

Assessing the Social Sustainability of Housing in Informal Settlements (Case Study: Ardabil City)

Mahdi Mohammadi Sarin Dizaj ^{1⊠}, Shahram Salamati Gabaloo², Leyla Mohajeri Naeemi ³

- 2. PhD student in Geography and Urban Planning, University of Tabriz, Tabriz, Iran. E-mail: Salamati65@gmail.com
- 3. Master of Geography and Urban Planning Urban Improvement and Renovation, Payame Noor University, Tabriz, Iran. E-mail: mohajeri047@gmail.com



How to Cite: Mohammadi Sarin Dizaj, M; Salamati Gabaloo, SH & Mohajeri Naeemi, L. (2023). Assessing the Social Sustainability of Housing in Informal Settlements (Case Study: Ardabil City). *Geography and Territorial Spatial Arrangement*, 13 (46), 115-120.

DOI: http://dx.doi.org/ 10.22111/GAIJ.2023.41846.3010

Article type: Research Article

Received: 11/05/2022 Received in revised form: 14/08/2022 Accepted: 21/11/2022 Publisher online: 11/03/2023



Keywords:

Social Sustainability, Housing, Informal Settlements, Multi-Criteria Decision Making, Ardabil..



© the Author(s).

Publisher: University of Sistan and Baluchestan

ABSTRACT

With the increase of social inequalities in today's cities, social challenges have become the most important issue in stabilizing and one of the biggest housing threats. Among the components of sustainability in urban settlements, the social sustainability of housing is one of the most important concerns of managers and urban decision makers. In the present study, considering the importance of the above variable, the degree of social stability of housing in informal settlements of Ardabil has been evaluated. The city of Ardabil, due to irregular rural-urban migration, has experienced increasing physical and population growth in the last three decades, and this has led to the formation of suburbs around the city to attract additional population, these neighborhoods in the field of social sustainability of housing And there are problems. Therefore, the present study aims to investigate the social sustainability of housing in informal settlements in Ardabil. The present study is an applied type and in terms of the nature of the descriptive-analytical method, which is followed by the survey method and questionnaire tools and Gis software to explain the evaluation components. In this study, to analyze, evaluate and rank the studied neighborhoods in terms of social sustainability of housing, multi-criteria decision-making models of TOPSIS, VICOR, SAW and Copeland integration model have been used. According to the findings, the results showed that based on the dimensions analyzed in the evaluation of social sustainability of housing in informal neighborhoods of Ardabil, Iranabad neighborhood (Jane Kennedy) has the highest rate of housing instability and Salmanabad neighborhood has the lowest rate of housing instability compared to other neighborhoods. Are studied in this study.

Extended Abstract

Introduction

One of the categories that has attracted everyone's attention in urban planning is the quality of housing and its sustainability. In the social sustainability of housing, the set of living conditions is such that with the passage of time, social interactions increase and the majority of residents feel attached to their place of residence. Among the components of sustainability in urban settlements, the social sustainability of housing is one of the most important concerns of managers and urban decision makers.

Study Area

In this research, due to the importance of the above variable, it has been evaluated in the informal settlements of Ardabil city. Ardabil city has experienced increasing physical and population growth in the last three decades due to excessive rural-urban migrations and this has caused the formation of marginal neighborhoods around the city to attract additional population. These neighborhoods have many issues and problems in the field of social sustainability of housing. Therefore, the current research is conducted with the aim of investigating the social sustainability of housing in the informal settlements of Ardabil city.

Material and Methods

The current research is applied and descriptive-analytical in nature. To explain the evaluation components in the geography of the studied localities, the survey method, questionnaire tool and spss and Arc GIS software have been used. The statistical population is the informal neighborhoods of Ardabil city with a population of 74,628 people and the number of samples according to Cochran's formula with a probability of 95% of correctness of speech is 382 people. In this study, in order to analyze, evaluate and rank the studied localities in terms of social sustainability of housing, the multi-criteria decision-making models TOPSIS, VIKOR, SAV and Copeland integration model were used.

Result and Discussion

The final investigations carried out in the present study show that despite the use of multi-criteria evaluation and analytical models in the studied localities, close results were obtained with minimal displacement in the ranks. This importance indicates the high accuracy of information and evaluation methods and accuracy in researchers' performance. Based on the results of the interpretation of the one-sample t-test with reference to Table No. 6, the neighborhoods of Kalkhoran, Niyar, Mirashraf and Salmanabad have a better situation in terms of social sustainability of housing than other neighborhoods. On the other hand, Golamghan neighborhood has the highest level of social instability in housing, confirming that it is problematic in all dimensions. Also, based on the results of the multi-criteria decision-making models of TOPSIS, VIKOR, and SAV, referring to Table No. 10, Kalkhoran, Niyar, Mirashraf, and Salmanabad neighborhoods have a better situation than other neighborhoods in terms of housing social sustainability and in contrast, Iran Abad, Malabashi and Golamghan neighborhoods have the highest level of housing social instability in all dimensions. In the dimension comparison, the dimension of spatial justice is the most frequent, the most problematic dimension in the studied localities. In the end, according to the final ranking matrix of neighborhoods in terms of housing social stability based on Copeland's integration model with reference to Table No. 11, Iranabad, Golamghan, Malabashi, and Melayousef neighborhoods have the highest amount of instability and Salman Abad, Mirashraf, and Niyar neighborhoods have the lowest amount of housing social instability in They are compared with other studied localities. Also, other studied localities that have received middle ranks in the series of evaluations have a moderate degree of stability. Therefore, the final result of the analysis and results in the current research shows that at least three types of programs should be used in the treatment of local problems and problems, which can achieve the realization of planning and empowering the localities in certain times for the amount of instability obtained in the localities and based on map number 3. Because as obtained from the tables; It is obvious that the dimensions in which the existence of high-level issues in terms of housing social stability have not been confirmed are very close to the average of instability. In case of neglect and lack of strengthening of the levels of the desired dimensions, they may turn into problematic dimensions in the localities and complicate the current and future situation.

Conclusion

According to the findings of the research, the results showed that based on the dimensions analyzed in the assessment of the social stability of housing in the informal neighborhoods of Ardabil city, Iranabad (Jin

Kennedy) and Golmaghan neighborhoods have the highest amount of social housing instability and Salmanabad and Mirasharf neighborhoods have the lowest amount of social housing instability. In comparison with other localities studied in this research.

Key words: social sustainability, housing, informal settlement, multi-criteria decision making models, Ardabil.

References (Persian)

Ahmadi, Bahman and Aminzadeh Goharrizi, Behnaz (2015). Analysis of the effects of social stability on the perception of security in informal settlements (Slaughterhouse neighborhood of Urmia city), Urban Studies Quarterly, year 13, No. 20, Fall, 29-42.

https://urbstudies.uok.ac.ir/article_40903.html

- Ardabil Municipality (2016). Report of the residential areas of Ardabil city, Deputy of Urban Planning and Architecture of Ardabil Municipality.
- Darvishi, Yusof (2017). Investigating the role of rural migration in the emergence of informal settlements, case: Mirasharf neighborhood of Ardabil city, Journal of Official Statistics of Iran, year 29, number 2, 133-149.

https://ijoss.srtc.ac.ir/article-1-275-fa.html

Ebrahimzadeh, Isa and Qadir Mezi, Jameel (2014). An analysis of housing quality in urban areas, a solution to improve the quality of life of citizens, a case study: Dehgolan city areas, Geography and Development Quarterly, year 13, number 40, 156-139.

https://gdij.usb.ac.ir/article_2103.html

- Gulabchikov, Eleg and Badiata, Anna (2014). Sustainable Housing for Sustainable Cities, Policy Making Framework for Developing Countries, Translators: Hossein Hataminejad, Seyed Mohammad Mir Sidi, Akram Shahidi, Mashhad: Popeli Publications, first edition.
- Habibi, Mohsen (2012). Practical training of Spss software, publisher of Pars Madreer internet base, third edition, fall 2012.
- Jumepour, Mahmood (2014). Measuring and evaluating the principles of social sustainability in residential complexes, urban sociological studies, year 5, number 16, 30-1.

https://urb.dehaghan.iau.ir/article_647604.html

Mohammadi Dost, Suleiman, Khanizadeh, Mohammad Ali and Namazian, Fariba (2017). Measuring the level of satisfaction with Mehr housing with emphasis on social sustainability dimensions (case study: Mehr housing in Yasouj city), Human Settlements Planning Studies Quarterly, Volume 13, Number 1 (42 series), 251-266.

https://jshsp.rasht.iau.ir/article_540515.html

Mohammadi, Alireza and Pashazadeh, Asghar (2013). Measuring the level of sustainability of Ardabil city neighborhoods with an emphasis on neighborhoods with rural cores, Urban Studies Journal, year 3, serial number 11, 62-49.

https://urbstudies.uok.ac.ir/article_9566.html

Nastern, Mahin, Ghasemi, Vahid, Hadizadeh Zargar, Sadegh (2012). Evaluation of social sustainability indicators using the network analysis process (ANP), Applied Sociology, Year 24, serial number 51, number three, 155-174.

https://jas.ui.ac.ir/article_18320.html

Nazmfar, Hossein, Visyan, Mohammad, Mohammadi Hamidi, Sumiya (2017). Investigating and measuring urban social sustainability using Cooperas model and lisrel software, case study: Ardabil city, Urban Research and Planning Journal, year 9, serial number 33, 43-48.

https://jupm.marvdasht.iau.ir/article 2890.html

- Norouzian Maliki, Saeed, Alaei, Amir Ali, Yazdanfar, Abbas, Hosseini, Baqer (2019). Effective criteria in measuring the social sustainability of housing, Architecture and Urban Development Quarterly, year 30, number 88, 5-26.
- Portaheri, Mahdi, Fazal Ali, Zeinab, Roknuddin Aftakhari, Abdolreza (2015). Evaluation of changes in the rural housing pattern of Mazandaran province, Human Geographical Research, 48(4), 95-131.

https://www.sid.ir/paper/172024/fa

- Pourahmad, Ahmad, Kalantari, Mohsen, Farhoudi, Rahmatullah, Ashnavi, Amir (2014). Assessing the social sustainability of the residential environment in historical urban contexts, case: Hajiabad city, Fars province, Zagros Perspective Quarterly, year 2, number 3.
- Rakeei-Banab, Neda, Haghitian, Mansour, Jahanbakhsh, Ismail (2016). Sociological explanation of social sustainability in Tabriz neighborhoods, Journal of Urban Planning and Research, Year 8, Number 31, 82-63.

https://jupm.marvdasht.iau.ir/article_2595.html

Sarhani, Faiqeh, Yazdani, Mohammad Hassan, Amanpour, Saeed (2018). Ranking of Ahvaz suburbs based on housing social sustainability indicators using the Electra model, Urban Management Studies Quarterly, year 11, number 37, 45-33.

https://ums.srbiau.ac.ir/article_14665.html

- Sayafzadeh, Alireza, Ahmadi, Fatemeh (2018). An analysis on the social sustainability of housing in urban areas, a case study: Khorram Abad city areas, Sabz Memamari Quarterly, year 5, number 1 (11 series), volume two, 1-18.
- Yousefzadeh Bekavali, Mina, Sabbaghpur, Arzoo (2015). Investigating factors affecting social sustainability and its role in designing sustainable development, the fourth national conference on new technologies of the construction industry, sustainable development and construction technologies.
- Zanganeh, Mehdi, Bani Asad, Taibeh, Khavarian, Atefeh (2019). Investigating social sustainability in new settlements (case example: Mehrgan settlement in Mashhad), studies of urban structure and function, year 7, number 22, 113-129.

https://shahr.journals.umz.ac.ir/article_2532.html

Zaranji, Zila Farzaneh Sadat and Yazdani, Mohammad Hassan (2018). An analysis of the sustainability of informal settlements (Ardebil city), Geography and Urban-Regional Planning, Year 9, Number 32, 17-32.

https://gaij.usb.ac.ir/article_4959.html

Zarghami, Ismail (1389). Principles of social sustainability of residential complexes in Iranian-Islamic cities, Iranian-Islamic City Studies Quarterly, No. 2, 115-103.

https://www.sid.ir/paper/372921/fa

References (English)

- Abdul karim, H. & Diyanah, I. (2012). Implications of walkability towards promoting sustainable urban neighbourhood, journal of social and behavioral sciences, vol.50, 204-213.
- https://www.researchgate.net/publication/257716071 Implications of Walkability Towards Promoting Susta inable Urban Neighbourhood
- Bahadure Skotharkar, R. (2017). Framework for Measuring Sustainability of Neighbourhoods in Nagpur, India. (In Persian)
- Bassett, E.M. (2005). "Tinker with tenure: The community land trust experiment in Vio, Kenya", Habitat International 29, 375-398.
- Brimley, G., and Power, S. (2009). Urban from and social sustainability: The role of density and housing type, Sage journal, 36(1): 30-48.

https://www.academia.edu/18196201/Urban_form_and_social_sustainability_the_role_of_density_and_housing_type

Charles, L. (2007). Choguill, The search for policies to support sustainable housing, Journal of Habitant International, 31, 143-149.

https://www.academia.edu/37705430/The search for policies to support sustainable housing

- Colantonio, A., Dixon, T., Ganser, R., Carpenter, J. & Ngombe, A. (2009). Measuring Socially Sustainable Urban Regeneration in Europe, Oxford Institute for Sustainable Development (OISD).
- Dempsey, N. & et al (2011). "The Social Dimension of Sustainable Development: Defining Urban Social Sustainability", Journal of Sustainable Development, 19, 289-300.
- https://www.researchgate.net/publication/229889535 The Social Dimension of Sustainable Development D efining Urban Social Sustainability
- Easthope, H., Liu, E., Judd, B. & Burnley, I. (2015). Feeling at home in a multigenerational household: The importance of control. Housing, Theory and Society, 32(2), 151-170.
- https://www.researchgate.net/publication/275255566 Feeling at Home in a Multigenerational Household T he_Importance_of_Control
- Gonzalez-Gaicia, S., Manteiga, R., Teresa Moreira, M. & Feijoo, G. (2018), "Assessing the sustainability of Spanish cities considering environmental and socio-economic indicators", Journal of Cleaner Production, 178: 599-610 pp.475-492.
- Gostautas, I. (2017). Spatial Analysis of Regional Residential Markets in England and Wales, Nottingham Trent University, Phd thesis, p. 1-235.

http://irep.ntu.ac.uk/id/eprint/31661/1/Ignas%20Gostautas%202017.pdf

http://irep.ntu.ac.uk/id/eprint/31661/

- Hipp, J. (2010) What is the "neighbourhood" in neighbourhood satisfaction? Comparing the effects of structural characteristics measured at the microneighbourhood and tract levels, Urban Studies, 47(12).
- Jose, A. & Puppim, d.O. (2019). Sustainability Challenges in an Urban Century: Can We Change Urbanization Paths to Make Cities the Solutions for Rather than the Drivers of Global Problems?, Challenges in Sustainability | 2019 | Volume 7 | Issue 1 | Pages 1–4.
- https://www.researchgate.net/publication/332724763 Sustainability Challenges in an Urban Century Can We Change Urbanization_Paths_to_Make_Cities_the_Solutions_for_Rather_than_the_Drivers_of_Global_Problems
- DOI: 10.12924/cis2019.07010001 ISSN: 2297-6477
- Murphy, K. (2012). The Social Pillar of Sustainable Development: A Literature Review and Framework for Policy Analysis, Sustainability: Science, Practice and Policy 8.
- Neuwirth, R. (2010). Shadow Cities: A Billion Squatters in New Urban World, Translated by Pourahmad, A. & et al, University of Tehran. [In Persian].
- Porio, E. & Crisol, C. (2004). "Property rights, security of tenure and urban poor in Metro Manila", Habitat International, 28, 203-219.
- Raco, M. (2007). Building Sustainable Communities, Spatial Policy Place Imaginations and Labor Mobility in Post War Britain, Bristol Policy Press.
- Rioux, L. & Werner, C. (2010). Residential satisfac tionamong aging people iving in place. Journal of Environ Mental Psychology. 31(2), 158 -169.
- Thinh, N.X., Arlt, G., Heber, B., Hennersdorf, J. & Lehmann, I. (2002), Evaluation of urban land-use structures with a view to sustainable development, Environmental Impact Assessment Review, Vol. 22, No.5, pp.475-492.

https://www.researchgate.net/publication/222406393 Evaluation of urban landuse_structure_with_a_view_to_sustainable_development

UN-HABITAT, (2004). Financing Urban Shelter, Earthscan.

- Weingaertner, C., & Moberg, A. (2011). Exploring Social Sustainability: Learning from Perspectives on Urban Development and Companies and Products. Sustainable Development.
- Whittingham, N. (2013). Towards the healthy city: An urban planner's reflection on health , and wellbeing, Global Built Environment Review, 8(2), 61-87.

https://media.neliti.com/media/publications/154150-EN-artowards-the-healthy-city-a-reflection.pdf

World Bank. (2018). Urban Development, Retrieved 29 May 2018, from:

www.worldbank.org/ en/ topic/urbandevelopment/overview