an Introduction to Islamic Lifestyle, *Special Periodicals on Social Studies and Media*, No. 2.

10. Gharaei, F. M. N., & Rafieian, M. (2013), investigate Cross-Cultural Differences in Personal Space: Kurdish and Northern women in Iran. *Journal of Asian Behavioral Studies* , 3(8)
11. Golmi Zareh Ghomshei, Gholam Reza (2004), *Housing, Relaxation and Comfort*, Pasdaran Islamic Edition, No. 275.
12. Heidari, Ali Akbar, Issa Ghassemian Asl and Mariam Kayani (2017), *Spatial Analysis of Traditional Iranian Houses Using Synthesis Method Case Study Comparison of Houses of Yazd, Kashan and Isfahan*, *Iranian Journal of Iranian Cities*, vol. 7, No. 28
13. Hekmatnia, Hassan and Mirnajaf Mousavi (2013), *Application of Model in Geography with Emphasis on Urban and Regional Planning*, New Science Publishing, Yazd
14. Ismaili Moghadam, Mehrnoush (2014), *Investigating the presence of natural light and privacy of the interior spaces of the inner-home houses of Yazd*, the International Congress of Religious Culture and Religion, the Center for Cultural Engineering of the General Culture Council of Bushehr Province
15. Kelini, Abi Jafar Mohammad ebneyaghub (1407), *Kafi Principles*, Vol. 5 and 6, Translation Mohammad Bagher Kamarei (1996), Oswah Publications, Qom.
16. Kumarahi, Mohammad Baqir (1998), *Khasal Sheikh Sadugh*, written by Baboudi Qomi, Abu Jafar Mohammad bin Ali ibn Husayn bin, book publishing, Tehran.
17. Mansouri, Seyed Amir (2013), *Space Organization in Islamic city of Iran*, *East Asian Arts and Civilization Quarterly*, First Year, No. 1.
18. Mousavi Hamedani, Mohammad Bagher (1987), *Tahrir Al-Wassilah by Seyyed Rouhollah Mostafavi Mousavi Khomeini*, Publisher Al-Alibit institute, Qom
19. Naghizadeh, Mohammad (2012), *Thoughts on Understanding the Foundations of Islamic-Iranian Housing*, *Moon Art*, No. 170
20. Neyri Fallah, Siamak, Akram Khalili, Mohammad Tajeddin bin Mohammad Sadeqi (2014), *Confidentiality layers in traditional Iranian homes, symbol of religious model in family life*, International Congress of Culture and Religious Thought, Center for Cultural Engineering Council General Culture of Bushehr Province
21. Nouri al-tabasi, Hussein ibn Muhammad Taqi (1985), *Mustardak al-Wasael and Mastanatat al-Masaleh*, Arabic language, publisher of the Al-Alibit institute (AS), Fallah al-Tatar, Qom.
22. Poor Ahmad, Ahmad and Sirius Mousavi (2010), *Social Nature of Islamic City*, *Quarterly Journal of Iranian-Islamic Studies journal*, No. 2.
23. Rapoport, A. (2007), *Some Further Thoughts on Culture and Environment*, *Archnet-IJAR, International Journal of Architectural Research*, March 2008. 2(1).
24. Razalia, Noorul Huda Mohd and Talibb, Anuar (2013), *Aspects of Privacy in Muslim Malay Traditional Dwelling Interiors in Melaka*, *Procedia - Social and Behavioral Sciences*, 105, Available online at www.sciencedirect.com
25. Salehi, Atefeh and Mehdi Farghighi (2010), *Investigating the Psychological and Physical Relief Effective in the Social Stability of Residential Areas*, National Contemporary Architecture and Contemporary Urbanism Conference, Islamic Azad University, Beyaza Branch
26. Shokrani, Reza (2008), *Islamic Culture Engineering in Components and Features of Urbanism*, First Conference of Islamic Ideal University, Isfahan University.
27. Zarabi Asghar, Younes Gholami Bemorgh and Masoud Hajbandeh Afousi (2008), *A Historical Study of the Physical Formation of Islamic Towns with Emphasis on Iran*, The First Islamic Ideal Conference, Isfahan University.

Spatial Pattern and Related Factors Affecting the Contemporary Growing Urbanism in Iran (Emphasizing on Development and Livelihood Indices)

Mostafa Mirabadi^{1*}, Sadegh Besharatifar², Ahmad Karimi³

1. PhD of Geography and Urban Planning, Islamic Azad University, Tehran Research and Sciences Branch, Iran
2. Assistant Professor of Geography and Urban Planning, Islamic Azad University, Mahshahr Branch, Iran
3. Lecturer in Geography, Payam Noor University, Mahabad Center, Iran

Received: 13 April 2017 Accepted: 13 June 2018

Extended abstract

Introduction

The growing urbanization and demographic imbalance between urban and rural areas of the country is not a new simple topic. Although there is a high correlation between urbanization and human development, but its quick growth without planning and policy making would have some consequences. Therefore, a comprehensive recognition and analysis of the progress, dimensions and the factors related to the urbanization is the first and critical condition to make decisions and plans. Urbanization system and its fast growth in the developing countries has caused a massive influx into the cities and the emergence of services, broad marginalization, hidden unemployment and also the rise of duality in the social networks of the immigrants in the cities. The cities of underdeveloped countries are hybrid institutions emerged as a result of two reactions: Firstly, reaction to the division of labour as a local phenomenon and secondly, reaction to the integration in the global economy. In Iran, the explosive growth of the urban population and its real quick growth happened after the 1967. This is the reflection of the land reform and national investments and the rapid growth of the urban investments. In 2012, the urban population of Iran has exceeded over two-thirds. Urbanization is affected by many various factors such as economic, social, and cultural activities and livelihood, infrastructural, and services status of the societies. Therefore, the presented research is conducted with the purpose of recognition of the current urbanization pattern of the country based on the spatial concentration and autocorrelation and also investigating the effects.

Methodology

The presented research is carried out with descriptive-analytical method and correlation and also based on the document studies. Among the used documental resources are Thematic Reports of the Statistical Center of Iran (2012), Statistical Reports of the Ministry of Sport and Youth (2012), The Reports of Department of Economic Studies of the Keshavarzi Bank (2012), and Agricultural Statistics of the Ministry of the Agriculture (2013). Therefore, the Moran and Gary models are used in the ArcGIS to evaluate the urbanization pattern in the country. The correlation coefficient of Pearson is utilized in the SPSS to evaluate the relation between urbanization with various industrial economic, social, cultural, infrastructural, services and agricultural development factors. The coefficient of dispersion is used to evaluate the difference

* Corresponding Author, Email: mirabadi1985@gmail.com

in the growth of urbanization between the states of the country during the period from 1986 to 2012.

Results and discussions

The findings of the Moran and Gary models showed that the spatial pattern of urbanization in the country during the period from 1996 to 2012 was concentrated and clustered in the country. It was also found that the urbanization pattern corresponds to the pattern of industrial development in the country.

- The results of the growing the urbanization during the period from 1986 to 2012 shows that in the majority of cases, the provinces have experienced the rapid growth of urbanization almost equally. The majority of their population lives in the cities nowadays.

- The urbanization pattern has a strong relationship with the pattern of distribution of industrial centers

- Generally, the growth of the urbanization has a direct relation with the promotion of economic indicators, especially income indicator.

- Urbanization and infrastructural indicators have a significant relation with a high compatibility. That is in a way that necessary infrastructures are considerably provided in the cities.

- Growth and development of services and facilities does not comply with the urbanization growth. The speed of urbanization has been much more than the speed of the urbanism.

- Urbanization has caused a promotion in the level of education and expertise. It has been cleared that the most important reason for the rapid urban population growth is the internal migrations (inter-provincial), creation of new urban areas (Becoming the countryside to the cities) and also external migrations (Interstate). These conditions have notable effects on the urbanization, except in metropolises such as Tehran.

- The health and therapeutic indicators have increased parallel to the urbanization growth and it has faced the urbanization with numerous problems.

- Unexpectedly, even some of the agricultural development indicators such as the amount of agricultural production, beneficiaries with agricultural education and agricultural companies have a significant and meaningful relation with the urbanization. One of the important reasons for the increasing amount of agricultural production in the more-urbanized provinces is the need of urban population centers (especially metropolises) for more agricultural products and also the existence of fertile lands near the population centers. In addition, proximity to urban population centers could influence the creation and growth of the expertise and organizational agricultural dimensions.

Conclusion

The current urbanization pattern in the country is cluster-like and the spatial concentration and autocorrelation is also clear in a way that the urbanite clusters of the country are located in the northern and central parts. In addition, neighboring provinces in the southern half are the lower zone of urbanization. Factors like the existence of the important industrial centers of the country and also the poor environmental potential in the central areas of Iran are among the important reasons of such urbanization pattern in the country. Generally, it can be said that despite of the problems and significant deficiencies in the field of health, infrastructure, and other services, urbanization is still welcomed warmly. Agricultural development and even the promotion of living conditions of villagers could not satisfy their interests in better life styles in the countryside.

Keywords: urbanism, spatial pattern, urbanism growth, urbanism growth factors, Iran.

References

1. Agricultural Mechanization Database (2011), available at <http://agmdc.ir>.

2. Agricultural Statistics (2014), Ministry of Agricultural- Jihad, Deputy of Planning and Economics, Center for Information Technology, Vol. 1 and 2, Tehran, Ministry of Agricultural- Jihad Publications.
3. Anamoradnezhad, Rahim Bardi (2016), Analysis of the spatial planning and urban development pattern in Iran, Journal of Research and Planning, Vol. 7, Issue 2, pp. 93-112.
4. Arriaga, Eduardo (1999), Population Analysis with Microcomputers, Translated by Amin mozaffar, F, Tabriz, Ahrar publications.
5. Dadashpoor, Hashem, Rostami, Faramarz and Bahram Alizadeh (2014), Analysis of Justice Distribution of Urban Services and the their Spatial Distribution Pattern in Hamadan City, Journal of Urban Studies, Vol. 3, Issue 12, pp. 5-18.
6. Esmaeelpour, Najma., Dasta, Farzaneh and Samaneh Iraj (2015), Analysis of Spatial Distribution of Public Libraries in the City of Yazd, Journal of Geography and Planinig, Vol. 19, Issue 52, pp. 1-24.
7. Farokh, Hesamian, Etemad, Giti and Mohammad Reza Haeri (2009), Urbanism in Iran, Tehran, Agah Publications.
8. Gilbert, Alan and Josef Gugler (1994), Cities, poverty and development: World Third the in Urbanization, Translate by Karimi Naseri, Parviz, Tehran, Publications of Tehran Municipality's Communication and International Affairs Center.
9. Hosseini, Sayyed Ahmad, Ebrahimzadeh, Eisa, Rafieian, Mojtaba, Midiri, Mahdi and Mohsen Ahadnejad Roshti (2016), Monitoring the dynamics of urbanization in contemporary Iran using multi-temporal images DMSP / OLS, Journal of Geographical Data (SEPEHR), VOL. 24, Issue 96, pp. 21-37.
10. Iranian Statistics Center (2011), Iran Statistical Yearbook, available at <https://salnameh.sci.org.ir>.
11. Navabakhsh, Mehrdad and Soroosh Fathi (2008), The Development of Urbanization in Iran (With a focus on socioeconomic activities), Journal of Terriotry, VOL. 4, Issue 15, pp. 3-14.
12. Nazarian, Asghar (2001), Future Cities: The Human Holocaust Midpoint or the Cultural Interaction Stand, Journal of Geographic Space, Vol. 1, Issue 3, pp. 1-22.
13. Nazarian, Asghar (2011), Urban Geography of Iran, Tehran, Publication of Payam Noor University.
14. Nazarian, Asghar (2012), Dynamics of Iran's urban systems, Tehran, Mobtakeran Publications.
15. Poor Afkari , Nasrollah, Kalantari, Samad and Asadollah Naghdi (2001), Urbanism development and its implications (with emphasis on Iran), Journal of Population, Vol. 10, Issue 39 and 40, pp. 1-34.
16. Potter, Robert B and Sally lioyd Evans (2005), The city in the developing world, Translated by Irandoost, Kiomars, Dehghan, Mahdi and Mitra Ahmadi, Tehran, Publications of the Organization of Municipalities and Daisies of the Country.
17. Sarvar, Rahim and Mahdi Amini (2013), Social Analysis Guide of the city, Tehran, Teesa Publication.
18. Shakooie, Hossein (2011), New Perspectives in Urban Geographic, Tehran, Samt Publication.
19. Statistical Reports of the Ministry of Sports and Youth (2011), available at <http://msy.gov.ir/index.php>.
20. Taghdisi, Ahmad and Mohammad Ali SHapoorabadi (2012), Migration and aging of the rural population of Iran: The challenge for rural sustainable development, journal of Geographical Research, Vol. 27, Issue 1, pp. 133-164.

Selection of Optimal Zones for Construction of Public Parking Lots in Ilam City

Pakzad Azadkhani^{1*}, Ghorban Heidarbeigi²

1. Assistant Professor of Geography and Urban Planning, Bakhtar University of Ilam, Ilam, Iran

2. MA Graduate of Geography and Urban Planning, Bakhtar University of Ilam, Ilam, Iran

Received: 03 March 2017 Accepted: 24 June 2018

Expanded abstract

Introduction

Selection of parking lots is influenced by a number of various criteria and variables in traditional models. This is while in the GIS environment, we can utilize the selected criteria in the form of various layers for selecting the optimal zones for parking lots. Using the Geographical Information System (GIS), we can apply the new changes immediately on the obtained model. Ilam City is one of those cities have a very limited potential on urban development surrounded by mountains from three geographical directions. The necessity to correctly select optimal locations for the construction of parking lots in Ilam City is very significant for the city. Thus, the aim of the current study is to analyze and select the optimal zones for the construction of public parking lots in Ilam City. This study is trying to answer the following questions: (1) what are the criteria for site selection for the construction of public parking lots in Ilam City? (2) What are the most suitable zones for the construction of parking lots in Ilam City based on site selection standard and criteria?

Methodology

The scheme used in the current study is a fundamental applicable methodology. The statistical population of the study includes all the university professors and experts in the field of urban management, among which 40 participants were selected as the sample of the study. Based on the consensus of six groups of experts, the specific criteria for the selection of the best sites for the construction of parking lots were calculated using stratified Intraclass Correlation Coefficient (ICC) in Expert Choice software. In this scheme, the higher the coefficient of a selected site is, the more optimal the site will be. The identified criteria were reviewed by the experts. Cronbach's Alpha coefficients were calculated as 0.706 and 0.950 which indicate the acceptable correlation and compatibility among the experts' opinions, respectively. Finally, the integration of opinions was carried out using the average method. Pearson's test and the T-test in LISREL software were used to calculate the relationship between the variables. We combined fuzzy AHP and GIS to determine suitable zones for construction of public parking lots. After completing the steps and the integration of layers, the status quo was analyzed, suitable zones were obtained, and the most optimal sites for the construction of public parking lots were selected.

Results and discussion

Based on the opinions of the experts, eight criteria were selected for site selection of public parking lots in Ilam City. These criteria are as following: availability of funds, public access,

* Corresponding Author, Email: pakzad540azad@gmail.com

size of the area for parking, compatibility with urban high-traffic routes, landuse of the site, sales and revenue, administrative bureaucracy, and other sections. The results of the correlation analyses show that there is a significant relationship between the selected criteria and the selection of the optimal sites for the construction of parking lots. Another result of the current study was the identification of the zones suitable for the construction of public parking lots. Through combining the fuzzy Analytical Hierarchy Process (AHP) with digital layers, and finally by analyzing the sensitivity of each one of the sites, only two sites were determined as the most optimal locations for the construction of urban parking lots in Ilam City. These two sites are located near Payam-e-Nour Intersection and Saadi Intersection. This is because of spatial conditions, geographical location, access level, demand level, effectiveness, and impacts on above-mentioned trends. These locations have the highest potential for development and expansion.

Conclusions

The selection of the two above-mentioned locations as the appropriate zones for construction of the parking lots is important because Saadi Intersection is located in the oldest physical texture of the city and it is in fact the main core of Ilam City. Therefore, urban applications are not compatible with the infrastructural conditions of this area to create traffic congestions in this zone. Payam-e-Nour Intersection has also with the problems of traffic congestion at all times, particularly at the beginning of the education in fall, due to the presence of multiple educational centers and the high concentration of school and university students as well as lack of a suitable parking lot. Therefore, based on the above-mentioned considerations, due to the high interference of functionalities and the high levels of public traffic in these two sites during day, the construction of parking lots in these two sites is highly required. Therefore, in order to prevent disruptions and the formation of traffic congestion points as well as the well-being of citizens, public parking lots should be built in these two optimal sites.

Keywords: public parking lots, site selection, AHP, Ilam City.

References

1. Ahmadi Baseri, Mazaher; Mokhtari Malek Abadi, Reza; Momeni, Mahdi, (2012) Application of New Technologies in Planning and Site Selection of Public Parking Lots in Isfahan City (Case Study: Zone Five), *Journal of Geography and Environmental Studies*, 1 (4), p. 79-99.
2. Aliabadi, Zaynab; Nastaran, Mahin; Pirani, Farzaneh; Sheikhzadeh, Farzaneh, (2017) Site Selection of Fire Fighting Stations Using a Combination of AHP and GIS, Case Study: Zone 3 of Isfahan City, *Scientific and Research Periodical Journal of Geographical Information (Sepehr)*, 26 (103), p. 123-136
3. Azadkhani, Pakzad; Abdollahipour, Zahra; Tahmasbi Kia, Zahra, (2015) The Legend of Parking Lots in Iranian Cities, The Eleventh International Conference on Civil Engineering and Stable Development, Science and Industrial University of Iran, Tehran.
4. Caicedo, F., (2010), Real-Time Parking Information Management to Reduce Search Time, Vehicle Displacement and Emissions, *Transportation Research Part D* 15 (2010), 228–234.
5. Ghanbari, Hussein; Nobakht Haghighi, Shahab; Mohammadi, Maryam (2017) Site Selection of Vertical Parking Lots in Rasht City, *Scientific and Research Journal of Urban Ecology Studies*, 8 (1), Serial No. 15, p. 41-62.
6. Ghanbari, Abolfazl; Saleki, Muhammad Ali; Ranjbarnia, Behzad, (2013) Optimal Site Selection of Public Parking Lots in C.B.D. of Iranian Cities (Case Study: Commercial and Historical Center of Tabriz City), *Journal of Geographical and Urban Planning Studies*, 1 (1), p. 97-113
7. Grant, J., (2007), Encouraging Mixed Use in Practice. Incentives, Regulations, and Plans: The Role of States and Nation-states in Smart Growth Planning, Edited by Gerrit-Jan Knaap, Huibert, A. Haccoü, Kelly J. Clifton and John W. Frece, Published by Edward Elgar Publishing.

8. Hawerton, C, (2006), GIS Network Analysis of Fire Department Response Time Dallas, Texa fall.
9. Hikichi, Lynda, (2003), New urbanism and transportation, CE 790, University of Wisconsin-Milwaukee.
10. Izadi Laybidi, Mohtaram; Nobakht Haghighi, Shahab; Mokhtari Malekabadi, Reza, (2012) Evaluating the State of Parking Lots in Zone Two of Rasht City, *Journal of Geography and Environmental Studies*, 1 (4), p. 7-18.
11. James, H. , Huang, Q. , Wang, Q. , Zhou, B. , & Li, J. (2013). Hazardous waste generation and management in China: A review. *J Hazard Mater*, 158 (2–3), 221-227 .
12. Karimi, V.; Ebadi, H.; Ahmadi, S.; (2009). Modeling of Parking Site Selection By Using GIS With Emphasis On Weighting And Integrating Layers, *Journal of Faculty of Engineering (University of Tabriz)*, Vol. 38 (Winter), PP: 11-21.
13. Khakpour, Baratali; Motamedi, Muhammad; Enfejari, Hussein (2010) Site Selection of Zones Appropriate for Construction of Public Urban Parking Lots Using Fuzzy GIS, Case Study: Medium Western Zone of Mashhad City, *The Second Conference on Urban Planning and Management*.
14. Maleki, Saeed; Zarei, Reza, (2012) Evaluation and Site Selection of Vertical Parking Lots using AHP Model, Case Study: Ahvaz City, *Journal of Geography and Environmental Studies*, 1 (3), p. 60-62.
15. National Statistical Center of Iran, (2016) General Population and Housing Census.
16. Pourahmad, Ahmad; Habibi, Kyumars; Muhammad Zahraee, Sajad; Nazari Adli, Saeed, (2007) Using Fuzzy Algorithms and GIS for Site Selection of Urban Facilities (Case Study: Landfill Location of the City), *Journal of Environmental Studies*, 33 (42), p. 31-42.
17. Pour Mohammadi, Muhammad Reza, (2016), *Urban Land Use*, 12th Edition, Tehran: SAMT Publications
18. Rodier, C.J. Shahenn, S.A., (2010), Transit- Based Smart Parking: An evaluation of the San Francisco Bay area field test. *Transportation Research Part C* 18, (2010), 225-233.
19. Roshandel, Taktam; Akbar, Elaheh, (2014) Organizing the Location of Public Parking Lots in Sabzevar City Using GIS, *The Sixth National Conference on Urban Planning and Management with an Emphasis on Components of an Islamic City*, November 12-13, Mashhad City
20. Saraee, Muhammad Hussein; Ghanei Bafghi, Ruhollah, (2011) Evaluation and Site Selection of Public Parking Lots in Downtown Yazd, *Journal of Geographical Perspective (Studies in Humanities)*, 6 (15), p. 70-88
21. Sarvar, Rahim; Yahyapour, Iraj, (2014), Vertical Parking Lots Based on Analytical Hierarchy Process (AHP) Model and Boolean Logic (Case Study: Zone 15 of Tehran City), *Sepehr Journal*, 23 (90), p. 80-88
22. Shams, Majid; Divsalar, Asadollah; Sheikh A'zami, Ali, (2011) Role of Ecological Approach in Stable Development of Coastal Cities (Case Study: Nour City), *Periodical Journal of Environmental Survey*, No. 17, p. 63-86.
23. Xun, Y.N., Xiao, D.M., Xiao, M.X., (2013), Location Model of Public Parking Facilities Basing on the Optimal Total Social Cost, *Trans Tech Publications*, Switzerland, 175- 178.
24. Zareh Pisheh, Narges; Azani, Mehri; Ghaed Rahmati, Safar; Setayeshi, Hasan, (2012), Site Selection of Public Parking Lots with Regards to Stable Urban Development Using AHP Model (Case Study: Neyriz City), *Journal of Geography and Environmental Studies*, 1 (3), p. 87-105
25. Zayari, Keramatollah, (2007), *Planning for Urban Land Usage*, Third Edition, Yazd: Publications of Yazd University
26. Zarabi, Asghar; Saberi, Hamid; Mohammadi, Jamal; Vorasi, Hamid Reza, (2011), Spatial Analysis of Smart Growth Indicators (Case Study: Isfahan), *Journal of Human Geography Studies*, 43 (77), p. 1-17.
27. Zheng, I. , Massard, G. , & Agarwal, A., (2008), Waste management policies for industrial symbiosis development: case studies in European countries. *Journal of Cleaner Production*, 18 (8), 815-822.