NICOLAUS COPERNICUS UNIVERSITY IN TORUŃ

Bulletin of Geography. Socio-economic Series, No. 66 (2024): 7–26
http://doi.org/10.12775/bgss-2024-0030

BULLETIN OF GEOGRAPHY. SOCIO–ECONOMIC SERIES

journal homepages:
https://apcz.umk.pl/BGSS/index
https://www.bulletinofgeography.umk.pl/

The future of Iranian social housing: a regional governance challenge

Ali Soltani[1, CDFMR], Majid Goodarzi[2, CDFMR], Zahra Soltani[3, CDFMR], Fahime Fadaei Jazi[4, CDFMR]

[1]*Flinders University,* FHMRI, Bedford Park, South Australia, Australia, [1]e-mail: ali.soltani@flinders.edu.au, [1]https://orcid.org/0000-0001-8042-410X; [2,3,4]*Shahid Chamran University of Ahvaz*, Department of Geography, Ahvaz, Iran, [2]e-mail: m.goodarzi@scu.ac.ir (*corresponding author*), [2]https://orcid.org/0000-0001-7982-8027; [3]e-mail: z.soltani@scu.ac.ir, [3]https://orcid.org/0000-0001-5876-0473; [4]e-mail: f-fadaeijazi@stu.scu.ac.ir, [4]https://orcid.org/0000-0003-4649-8951

How to cite:
Soltani, A., Goodarzi, M., Soltani, Z. & Jazi, F.F. (2024). The future of Iranian social housing: a regional governance challenge. *Bulletin of Geography. Socio-economic Series,* 66(66): 7-26. DOI: http://doi.org/10.12775/bgss-2024-0030

Abstract. Housing is a fundamental human necessity, shaping health, security and socio-economic well-being. The government of Iran has implemented various policies, plans and projects to ensure housing provision, but significant challenges remain, particularly in social housing. This study aims to identify and analyse the obstacles affecting the future development of social housing in Iran. Utilising a mixed-method approach, we conducted both quantitative and qualitative research, gathering expert insights through the Delphi method and analysing the data using cross-impact analysis via MICMAC software. The results revealed four critical challenges: limited loan repayment ability, currency instability, social issues within low-income communities, and policy isolation. These findings underscore the need for policymakers to adopt a comprehensive strategy that addresses financial, social and political fragmentation to ensure sustainable and equitable access to social housing for low-income residents.

Article details:
Received: 09 June 2024
Revised: 07 October 2024
Accepted: 22 November 2024

Key words:
geography, planning & development, social housing & housing policy, Iran, MICMAC analysis, Delphi method

Contents:

1. Introduction

The rapid urbanisation of the world is creating a growing demand for affordable housing, especially for low-income communities (Pons & Rullan, 2014; Afrane et al., 2016; Cobbinah & Niminabeka, 2017; Miller & Hutchins, 2017; The Lancet, 2017; Chiwenga, 2019; Debele, 2019; UN, 2019; Achamwie & Danso-Wiredu, 2021; Allan et al., 2022; Azizi et al., 2022). While housing provision has always been important, the rapid pace of urbanisation presents unique and unforeseen challenges (Adeoye, 2016; Hochstenbach, 2016; Marsh & Gibb, 2011; Soltani et al., 2022; Sururi, 2022; Soltani et al., 2023). Social housing emerges as a key intervention to address this issue, offering appropriate and accessible housing options (Ceron-Palma et al., 2013; Lin et al., 2014; Umbro, 2016).

Globally, social housing systems encounter numerous challenges, including financial constraints, inappropriate policy frameworks and difficulties in land provision (Makinde, 2014; Wetzstein, 2017). Many nations strive to balance the need for affordable housing with sustainable urban development amidst economic constraints (Moghayedi et al., 2023). Additionally, rapid demographic changes and increasing socio-economic inequalities have exacerbated pressures on social housing systems, highlighting the critical importance of access to safe and adequate housing for maintaining social cohesion and enhancing citizens' quality of life (Winston, 2020).

Despite the constitutional prioritisation of affordable housing, Iran faces a significant housing deficit. Rapid urbanisation, coupled with economic sanctions and inflation, has precipitated a severe shortage of affordable housing (Zadeh & Moulaert, 2024). Recent estimates indicate a deficit of 673,000 housing units in urban areas and 698,000 units in rural areas, disproportionately affecting low-income groups (Comprehensive Housing Plan, 2017). In response, the Iranian government has implemented various policies, plans and projects, including "Minimum Housing", "Clean Housing", and "Mehr Housing", to address these disparities. The Social Housing Plan, introduced in 2016, represents the latest effort to provide housing for low-income groups. This plan is founded on three principles: institutionalisation and the creation of sustainable policies, leveraging the capacities of non-governmental organisations, philanthropists and the private sector in the construction and management of housing for low-income groups, and minimising government intervention in housing construction. The plan outlines three approaches for supporting housing provision for low-income groups: assistance in the construction of rental housing, rental subsidies and interest-free deposit loans. Notably, social housing projects are prioritised within cities, particularly in dilapidated areas (Government Archives, 2016; Comprehensive Housing Plan, 2017).

However, despite its innovative approach, the social housing initiative has yet to achieve its desired level of success. Challenges such as bureaucratic inefficiencies, limited financial resources and difficulties in land allocation have impeded progress. The implementation of this plan has faced significant shortcomings, including a lack of coordination between governmental and private institutions, insufficient financial support for low-income groups and inefficiencies in utilising the capacities of non-governmental organisations. These weaknesses have not only diminished the overall effectiveness of the programme but have also left many target groups without access to adequate housing. Existing research on housing in Iran has primarily concentrated on analysing the outcomes of past policies and identifying current challenges (Ghaedrahmati & Zarghamfard, 2021). However, there is a critical gap in forward-looking studies that aim to anticipate future challenges and offer proactive solutions. This study seeks to fill this gap by using the Delphi method and cross-impact analysis (MICMAC software) to identify and assess the challenges that could impede the future development of social housing in Iran. By doing so, this research provides a foundation for policymakers to develop more effective strategies that address both current and anticipated barriers to social housing. The research questions guiding this study are:

1. What are the key challenges affecting the future of social housing in Iran?
2. How do economic, social and political factors influence the success of social housing policies?
3. What strategies can policymakers adopt to address these challenges and ensure the long-term viability of social housing programmes?

This study contributes to the broader literature on social housing in developing countries by focusing on the specific case of Iran and offering valuable insights for policymakers and urban planners seeking to address the housing needs of low-income populations.

2. Background

Access to safe and adequate housing is not just a human right but a cornerstone for building thriving communities (Saldaña-Márquez et al., 2018; Ampofo, 2020; Zhang & Yan, 2023). Master-planned housing projects are fundamental elements in shaping the urban structure of metropolitan regions (Moghadam et al., 2018a; Moghadam et al., 2018b). Housing access is intricately linked to essential factors like security, health, education and safety, all of which significantly impact societal welfare (Sorouri, 2022). Adequate housing serves as an indicator of public health, while its absence can trigger negative outcomes such as disease outbreaks, social conflict, environmental degradation and intergenerational inequalities (Rangwala, 1998; Asiniwasis et al., 2024). Research consistently demonstrates the clear connection between housing and both human health and societal progress (Howden-Chapman et al., 2023). In developing countries, access to affordable housing is particularly crucial for enhancing workforce productivity and driving economic growth (Ebekozien, 2020). The pursuit of affordable housing solutions aims to bridge the gap between housing availability and the demands of both formal and informal sectors.

Achieving sustainable development hinges on ensuring equitable access to housing, especially for low-income residents (Cloke & Milbourne, 2006; Gallent & Robinson, 2011; Seo et al., 2016). Governments implement housing policies to influence housing markets and outcomes (Clapham, 2018). However, a troubling trend has emerged: a decline in the focus on the human and social aspects of these policies (Kimhur, 2020). Housing, once seen as a social issue, has increasingly been financialised, viewed as a commodity for wealth accumulation and financial stability, thereby diminishing its fundamental social purpose (Aalbers, 2016; UN Human Rights Council, 2017; Clapham, 2018; Leijten & de Bel, 2020; Soltani & Lee, 2024). Amidst the financialisation of housing and its growing inaccessibility for low-income groups, social housing emerges as a beacon of sustainability (Lund, 2011; Mitlin & Mogaladi, 2013). Social housing programmes prioritise providing affordable and accessible housing options, promoting social equity and fostering inclusive urban development (Miraftab, 2009; Kellett et al., 2013; Mitlin & Mogaladi, 2013; Kraatz et al., 2015). By adopting such policies, governments demonstrate a commitment to ensuring adequate housing for marginalised communities (Prentice & Scutella, 2020).

The literature underscores the importance of integrating social housing policies with broader socio-economic and urban development plans. Researchers argue that successful social housing initiatives in developing countries require a multifaceted approach, including the provision of physical housing units and the enhancement of social services, economic opportunities and urban infrastructure (Gilbert, 2014). For instance, aligning social housing with slum-upgrading programmes and urban renewal projects can significantly improve living conditions and promote social inclusion in India (Mahadevia, 2011). Additionally, the role of international organisations and development agencies in providing technical assistance, funding and policy frameworks is crucial for supporting social housing efforts in developing countries (OECD, 2020). While progress has been made, a more holistic, coordinated approach is essential for addressing the complex housing needs of low-income populations.

Central and local governments, alongside policymakers and planners, play crucial roles in the development and implementation of social housing initiatives, especially in the Global South. Central governments establish national housing policies, allocate resources and set regulatory frameworks guiding social housing programmes. For example, Brazil's federal government launched the "Minha Casa, Minha Vida" programme to provide millions of affordable housing units through direct funding and subsidies (Fiori, 2014). Similarly, South Africa's national government has been instrumental in the Reconstruction and Development Programme, targeting housing provision to redress historical inequalities (Marais, 2013). Local governments manage the planning and construction of housing projects, ensure the provision of necessary infrastructure and often tailor national programmes to local contexts. In India, municipal authorities play key roles in the Pradhan Mantri Awas Yojana, facilitating the construction and allocation of affordable housing within cities (Mahadevia, 2011).

Effective policymaking in the social housing domain requires a deep understanding of socio-economic dynamics, demographic trends and urban development patterns. For example, planners in Mexico have incorporated community participation in the design and execution of housing projects to ensure they meet the actual needs of residents (Gilbert, 2014). In Colombia, planners have focused on integrating social housing with broader urban renewal projects to promote social inclusion and economic development (OECD, 2020). Overall, the coordinated efforts of central and local governments, along with informed and responsive policymakers and planners, are fundamental to the success of social housing programmes in the Global South,

ensuring they are sustainable, inclusive and effective in meeting the needs of low-income populations.

3. Theoretical framework

The theoretical framework for this research is grounded in the understanding that adequate and affordable housing is a fundamental human right and a critical component for the development of thriving communities. This research builds on the theories of housing as a multifaceted issue that extends beyond mere physical structures to encompass aspects of identity, societal well-being and public health (Ngcobo, 2018; Saldaña-Márquez et al., 2018; Ampofo, 2020; Sorouri, 2022; Zhang & Yan, 2023). It explores the intricate connections between housing and essential factors such as security, health, education and safety, all of which collectively impact overall societal welfare (Sorouri, 2022).

In expanding the theoretical discussion, *Henri Lefebvre's* (1967) theory of "The Right to the City" can more effectively emphasise the importance of citizen participation in decision-making related to social housing and equitable access to urban amenities. This theory underscores the right of people to shape and utilise urban space, which, in the context of social housing, highlights the importance of residents' active involvement in housing decisions and the provision of essential services. Don Mitchell (2003) further argues that the right to housing, which includes the right to have a place to sleep and rest without needing permission from anyone, should be prioritised.

The framework acknowledges the dual role of housing policies in promoting sustainable development and social equity, particularly for low-income residents (Cloke & Milbourne, 2006; Gallent & Robinson, 2011; Seo et al., 2016). According to David Harvey's theory of financialisation, the commodification of housing often leads to the marginalisation of low-income communities as housing markets prioritise profit over social needs (Harvey, 2008). Edward Soja's (2010) theory of spatial justice adds depth to this discussion by emphasising the equitable distribution of urban resources and services, which can aid in analysing the distribution of social housing at local and regional levels. Housing political economy theories can be employed to further strengthen this discussion. These theories explore the role of capital in shaping housing markets and its impact on housing access and affordability.

Ultimately, this framework emphasises the crucial role of central and local governments, policymakers and planners in the successful implementation and sustainability of social housing programmes (Gilbert, 2014; OECD, 2020). In this regard, theories of multi-level governance can help examine the interactions between different levels of government and their roles in the policymaking and implementation of social housing programmes. Drawing from multi-level governance theory, which suggests that effective governance requires collaboration between various levels of government and sectors (Hooghe & Marks, 2001; Bagheri et al., 2024), this study recommends that policymakers adopt an integrated housing policy. Such a holistic approach will ensure that housing strategies are aligned with broader socio-economic and environmental objectives, facilitating the development of inclusive cities that meet the needs of all residents (OECD, 2020).

4. Methods and materials

4.1. Study area

Rapid urbanisation in Iran has driven demand for affordable housing, particularly among low-income urban populations. In 2017, the government launched a social housing programme focused on providing low-cost housing and promoting social inclusion. This initiative emphasises sustainable policies, leveraging civil society and reducing direct government involvement in construction. Strategies include rental assistance, interest-free loans and land allocation for development.

First, the programme assists individuals and entities who own land and wish to construct rental housing units with preferential rates. Agreements are facilitated through the Housing Foundation of the Islamic Republic of Iran, with incentives like double the declared facilities for each unit. Second, the Ministry of Roads and Urban Development plays a role by allocating land with infrastructure within existing city boundaries or new cities for the construction of these rental units. This land is assigned to builders participating in the programme, with a requirement to offer a discount on rent of at least 40%. Land acquisition prioritises revitalising existing urban fabric. The government can barter its land for the project, residents can contribute land, or the builder can acquire it directly. Importantly, the land must be located in affordable urban areas. Finally, the programme acknowledges the need for

subsidies to ensure affordability and encourages collaboration with various stakeholders. These include non-governmental organisations like relief and welfare organisations, and financial institutions such as development banks and the State Pension Fund.

Table 1 provides data on population, residential units and household density in Iran from 1996 to 2016. Key observations include population growth, with the population of Iran increasing steadily from 60 million in 1996 to 80 million in 2016, reflecting an average annual growth rate of 1.38% during this period. Household growth outpaced population growth, indicating a decline in average household size from 4.84 in 1996 to 3.3 in 2016. The number of residential units increased significantly, keeping pace with the growth in households. Household density in residential units, both total and urban, remained relatively stable, suggesting that the growth in residential units has been sufficient to accommodate the increasing population and households. However, the number of vacant houses increased substantially between 2011 and 2016, indicating a potential mismatch between housing supply and demand in some areas. These findings highlight the significant demographic and housing changes that have occurred in Iran over the past two decades. While the country has been able to accommodate population growth through increased residential unit construction, the rising number of vacant houses suggests that there may be challenges in ensuring efficient and equitable housing distribution.

Based on the literature and the above outlook of social housing in Iran, the future of social housing in Iranian cities has faced with various challenges identified across social, economic, political-administrative and physical dimensions.

Challenges faced by vulnerable groups: The need to prioritise marginalised communities is more urgent than ever. Enhancing civic participation platforms and empowering low-income groups should be central to housing policies. Rapid urbanisation exacerbates socio-economic divides, often forcing low-income families into substandard housing without considering their specific demographic needs (Azkia & Saeedi, 2022). Additionally, social displacement caused by rapid urban growth has led to the breakdown of indigenous communities and weakened social bonds, which further fuels instability and disorganisation (Habibi & Saeidi Rezvani, 2015). Limited interaction between households and local authorities also contributes to the lack of trust and inadequate community engagement, worsening the situation for low-income families (Madani, 2020).

Economic perspective: From an economic standpoint, the gaps in the financial system and policy reveal significant shortcomings in housing support. These gaps are particularly visible in the inability of current financial frameworks to offer adequate assistance for housing provision. The heavy reliance on construction revenues and inefficient pricing mechanisms further hinder homeownership opportunities for low-income families (Khatami, 2019). Moreover, wide income disparities result in inconsistent housing programmes that often fail to meet the needs of applicants, leading to inequities in housing distribution. Rising construction costs and the unsustainable reliance on subsidies have made housing increasingly unaffordable for many, highlighting the need for more effective financial and policy solutions (Sadeghi et al., 2021).

Table 1. Changes in population, residential units and household density in residential units in Iran

Description	1996	2006	2011	2016
Population (thousands)	60.055	70.495	75.149	79.926
Annual population growth rate	-	1.62	1.3	1.2
Number of households (thousands)	12.280	17.585	21.110	24.196
Annual household growth rate	-	3.5	3.9	2.7
Household size	4.84	4.03	3.55	3.3
Number of residential units excluding unoccupied houses (thousands)	10.770	15.859	19.954	22.825
Number of empty houses (thousands)	-	-	-	2.098
Number of residential units including vacant houses (thousands)	-	16.492	21.617	25.412
Household density in residential units excluding vacant and second houses (total)	1. 14	1.09	1.06	1.06
Household density in residential units (urban)	-	1.08	1.04	1.04
Household density in residential units (rural)	-	1.14	1.11	1.13
Household density in residential units including only vacant houses	-	1.07	0.98	0.95

Source: own elaboration based on Iran Statistics Center 1996–2016

Regional discrepancies highlight substantial regional inequalities and mismatches between quality standards and expectations, while Affordability and Compliance Issues focus on the impact of fluctuating exchange rates and regulatory circumvention on housing affordability (Ehsani, 2022; Qadikolaei et al., 2024). Finally, Long-term Project and Policy Monitoring emphasises the need for better oversight and more socially oriented housing initiatives to ensure sustainable development (Ghaffari, 2017).

Physically, the housing standards and infrastructure cluster points to the inadequate provision of essential infrastructure and the mismatch between housing unit sizes and resident needs (Mohammadi, 2016). The Housing Quality and Planning cluster addresses the substandard quality of housing units and the neglect of the urban middle class in housing plans (Yazdani & Ahmadi, 2021).

A comprehensive and integrated approach that addresses these clusters is essential for effective social housing foresight in Iranian cities. This includes strengthening financial systems, enhancing policy coherence, improving institutional mechanisms, ensuring regulatory compliance and prioritising the needs of vulnerable groups and regions to foster a more inclusive and sustainable urban development (Saadi, 2023).

Figure 1 depicts the conceptual framework for social housing in Iran. This model identifies four fundamental elements that influence social housing: social, economic, political-administrative and physical. Each dimension represents a collection of elements influencing the development of social housing. This conceptual model was used to identify and analyse the social housing key factors.

4.2. Data collection

Data collection was based on the Delphi method, a future-oriented technique that leverages expert opinions. The Delphi method involves multiple rounds of structured, anonymous questionnaires with controlled feedback, allowing experts to refine their insights based on collective knowledge. This approach aims to achieve a reliable consensus, surpassing the limitations of traditional surveys that rely solely on participant numbers (Delphi, 1968; Skutsch & Johnson, 2007).

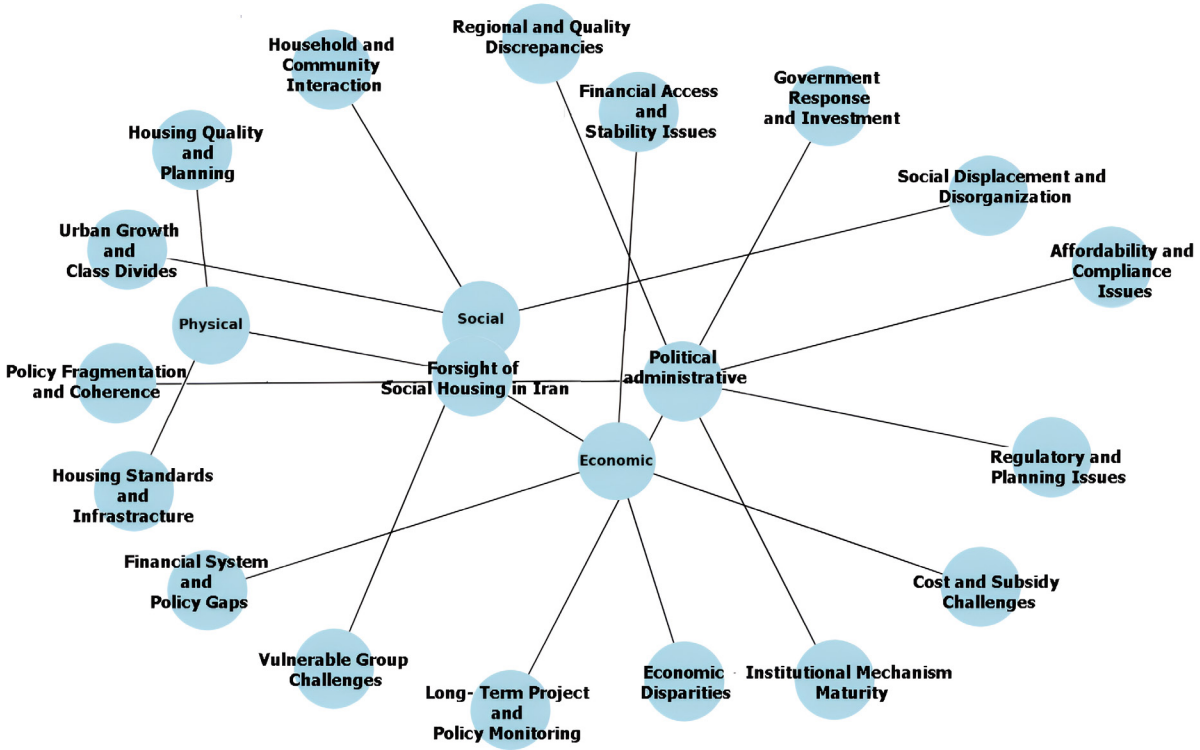

Fig. 1. Conceptual framework for social housing initiatives in Iran
Source: own elaboration

Table 2. Experts involved along in the study with the reliability of the mutual effects analysis questionnaire

Expert number	Position	Field of study	Work history (yrs)	*Gender*	*Age group*	Occupation Place
Expert 1	Researcher	Geography and urban planning	17	Male	44-52	University
Expert 2	Manager	Urban Management	5	Male	35-43	Provincial Government
Expert 3	Team leader	Law	12	Male	62-70	Municipality
Expert 4	Planner	Geography and urban planning	7	Female	18-25	Private consulting company
Expert 5	Planner	Urban development	4	Male	26-34	Private consulting company
Expert 6	Lecturer	Economics	11	Female	35-43	University
Expert 7	Researcher	Architecture	8	Female	53-61	University
Expert 8	Researcher	Political science	7	Male	53-61	University
Expert 9	Team leader	Urban management	5	Male	26-34	Municipality
Expert 10	Lecturer	Sociology	15	Male	62-70	University
Expert 11	Development officer	Civil engineering	4	Male	26-34	Municipality

Source: own elaboration

This research employed a snowball sampling technique to recruit a sample of experts until theoretical saturation was achieved (Guest et al., 2006; Zali et al., 2022). Theoretical saturation refers to the point at which no new insights emerge from further data collection. In this study, saturation was reached with a sample size of 11 experts (Table 2). This table provides a detailed overview of the experts who participated in the Delphi study, including their expertise, experience, gender and background. The experts represent a diverse range of fields, with experience ranging from four to 17 years. While the majority are male, there are several female experts included. This diversity ensures a reliable and valid Delphi study, as it incorporates a wide range of perspectives and knowledge on social housing development in Iran.

The Delphi method is used to establish a consensus on key challenges facing social housing in Iran, involving three rounds of questionnaires with controlled feedback from experts. In the first round, the experts were asked to identify the main challenges of social housing in Iran. In the second round, these challenges were presented to the experts in the form of a questionnaire to assess the importance of each challenge. In the third round, the results were fed back to the experts, and they were asked to reconsider their evaluations. This process led to a consensus on the most significant challenges.

To ensure the validity and reliability of the research instruments, particularly the Delphi questionnaire, several measures were undertaken. First, the content validity of the questionnaire was assessed by three experts in the field of social housing research. Second, the questionnaire's reliability was evaluated using a statistical test for data rotation twice. This test confirmed a high level of internal consistency, with a score of 68.4% (Table 3). The study adhered to strict ethical principles throughout the research process.

4.3. Mutual Causal Analysis (MCA)

The Mutual Causal Analysis (MCA) method offers a valuable tool for identifying and analysing the complex interplay of factors influencing social

Table 3. Characteristics of direct effects (MDI)

Fill rate	Total	Number of P	Number of threes	Number of twos	Number of ones	Number of zeros	Number of iterations	Matrix size	INDICATOR
68.4%	2,224	0	299	916	1,009	1,025	2	57	VALUE

Source: own elaboration

housing development (Nouri & Boujelbene, 2022). Unlike traditional cause-and-effect models, MCA focuses on mutual relationships, where each factor can both influence and be influenced by others. This approach is particularly relevant for social housing development, a system characterised by numerous interconnected variables. MCA is a semi-quantitative method that utilises a matrix to depict these relationships (Omran, 2014).

In the first round, a broad question was posed to the Delphi group: "What factors hinder the social housing development in Iran?" This open-ended prompt encouraged experts to brainstorm and generate ideas. Following the first round, the researchers categorised and analysed the responses. Redundant comments, minor points and issues on the periphery of the main topic were excluded. The refined list of key obstacles was then presented to the Delphi group in the second round. Experts were asked to express their level of agreement or disagreement with each proposed challenge.

Here is the breakdown of the key steps involved:

1. **Identifying primary factors:** The first step involves compiling a comprehensive list of variables considered to be the most significant drivers or obstacles in social housing development.
2. **Constructing the MCA matrix:** A square matrix with dimensions n×n is created, where n represents the total number of identified primary factors. Each cell within the matrix represents the potential impact of one factor (row) on another (column).
3. **Assessing interrelationships:** Experts or stakeholders then evaluate the extent to which each factor (process A) influences another (process B). This assessment is typically scored on a scale ranging from 0 (no effect) to 3 (high effect), with intermediate values signifying low or moderate influence.
4. **Summarising results:** The sum of each row in the matrix reflects the dominance of a variable, indicating the overall degree to which it influences other factors in the system. Conversely, the sum of each column represents the dependency of a variable, highlighting how much it is influenced by other factors.
5. **Visualisation:** Finally, the identified processes (variables) are plotted on a graph, with the dependency score on one axis and the dominance score on the other. This visual representation facilitates the identification of key leverage points within the system – factors with high dominance and low dependency – that offer the most significant potential for influencing overall social housing development outcomes.

MICMAC goes beyond the basic matrix analysis by generating a graphical representation of the results. This conceptual chart utilises two axes: influence (on the x-axis) and susceptibility (on the y-axis). By plotting each variable based on its influence and susceptibility scores, MICMAC categorises them into five distinct zones (Fig. 2):

- **Zone 1: Key factors:** These variables exert high influence and low susceptibility, signifying their role as the primary drivers of change within the system.

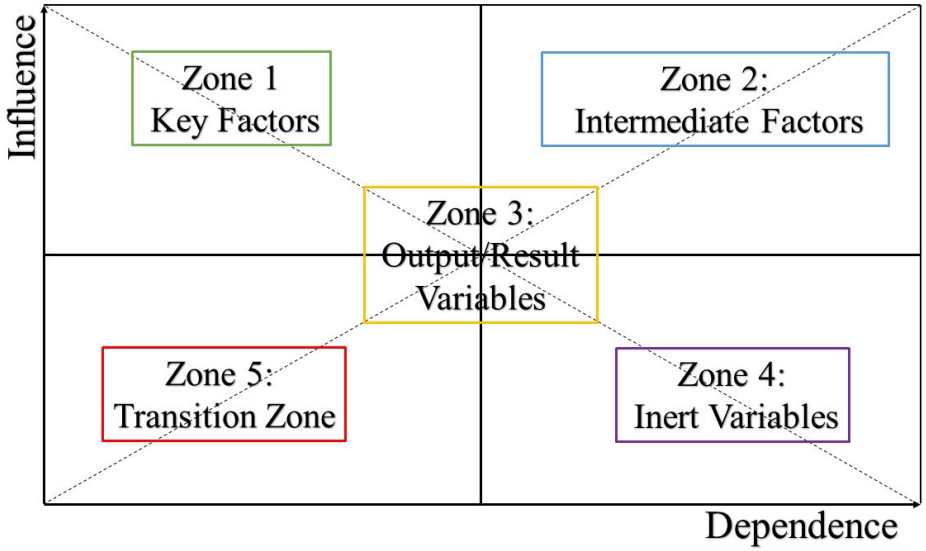

Fig. 2. Schematic diagram of classifying factors based on their impact and dependency
Source: own elaboration

- **Zone 2: Double-edged swords (intermediate factors):** These variables exhibit both high influence and high susceptibility, indicating they can both significantly impact and be impacted by other factors.
- **Zone 3: Output/result variables:** These variables have low influence but high susceptibility, suggesting they are largely shaped by the system's dynamics.
- **Zone 4: Inert variables:** These variables display low influence and low susceptibility, implying they have minimal impact on or are minimally affected by the system.
- **Zone 5: Transition zone:** This zone encompasses variables whose future trajectory is uncertain. Their influence and susceptibility scores place them in the centre of the chart, suggesting they may shift into other zones depending on future developments.

The distribution of variables within the MICMAC influence–susceptibility chart offers valuable insights into the stability of the system under study (Nouri & Boujelbene, 2022; Zali et al., 2022). Stable systems tend to exhibit an L-shaped distribution on the chart. This pattern indicates a clear differentiation between variables:

- **High influence, low susceptibility (Zone 1):** These "key factors" are the primary drivers of change within the system. They exert a strong influence on other variables but are themselves minimally affected by them.
- **Low influence, high susceptibility (Zone 3):** These "output/result variables" are largely shaped by the dynamics of the system and have minimal influence on other factors.
- **Intermediate influence and susceptibility (Zones 2 & 4):** These zones encompass variables with varying degrees of influence and susceptibility. "Double-edged sword" variables (Zone 2) can both significantly impact and be impacted by other factors. "Inert variables" (Zone 4) have minimal influence and are minimally affected by the system.

In sustainable systems, the roles and positioning of variables are relatively clear, facilitating the identification of key leverage points for intervention. Conversely, unstable systems present a more complex picture. Here, variables are often scattered around the diagonal axis, exhibiting a more ambiguous state between influence and susceptibility. This ambiguity can make it challenging to identify key factors and formulate effective interventions. It is important to acknowledge that system stability is not a static condition. Over time, a system can transit from stable to unstable or vice versa. Therefore, ongoing monitoring and analysis are crucial for understanding the system's dynamics and ensuring the effectiveness of interventions aimed at promoting positive change.

5. Results

5.1. Determining the key obstacles

A multi-pronged approach was employed to identify the critical obstacles hindering social housing development in Iran. By analysing the completed questionnaires, a comprehensive list of significant obstacles in Iranian social housing development was established. These obstacles were then categorised into four key areas: social factors, economic factors, political-administrative factors and physical factors. The social category examines issues like the neglect of disadvantaged populations in housing policies. Economic factors focus on obstacles like the inadequate development of financing systems for housing. Political-administrative complexities include the lack of government funding for housing and ineffective regulations. Finally, physical factors address issues like poor housing quality and inadequate infrastructure.

Table 4 reveals the identification of 57 significant obstacles in the development of social housing in Iran. Using the MICMAC approach, a cross-impact analysis was carried out to ascertain the specific importance of these elements and get a better understanding of their interrelationships.

This research eventually revealed the key problems that have the most influence. A questionnaire called the "matrix of mutual effects", which is a two-dimensional matrix, was presented to the experts. They were asked to indicate the extent of the impact of each component on one another. The question "Is there a direct relationship between variable A and variable B?" was posed for each pair of variables. If the result is negative, the value zero is assigned; otherwise, based on the amount and intensity of the impact, each cell is assigned a value of either 1, 2 or 3. Ultimately, these influences are inputted into the MICMAC software to extract the final and crucial components. MICMAC facilitates the analysis of relationships and system structure by translating the relationships and magnitudes of variables into outputs represented as distinct shapes and diagrams. Direct impact calculation focuses solely on the size

Table 4. Obstacles affecting the development of social housing in Iran

Category	Num.	Code	Variables
Social	1	S1	Lack of prioritisation for vulnerable groups
	2	S2	Rapid urban population growth
	3	S3	Concentration of low-income individuals in construction complexes
	4	S4	Indigenous population displacement and immigration
	5	S5	Deepening social class divides
	6	S6	Absence of platforms for civic participation and solidarity
	7	S7	Decline in social connections and community bonds
	8	S8	Emergence of social disorganisation and instability
	9	S9	Neglect of demographic factors in housing planning
	10	S10	Limited interaction between residents and officials due to project scale
	11	S11	Growing impact of household-level issues on low-income families
	12	S12	Insufficient empowerment of low-income groups
	13	S13	Social challenges faced by the most economically disadvantaged
Economic	14	E1	Underdeveloped financial systems for housing provision
	15	E2	Rent subject to possession, hindering access to ownership
	16	E3	Inconsistent housing construction with applicant needs and economic capacities
	17	E4	Disparity between available facilities and the financial means of low-income groups
	18	E5	Heavy reliance on subsidies for housing provision
	19	E6	Wide income disparity among social strata and geographic regions
	20	E7	Inability to mitigate construction costs, leading to rising housing prices
	21	E8	Failure to align housing prices with household incomes
	22	E9	Average to low GDP and *per capita* income
	23	E10	Excessive dependence on construction revenues for urban financial systems
	24	E11	Collateral-based lending practices in housing finance
	25	E12	Ineffective policies for bolstering local housing funds
	26	E13	Limitations in banking sector support for housing financing
	27	E14	Mortgage repayment challenges
	28	E15	Financial inability of low-income groups to repair deteriorating housing units
Political-administrative	29	PM1	Widening gap between housing needs and governmental responses
	30	PM2	Insufficient incentives for mass housing production
	31	PM3	Reluctance of private sector investors to engage in housing development
	32	PM4	Prolonged government construction projects
	33	PM5	Low government investment in housing sectors
	34	PM6	Limited coverage of social security nets for housing
	35	PM7	Immature institutional mechanisms in technical spheres
	36	PM8	Immature institutional mechanisms in decentralisation efforts
	37	PM9	Immature institutional mechanisms in economic spheres
	38	PM10	Underutilisation of non-governmental organisation capacities
	39	PM11	Overreliance on private sector for housing solutions
	40	PM12	Segregation of housing policy from broader policy frameworks
	41	PM13	Incompatibility of urban regulations with needs of low-income groups
	42	PM14	Lack of coherent long-term housing policies

continiued from previous page

	43	PM15	Substantial regional disparities in housing access and distribution
	44	PM16	Inefficient urban planning and management systems
	45	PM17	Fragmented policy formulation and implementation
	46	PM18	Prevalence of supportive housing schemes over socially oriented housing initiatives
	47	PM19	Discrepancy between quality standards and user expectations
	48	PM20	Vulnerability of social housing projects to shifts in political and policy landscapes
	49	PM21	Inadequate identification of low-income demographics
	50	PM22	Escalating exchange rates and their impacts on housing affordability
	51	PM23	Prevalence of illicit means to circumvent construction regulations
	52	PM24	Lack of monitoring on vacant properties and implementation of appropriate financial and tax policies
Physical	53	P1	Production of housing units with minimal consumption pattern standards
	54	P2	Substandard quality of some housing units
	55	P3	Inadequate provision of housing infrastructure, including water, electricity, gas, sewage, etc.
	56	P4	Neglect of the urban middle class in housing planning and provision
	57	P5	Mismatch between unit size and resident needs

Source: own elaboration

of the impact of variables A and B. Indirect impact, on the other hand, arises from the relationship and connection between two variables through an intermediary variable. MICMAC computes both types of associations. The matrix has dimensions of 57×57, and the factors are modified in four dimensions. The matrix has a density of 68.45%, suggesting that over 60% of the variables are interconnected and influence one another. Among the 3,249 assessable associations in this matrix, 1,025 have no impact, 1,009 have a weak impact, 916 have a moderate impact and 299 have a large impact.

5.2. Zoning

Despite the inherent obstacles, the MICMAC chart still offers valuable insights when considering the five potential zones occupied by variables:

- **Zone A: Key factors (influencers):** This zone encompasses variables with high influence and low susceptibility (north-west quadrant). These "determining factors" exert a significant impact on the system's future trajectory. Identifying and addressing these obstacles is crucial for promoting positive change in Iranian social housing development.
- **Zone B: Double-edged swords (key leverage points):** These variables exhibit both high influence and high susceptibility (around the centre). They can significantly impact other factors and are also readily influenced by changes within the system. Due to this interplay, double-edged sword variables offer strategic leverage points for intervention. Targeted policies or initiatives focused on these variables can potentially trigger positive cascading effects throughout the system.
- **Zone C: Regulatory/control variables (transition zone):** Located near the centre of the plot, these variables exhibit a balance of influence and susceptibility. Their future position within the system is uncertain, and they may shift into other zones depending on external factors or policy interventions. Carefully monitoring these regulatory variables is essential for understanding the system's dynamics and anticipating potential shifts.
- **Zone D: Susceptible variables (resultant variables):** These variables are highly susceptible to the system's dynamics but have minimal influence on other factors (south-east quadrant). They represent the "outcomes" or consequences of the system's functioning. While they may not be the primary targets for intervention, understanding these susceptible variables is important for assessing the overall effectiveness of social housing initiatives.
- **Zone E: Inert variables:** These variables have minimal influence and low susceptibility (south-west quadrant). Due to their limited impact on the system, they can often be disregarded during the initial stages of analysis. However, it is important to acknowledge that even these seemingly inert variables may become more relevant under changing circumstances.

Table 5 classifies the factors into five types: Influencers, Key Leverage Points, Transition Zone, Resultant Variables and Inert Variables. This

Table 5. Distribution of variables based on their classification

Variables	Group	Num.
Mortgage repayment challenges (E14), Escalating exchange rates and their impacts on housing affordability (PM22), Social challenges faced by the most economically disadvantaged (S13) and Segregation of housing policy from broader policy frameworks (PM12).	Key Factors (Influencers)	**A**
Lack of coherent long-term housing policies (PM14), Underdeveloped financial systems for housing provision (E1), Mismatch between unit size and resident needs (P5), Inadequate identification of low-income demographics (PM21), Low government investment in housing sectors (PM5), Financial inability of low-income groups to repair deteriorating housing units (E15), Disparity between available facilities and the financial means of low-income groups (E4).	Double-Edged Swords (Key Leverage Points)	**B**
Neglect of the urban middle class in housing planning and provision (P4), Prevalence of illicit means to circumvent construction regulations (PM23), Decline in social connections and community bonds (S7), Immature institutional mechanisms in economic spheres (PM9), Immature institutional mechanisms in technical spheres (PM7), and Immature institutional mechanisms in decentralisation efforts (PM8).	Regulatory/ Control Variables (Transition Zone)	**C**
Vulnerability of social housing projects to shifts in political and policy landscapes (PM20), Lack of monitoring on vacant properties and implementation of appropriate financial and tax policies (PM24), Emergence of social disorganisation and instability (S8), Underutilisation of non-governmental organisation capacities (PM10), Lack of prioritisation for vulnerable groups (S1), Rapid urban population growth (S2), Concentration of low-income individuals in construction complexes (S3), Indigenous population displacement and immigration (S4), Limitations in banking sector support for housing financing (E13), Substantial regional disparities in housing access and distribution (PM15), Heavy reliance on subsidies for housing provision (E5), Neglect of demographic factors in housing planning (S9), Collateral-based lending practices in housing finance (E11), Limited coverage of social security nets for housing (PM6), Rent subject to possession, hindering access to ownership (E2), Excessive dependence on construction revenues for urban financial systems (E10), Ineffective policies for bolstering local housing funds (E12), and Prolonged government construction projects (PM4).	Susceptible Variables (Resultant Variables)	**D**
Deepening social class divides (S5), Absence of platforms for civic participation and solidarity (S6), Limited interaction between residents and officials due to project scale (S10), Growing impact of household-level issues on low-income families (S11), Insufficient empowerment of low-income groups (S12), Inconsistent housing construction with applicant needs and economic capacities (E3), Wide income disparity among social strata and geographic regions (E6), Inability to mitigate construction costs, leading to rising housing prices (E7), Failure to align housing prices with household incomes (E8), Average to low GDP and *per capita* income (E9), Widening gap between housing needs and governmental responses (PM1), Insufficient incentives for mass housing production (PM2), Reluctance of private sector investors to engage in housing development (PM3), Overreliance on private sector for housing solutions (PM11), Incompatibility of urban regulations with needs of low-income groups (PM13), Inefficient urban planning and management systems)PM16), Fragmented policy formulation and implementation (PM17), Prevalence of supportive housing schemes over socially oriented housing initiatives (PM18), Discrepancy between quality standards and user expectations (PM19), Production of housing units with minimal consumption pattern standards (P1), Substandard quality of some housing units (P2), and Inadequate provision of housing infrastructure, including water, electricity, gas, sewage, etc. (P3).	Inert Variables	**E**

Source: own elaboration

classification aids in better understanding the role and significance of each variable in Iran's social housing system.

An analysis of the MICMAC scatter plot reveals that the social housing development system in Iran exhibits characteristics of an unstable system. As opposed to a stable system with a clear L-shaped distribution, the variables in this case appear dispersed around the diagonal axis (illustrated in Fig. 3). This dispersion suggests a more complex interplay of factors, making it challenging to pinpoint key drivers of change.

5.3. Analysis of direct relationships

The graph below (Fig. 4) illustrates the causal relationships among key obstacles to social housing development in Iran, depicting how they influence each other and their mutual relationships using the MICMAC software. This graph represents the causal model, shown in red lines, with the end of each line shown by an arrow, indicating the direction of the influence of the factors. The red lines represent strong influence of variables on each other. The influence cycle graph displays the relationships among variables using the MICMAC software.

5.4. Ranking of key obstacles

Following the identification of 57 potential obstacles through a data collection process, a rigorous selection procedure was employed to prioritise those with the most significant impact on Iranian social housing development. Expert assessments informed the creation of an impact matrix, which facilitated the evaluation of the interrelationships between these obstacles. By feeding this data into MICMAC, the analysis identified a core set of 11 key obstacles (presented in the table below). These factors play a fundamental role in shaping the success or failure of social housing initiatives in Iran. Their ranking within the table reflects their relative impact based on the MICMAC analysis. Table 6 ranks the primary obstacles to the development of social housing in Iran. This ranking is based on each variable's direct impact score, as estimated by MICMAC. The variables with the highest direct impact scores were chosen as key difficulties. According to the chart, financial concerns is the most significant obstacles to social housing in Iran E4.

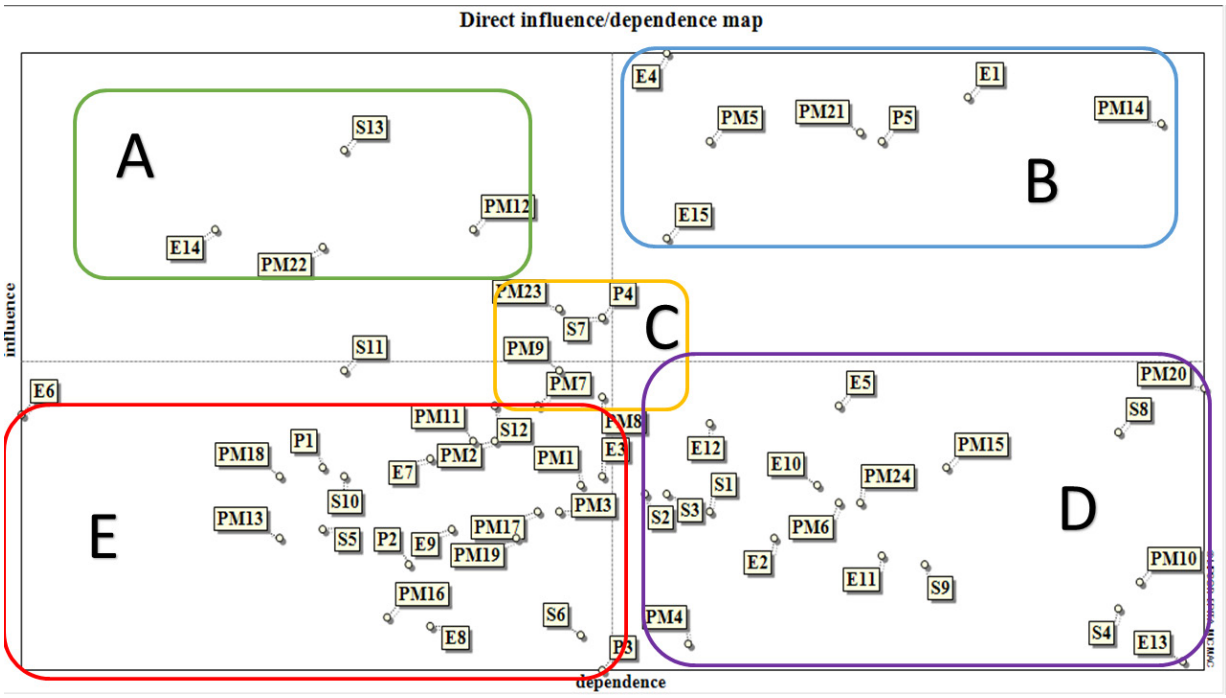

Fig. 3. Distribution of variables in the influence axis – influence based on direct effects
Source: own elaboration

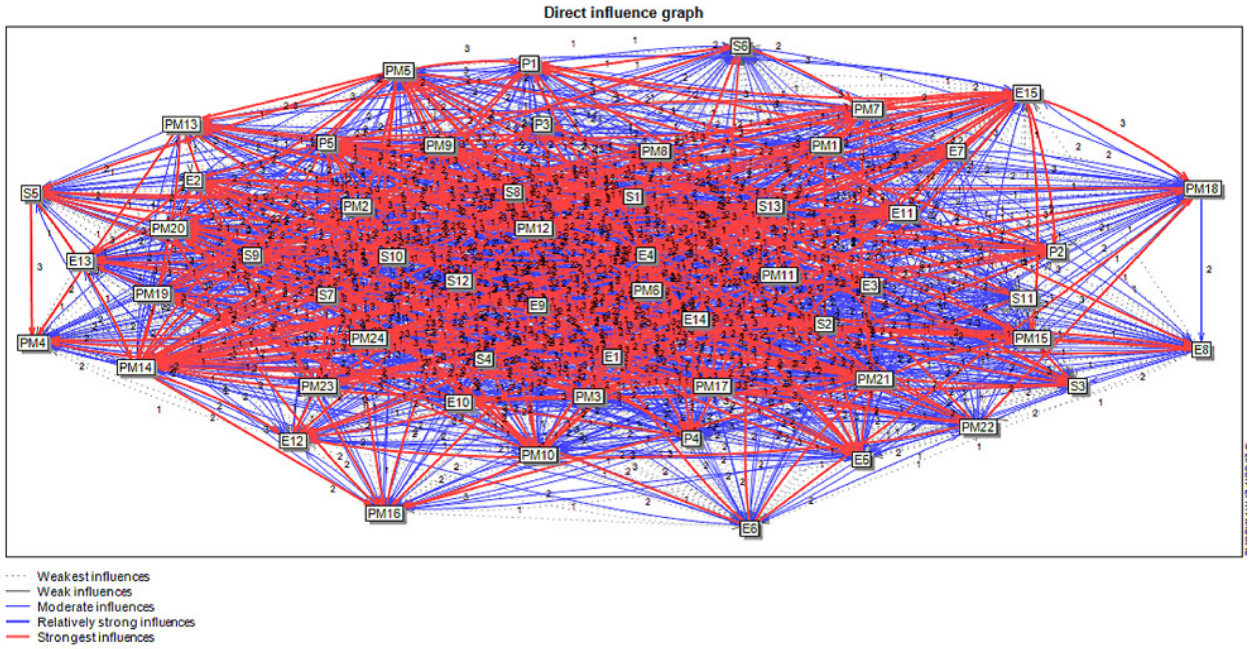

Fig. 4. Diagram of direct relationships between variables (very weak to very strong effects)
Source: own elaboration

Table 6. Distribution of variables based on their classification

Rank	Label	Code	Direct influence
1	E4	Disparity between available facilities and the financial means of low-income groups	288
2	E1	Underdeveloped financial systems for housing provision	275
3	PM14	Lack of coherent long-term housing policies	267
4	PM21	Inadequate identification of low-income demographics	264
5	PM5	Low government investment in housing sectors	262
6	P5	Mismatch between unit size and resident needs	262
7	S13	Social challenges faced by the most economically disadvantaged	259
8	E14	Mortgage repayment challenges	235
9	PM12	Segregation of housing policy from broader policy frameworks	235
10	E15	Financial inability of low-income groups to repair deteriorating housing units	232
11	PM22	Escalating exchange rates and their impacts on housing affordability	230

Source: own elaboration

6. Discussion

This study employs a mixed-methods research design that combines both quantitative and qualitative data collection techniques to identify factors likely to impact the future development of social housing in Iran. Using the Delphi technique, a group of experts (n=11) responded to a survey designed to elicit potential obstacles facing social housing development, initially identifying 57 factors. These variables were then subjected to rigorous analysis using MICMAC software and cross-impact analysis models (Dalkey & Helmer, 1963).

The analysis revealed four key factors critical for future social housing development in Iran. The first challenge identified is the inability of low-income residents to repay housing loans. Rising housing costs, coupled with stagnant or declining wages, create a situation where loan repayment becomes difficult, if not impossible (OECD, 2020). This issue is further compounded by increased living expenses, unemployment and health issues (Central Bank of Iran, 2020). The study underscores the urgent need for innovative programmes that can assist and empower low-income populations to overcome these financial barriers. Continual increases in exchange rates emerged as another critical challenge. Fluctuations

in exchange rates directly impact the costs of construction materials and housing purchases, posing significant obstacles for low-income individuals who rely on loans (International Monetary Fund, 2019). To mitigate this issue, the study emphasises the importance of developing strategies to stabilise exchange rates and provide targeted financial support to vulnerable populations (World Economic Forum, 2019).

A third key challenge relates to the social problems faced by the lowest income deciles in Iran. These populations often grapple with pre-existing social obstacles such as poverty, inequality and limited access to education and healthcare (United Nations Children's Fund, 2018). These underlying issues exacerbate the difficulties they face in securing adequate housing. The study argues that addressing these social problems is crucial for achieving sustainable social housing development in the long term (United Nations Development Programme, 2021). Finally, the research highlights the issue of a disjointed housing policy in Iran. Currently, housing policy operates in isolation from other relevant sectors, such as fiscal policy, economic policy, urban development and transportation planning (Ehsani, 2022). This lack of coordination between different political authorities hinders the effective implementation of the housing initiatives. The study concludes by emphasising the importance of aligning housing policy with other sectors to create comprehensive and successful housing strategies for the future (European Bank for Reconstruction and Development, 2018).

This study identified four key obstacles hindering the future development of social housing in Iran. To address these obstacles and create a more sustainable and equitable system, policymakers should consider implementing the following recommendations:

Integrated housing policy: Housing policy should not operate in isolation. Effective implementation requires coordination with other relevant sectors, such as fiscal policy, economic policy, urban development and transportation planning. A holistic approach that considers these interdependencies is critical for tackling housing obstacles comprehensively (OECD, 2020).

Financial support mechanisms: Low-income residents often face difficulties repaying housing loans due to rising costs and stagnant wages. Policymakers should implement measures to assist these populations, such as income-based repayment plans, loan forgiveness programmes for extenuating circumstances, and targeted subsidies for the most vulnerable populations (World Bank, 2018).

Exchange rate stability: Fluctuations in exchange rates directly impact the costs of construction materials and housing purchases. Strategies to stabilise exchange rates are crucial for mitigating these fluctuations and ensuring affordability for low-income individuals who rely on loans. This may involve adjustments to monetary policy, currency interventions and international economic cooperation (International Monetary Fund, 2019).

Social welfare programmes: Sustainable social housing development requires addressing the underlying social issues that contribute to housing obstacles. Strengthening social welfare programmes to tackle poverty, improve access to education and healthcare and provide robust social support systems can alleviate the burdens faced by vulnerable populations (United Nations Development Programme, 2021).

Our findings align with Zarghamfard et al. (2019) in emphasising the interconnected nature of housing policies with broader societal and economic factors. However, our study goes beyond this by specifically identifying key obstacles such as loan repayment difficulties and exchange rate fluctuations, which received less attention in previous research. While Ghaedrahmati and Zarghamfard (2021) focused on demographic changes as a primary driver of housing policy failure, our study offers a broader perspective that identifies economic and policy coordination issues alongside demographic shifts. Although demographic trends are undoubtedly important, our research suggests that addressing socio-economic and policy-related obstacles is equally crucial for achieving effective social housing development (Mashayekhi, 2018). By building upon previous research and offering a nuanced analysis of current obstacles, this study provides policymakers with actionable recommendations to address the multifaceted issues impeding social housing development in Iran. This comprehensive approach holds the potential to create a more sustainable and equitable social housing system for all.

7. Conclusion

This study successfully achieved its main objective of identifying the key obstacles that could hinder the future development of effective social housing policies in Iran. Through a rigorous mixed-method approach involving expert opinions, the Delphi technique and MICMAC analysis, we identified four critical factors: difficulties in loan repayment, currency exchange rate fluctuations, social issues among low-income groups, and uncoordinated

housing policies. These findings directly address our research questions, elucidating specific obstacles, the economic and social factors affecting social housing, and their complex interactions. Furthermore, by providing targeted recommendations, this study offers valuable insights for policymakers to overcome these obstacles and ensure the programme's success.

While this research offers valuable insights into the future obstacles to social housing in Iran, there are limitations to consider. The study relies on expert opinions and surveys to predict future issues and the unforeseen circumstances that could arise. The study acknowledges the role of social problems in housing difficulties, but a deeper exploration of poverty, inequality and access to social services could be beneficial. Finally, the reliance on expert surveys, while valuable, may not fully capture the lived experiences of those facing housing obstacles. Future research on social housing development in Iran could explore several avenues. Longitudinal studies could track the actual impact of obstacles and implemented solutions over time, providing valuable insights into policy effectiveness. Comparative studies with other countries facing similar challenges could identify best practices for Iran. Further research could examine the root causes of social problems affecting low-income populations and how these issues interact with housing difficulties, informing the development of more targeted social interventions. Finally, engaging low-income residents and stakeholders in participatory action research could provide a more comprehensive understanding of their experiences and priorities, leading to the development of more inclusive and effective housing solutions.

Acknowledgement

The authors would like to express their sincere gratitude to the survey participants for their valuable contributions. We also extend our thanks to the two anonymous reviewers whose insightful comments significantly enhanced the quality of this paper.

References

Aalbers, M. (2016). *Financialization of housing*. Taylor & Francis. Routledge.

Achamwie, P.K. & Danso-Wiredu, E.Y. (2021). The rental system in Ghana's low-income housing communities, challenges and adaptation strategies. *Town and Regional Planning*, 79: 67-78. DOI: http://dx.doi.org/10.18820/2415-0495/trp79i1.8.

Adeoye, D.O. (2016). Challenges of Urban Housing Quality: Insights and Experiences of Akure, Nigeria. *Procedia - Social and Behavioral Sciences*, 216: 260-268. DOI: http://dx.doi.org/10.1016/j.sbspro.2015.12.036.

Afrane, A., Bujang, A.A., Liman, H.S. & Kasim, I. (2016). Major factors causing housing deficit in Ghana. *Developing Country Studies*, 6(2): 139-147. Available at: https://hdl.handle.net/2292/63662.

Al Mulhim, K.A.M., Swapan, M.S.H. & Khan, S. (2022). Critical junctures in sustainable social housing policy development in Saudi Arabia: a review. *Sustainability*, 14(5): 2979. DOI: https://doi.org/10.3390/su14052979.

Allan, A., Soltani, A., Abdi, M.H. & Zarei, M. (2022). Driving forces behind land use and land cover change: A systematic and bibliometric review. *Land*, 11(8): 1222.

Amirahmadi, H. (2019). Housing policy in Iran: Challenges and opportunities. *Journal of Urban Planning*, 22(1): 45-67.

Amirjani, R. (2020). Shushtar New Town: A Turning Point in Iranian Social Housing History (PhD Thesis). University of Canberra).

Amnesty International. (2019). Housing is a Human Right: Iran Report. Retrieved from Archive of the Cabinet Office (2015).

Ampofo, A.J. (2020). Constraints factors to maintenance of government senior high school buildings in Wa Municipal. *International Journal of Management & Entrepreneurship Research*, 2(3): 139-160. DOI: https://doi.org/10.51594/ijmer.v2i3.147.

Asiniwasis, R., Merati, N., Roesler, J., Simpson, E.L., Aubry, R., McMullen, E., Fraess, L., Choi, U.Y., Hinther, K., Chu, D.K. & Jack, C. (2024). The Social and Home Environment: Impacts of Determinants of Health on Atopic Dermatitis, Pathways Toward Solutions, and Unique Considerations for Rural and Remote North American Indigenous Populations. *The Journal of Allergy and Clinical Immunology: In Practice*, 12(2), 290-299. DOI: https://doi.org/10.1016/j.jaip.2023.11.034.

Average, C. (2019). Low income housing problems and low-income housing solutions: opportunities and challenges in Bulawayo. *Journal of Housing and the Built Environment*, 34: 927-938. Available at: https://link.springer.com/article/10.1007/s10901-019-09676-w.

Azizi, P., Soltani, A., Bagheri, F., Sharifi, S. & Mikaeili, M. (2022). An integrated modelling approach to urban growth and land use/cover change. *Land*, 11(10): 1715.

Azkia, M. & Saeedi, M. (2022). Urbanization and socio-economic divides in Iranian cities. *Social Science Quarterly*, 33(4): 78-92.

Bagheri, B., Azadi, H., Soltani, A. & Witlox, F. (2024). Global city data analysis using SciMAT: A bibliometric review. *Environment, Development and Sustainability*, 26(6): 15403-15427.

Bagheri, B. & Soltani, A. (2023). The spatio-temporal dynamics of urban growth and population in metropolitan regions of Iran. *Habitat International*, 136: 102797. DOI: https://doi.org/10.1016/j.habitatint.2023.102797.

Bratt, R.G. (2019). The role of nonprofits in meeting the housing challenge in the United States. *Urban Research & Practice*, 12(1): 7-37. DOI: https://doi.org/10.1080/17535069.2017.1341951.

Central Bank of Iran. (2020). Annual Report on Exchange Rates and Inflation.

Cerón-Palma, I., Sanyé-Mengual, E., Oliver-Solà, J., Montero, J.I., Ponce-Caballero, C. & Rieradevall, J. (2013). Towards a green sustainable strategy for social neighbourhoods in Latin America: Case from social housing in Merida, Yucatan, Mexico. *Habitat international*, 38: 47-56. DOI: https://doi.org/10.1016/j.habitatint.2012.09.008.

Clapham, D. (2018). Housing theory, housing research and housing policy. *Housing, Theory and Society*, 35(2), 163-177. DOI: https://doi.org/10.1080/14036096.2017.1366937.

Cloke, P. & Milbourne, P. (2006). Knowing homelessness in rural England. In: P. Milbourne & P. Cloke, P. (eds.). *International Perspectives on Rural Homelessness*. Routledge.

Cobbinah, P.B. & Niminga-Beka, R. (2017). Urbanisation in Ghana: Residential land use under siege in Kumasi central. *Cities*, 60, Part A: 388-401. DOI: https://doi.org/10.1016/j.cities.2016.10.011.

Dalkey, N. & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management science*, 9(3): 458-467.

Debele, E.T. (2019). Urban housing politics: Dynamics, challenges and coping mechanisms of urban housing problems in Sebeta Town. *Journal of Human Resource Management*, 7(4): 93-98. DOI: https://doi.org/10.11648/j.jhrm.20190704.13.

Delphi, L. (1968). The Delphi method: An experimental study of group process. *Management Science*, 15(10): B294-B303.

DTZ Consulting & Research. (2006). Housing, Economic Development And Productivity: Literature Review, A Report by DTZ CONSULTING & RESEARCH. Greyfriars Gate, England.

Ebekozien, A. (2020). Community participation in affordable housing provision in developing cities: A study of Nigerian cities. *Journal of Human Behavior in the Social Environment*, 30(7): 918-935. DOI: https://doi.org/10.1080/10911359.2020.1772164.

Ehsani, K. (2022). Economic policies and housing affordability in Iran. *Economic Review*, 18(3): 101-119. Available at: http://qjerp.ir/article-1-2093-en.html.

Ehsani, M. (2022). Financial Stability and Housing Market Fluctuations in Iran.

European Bank for Reconstruction and Development. (2018). Regional economic prospects in the EBRD regions: In the shadow of trade conflicts, sustained growth amidst tighter financing conditions. European Bank for Reconstruction and Development.

Fiori, J. (2014). Housing policy in Brazil: The social challenge of urbanization. *Habitat International*, 43: 157-165.

Gallent, N. & Robinson, S. (2011). Local perspectives on rural housing affordability and implications for the localism agenda in England. *Journal of Rural Studies*, 27: 297-307. DOI: https://doi.org/10.1016/j.jrurstud.2011.05.004.

Ghaedrahmati, S. & Zarghamfard, M. (2021). Housing policy and demographic changes: the case of Iran. *International Journal of Housing Markets and Analysis*, 14(1): 1-13. DOI: https://doi.org/10.1108/IJHMA-06-2019-0064.

Ghaedrahmati, S. & Zarghamfard, M. (2020). Housing policy and demographic changes: the case of Iran. *International Journal of Housing Markets and Analysis*, 14(1): 1–13.

Ghaffari, N. (2017). Policy monitoring and housing initiatives in Iran. *Public Administration Journal*, 30(2): 55-72.

Ghazi, A. (2020). Housing Affordability in Tehran: A Socioeconomic Analysis.

Gilbert, A. (2014). Free housing for the poor: An effective way to address poverty? *Habitat International*, 41: 253-261. DOI: https://doi.org/10.1016/j.habitatint.2013.08.009.

Habibi, M. & Saeidi Rezvani, N. (2015). Displacement and social instability in urban Iran. *Urban Studies*, 27(3): 123-140.

Harvey, D. (2008). The Right to the City. *New Left Review*, 53(1): 23-40.

Hochstenbach, C. (2016). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4): 399–419. DOI: https://doi.org/10.1080/14036096.2016.1271825.

Hooghe, L. & Marks, G. (2001). *Multi-level Governance and European Integration*. Rowman & Littlefield Publishers.

Howden-Chapman, P., Bennett, J., Edwards, R., Jacobs, D., Nathan, K. & Ormandy, D. (2023). Review of the impact of housing quality on inequalities in health and well-being. *Annual Review of Public Health*, 44: 233-254. DOI: https://doi.org/10.1146/annurev-publhealth-071521-111836.

Huchzermeyer, M. (2011). *Cities with 'Slums': From Informal Settlement Eradication to a Right to the City in Africa*. University of Cape Town Press.

International Monetary Fund. (2019). Exchange rate volatility and housing markets. International Monetary Fund.

Kellett, R., Christen, A., Coops, N.C., van der Laan, M., Crawford, B., Tooke, T.R. & Olchovski, I. (2013). A systems approach to carbon cycling and emissions modeling at an urban neighborhood scale. *Landscape and Urban Planning*, 110: 48-58. DOI: https://doi.org/10.1016/j.landurbplan.2012.10.002.

Khatami, A. (2019). Financial challenges in Iranian housing provision. *Housing Economics Review*, 14(2): 98-110.

Kimhur, B. (2020). How to apply the capability approach to housing policy? *Concepts, theories, and challenges. Housing, Theory and Society*, 37(3), 257-277. DOI: https://doi.org/10.1080/14036096.2019.1706630.

King, P. (2005). A social philosophy of housing. *Habitat International*, 29: 605-613. Available at: http://hdl.handle.net/2086/683.

Kraatz, J.A., Mitchell, J., Matan, A. & Newman, P. (2015). Rethinking social housing: Efficient, effective, and equitable. *Sustainable Built Environment National Research Centre Research Report*, 75.

Lancet, T. (2017). Urbanisation, inequality, and health in Asia and the Pacific. *Lancet (London, England)*, 389(10077): 1370. DOI: https://doi.org/10.1016/s0140-6736(17)30941-8.

Lefebvre, H. (1967). *Le droit à la ville (The Right to the City - in French)*. Paris: Anthropos.

Leijten, I. & de Bel, K. (2020). Facing financialization in the housing sector: A human right to adequate housing for all. *Netherlands Quarterly of Human Rights*, 38(2): 94-114. DOI: http://dx.doi.org/10.1177/0924051920923855.

Lévy-Vroelant, C., Reinprecht, C., Robertson, D. & Wassenberg, F. (2014). Learning from history: Path dependency and change in the social housing sectors of Austria, France, the Netherlands, and Scotland, 1889–2013. *Social Housing in Europe*, 277-294. DOI: http://dx.doi.org/10.1002/9781118412367.ch16.

Lin, Y., De Meulder, B., Cai, X., Hu, H. & Lai, Y. (2014). Linking social housing provision for rural migrants with the redevelopment of 'villages in the city': A case study of Beijing. *Cities*, 40: 111-119. DOI: https://doi.org/10.1016/j.cities.2014.03.011.

Lund, B. (2011). *Understanding housing policy (2nd ed.)*. The Policy Press.

Madani, R. (2020). Community interaction and housing issues in Iran. *Journal of Social Policy*, 29(1): 67-81.

Mahadevia, D. (2011). Branded and Renewed? Policies, Politics and Processes of Urban Development in the Reform Era. *Economic and Political Weekly*, 46(31): 64-75.

Makinde, O.O. (2014). Housing delivery system, need and demand. *Environment, development and sustainability*, 16: 49-69. DOI: https://doi.org/10.1007/s10668-013-9474-9.

Malpass, P. (2008). Housing and the new welfare state: Wobbly pillar or cornerstone? *Housing Studies*, 23(1): 1–19. DOI: https://doi.org/10.1080/02673030701731100.

Marais, L. (2013). The effectiveness of housing policies in developing countries: Evidence from South Africa. *Housing Studies*, 28(3): 457-478.

Marsh, A. & Gibb, K. (2011). Uncertainty, expectations, and behavioural aspects of housing market choices. *Housing, Theory and Society*, 28(3): 215–235. DOI: https://doi.org/10.1080/14036096.2011.599182.

Mashayekhi, A. (2018). The 1968 Tehran master plan and the politics of planning development in Iran (1945–1979). *Planning Perspectives*, 34(5): 849–876.

Mhlongo, N.Z.D., Gumbo, T. & Musonda, I. (2022). Inefficiencies in the delivery of low-income housing in South Africa: Is governance the missing link? A review of literature. *IOP Conference Series: Earth and Environmental Science*, 1101(5): 052004.

Mhlongo, N.Z.D., Gumbo, T., Musonda, I. & Moyo, T.J. (2024). Sustainable low-income housing: Exploring housing and governance issues in the Gauteng City Region, South Africa. Urban Governance.

Miller, J.D. & Hutchins, M. (2017). The impacts of urbanisation and climate change on urban flooding and urban water quality: A review of the evidence concerning the United Kingdom. *Journal of Hydrology: Regional Studies*, 12: 345-362. DOI: http://dx.doi.org/10.1016/j.ejrh.2017.06.006.

Ministry of Roads and Urban Development, Iran. (2017). Social Housing Plan Document.

Ministry of Roads and Urban Development. (2017). Comprehensive Housing Plan (2017-2022): Understanding the current situation, future outlook, strategic and executive document.

Miraftab, F. (2009). Insurgent planning: Situating radical planning in the global south. *Planning Theory*, 8(1): 32-50. DOI: http://dx.doi.org/10.1002/9781119084679.ch24.

Mitchell, D. (2003). The right to the city: Socialjustice and the fight for public space. Guilfordpress.

Mitlin, D. & Mogaladi, J. (2013). Social movements and the struggle for shelter: A case study of eThekwini (Durban). *Progress in Planning*, 84: 1-39. DOI: https://doi.org/10.1016/j.progress.2012.12.001.

Moghadam, A.S., Soltani, A. & Parolin, B. (2018a). Transforming and changing urban centres: The experience of Sydney from 1981 to 2006. *Letters in Spatial and Resource Sciences*, 11(1): 37–53. DOI: https://doi.org/10.1007/s12076-017-0197-7.

Moghadam, A.S., Soltani, A., Parolin, B. & Alidadi, M. (2018b). Analysing the space-time dynamics of urban structure change using employment density and distribution data. *Cities*, 81: 203–213. DOI: https://doi.org/10.1016/j.cities.2018.04.009.

Moghayedi, A., Phiri, C. & Ellmann, A.M. (2023). Improving sustainability of affordable housing using innovative technologies: Case study of SIAH-Livable. *Scientific African*, 21: e01819. DOI: https://doi.org/10.1016/j.sciaf.2023.e01819.

Mohammadi, H. (2016). Housing infrastructure in urban Iran: A critical analysis. *Urban Infrastructure Journal*, 19(4): 88-103.

Ngcobo, N. (2018). The impact of rural housing policy on the socio-economic status of households: a case study of Vulindlela rural housing project context (PhD Thesis).

Nouri, M.S. & Boujelbene, Y. (2022). Determinants of the export performance of Tunisian SMEs: Analysis through the MICMAC method. *South Asian Research Journal of Business and Management*, 4(1): 1-10.

OECD. (2020). Financial Support Mechanisms for Housing.

OECD. (2020). Housing Policy Toolkit. Retrieved from.

Omran, A., Khorish, M. & Saleh, M. (2014). Structural analysis with knowledge-based MICMAC approach. *International Journal of Computer Applications*, 86(5).

Peppercorn, I. & Taffin, C. (2009). Social housing in the USA and France: Lessons from convergences and divergences. *Urban Planning International*, 3(1): 25-30.

Pons, A. & Rullan, O. (2014). The expansion of urbanisation in the Balearic Islands (1956–2006). *Journal of Marine and Island Cultures*, 3(2): 78-88. DOI: https://doi.org/10.1016/j.imic.2014.11.004.

Population and Housing Census, Iran Statistical Center. (2023). Available at: https://www.amar.org.ir/statistical-information.

Prentice, D. & Scutella, R. (2020). What are the impacts of living in social housing? New evidence from Australia. *Housing Studies*, 35(4): 612-647. DOI: https://doi.org/10.1080/02673037.2019.1621995.

Qadikolaei, M.R., Zali, N. & Soltani, A. (2024). Spatiotemporal investigation of the digital divide, the case study of Iranian Provinces. *Environment, Development and Sustainability*, 26(1): 869-884.

Rangwala, S.C. (1998). *Town planning*. Charatar Publishing House.

Ronald, R. & Lee, H. (2012). Housing policy socialization and decommodification in South Korea. *Journal of Housing and the Built Environment*, 27(2): 111–131. DOI: http://dx.doi.org/10.1007/s10901-011-9257-2.

Saadi, M. (2023). Sustainable urban development and housing foresight in Iran. *Journal of Sustainable Development*, 35(2): 145-162.

Sadeghi, S., Mohammadi, A. & Naderi, M. (2021). Economic disparities and housing provision. *Economic Policy Journal*, 23(5): 112-128.

Saldaña-Márquez, H., Gómez-Soberón, J.M., Arredondo-Rea, S.P., Gámez-García, D. Saldaña-Márquez, H.,Gómez-Soberón, J.M.,Arredondo-Rea, S.P.,Gámez-García, D.C. & Corral-Higuera, R. (2018). Sustainable social housing: The comparison of the Mexican funding program for housing solutions and building sustainability rating systems. *Building and Environment*, 133: 103-122. DOI: https://doi.org/10.1016/j.buildenv.2018.02.017.

Seo, C., Sohn, H., Choi, Y. & Kim, J. (2016). Spatial process for housing prices in Seoul using spatiotemporal local G statistics. *Spatial Information Research*, 24(2): 155-164. DOI: http://dx.doi.org/10.1007/s41324-016-0002-5.

Shahabi, A. (2018). Government investment and housing needs in Iran. *Urban Planning Review*, 20(3): 90-104.

Skutsch, M. & Johnson, M. (2007). Using the Delphi method in health care. *Journal of Advanced Nursing*, 60(1): 78-86.

Soja, E.W. (2010). *Seeking Spatial Justice*. University of Minnesota Press. DOI: https://doi.org/10.5749/minnesota/9780816666676.001.0001.

Soltani, A. & Lee, C.L. (2024). The non-linear dynamics of South Australian regional housing markets: A machine learning approach. *Applied Geography*, 166: 103248.

Soltani, A., Heydari, M., Aghaei, F. & Pettit, C.J. (2022). Housing price prediction incorporating spatio-temporal dependency into machine learning algorithms. *Cities*, 131: 103941.

Soltani, A., Pettit, C.J., Heydari, M. & Aghaei, F. (2021). Housing price variations using spatio-temporal data mining techniques. *Journal of Housing and the Built Environment*, 1-29.

Sururi, A. (2022). A bibliometric analysis of housing and settlement research. *Journal of Quality Measurement and Analysis JQMA*, 18(3): 17-36.

Umbro, M. (2016). Social housing: The environmental sustainability on more dimensions. *Social and Behavioral Sciences*, 223: 251-256. DOI: http://dx.doi.org/10.1016/j.sbspro.2016.05.359.

UN Human Rights Council. (2017). Report of the Special Rapporteur on Adequate Housing as a component of the right to an adequate standard of living, and on the right to non-discrimination. in this context. No. A/HRC/34/51. Geneva: UN.

UN-Habitat. (2017). The New Urban Agenda. Available at: https://www.unhabitat.org/.

UN-Habitat. (2018). Housing for All: The Challenge of Affordability. Available at: https://www.unhabitat.org/.

United Nations Children's Fund. (2018). Social Protection Programs in Iran.

United Nations Development Programme. (2021). Poverty Eradication and Housing Security.

United Nations Human Settlements Programme. (2018). Housing for All: The Challenge of Affordability.

United Nations, Department of Economic and Social Affairs, Population Division. (2019). World Urbanization Prospects: The 2018 Revision (ST/ESA/SER.A/420). New York: United Nations.

United Nations. (2015). Sustainable Development Goals: Goal 11.

United Nations. (2018). The 2018 Revision of World Urbanization Prospects: Data Booklet (ST/ESA/SER.A/420). Population Division of the Department of Economic and Social Affairs. Available at: https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Jan/un_2018_worldcities_databooklet.pdf.

Wetzstein, S. (2017). The global urban housing affordability crisis. *Urban studies*, 54(14): 3159-3177. DOI: http://dx.doi.org/10.1177/0042098017711649.

Winston, N. (2022). Sustainable community development: Integrating social and environmental sustainability for sustainable housing and communities. *Sustainable Development*, 30(1): 191-202. DOI: http://dx.doi.org/10.1002/sd.2238.

World Bank. (2018). Inclusive Cities Approach: Tackling Urban Poverty and Inequality. Available at: https://www.worldbank.org/.

World Bank. (2018). Inclusive Cities Approach: Tackling Urban Poverty and Inequality.

World Bank. (2018). Iran Housing Sector Review.

World Economic Forum. (2019). Future of Construction and Housing.

Yazdani, R. & Ahmadi, L. (2021). Housing quality and middle-class neglect in Iranian urban planning. *Housing Studies*, 24(6): 134-150.

Zadeh, A.V. & Moulaert, F. (2024). Impact of Commodification of Formal Land and Housing Markets in Iran on Decent Housing for Low-Income Households. In: Innovations for Land Management, Governance, and Land Rights for Sustainable Urban Transitions: The Middle Eastern Perspectives. Cham: Springer International Publishing.

Zali, N., Amiri, S., Yigitcanlar, T. & Soltani, A. (2022). Autonomous vehicle adoption in developing countries: futurist insights. *Energies*, 15(22): 8464.

Zanganeh, M. (2020). Policy fragmentation in Iranian housing sector. *Policy Analysis Journal*, 31(1): 76-89.

Zhang, K. & Yan, D. (2023). Enhancing the community environment in populous residential districts: Neighborhood amenities and residents' daily needs. *Sustainability*, 15(17): 13255.