

Original Article

Received: 2025/12/09
Revised: 2026/06/07
Accepted: 2026/06/08



COPYRIGHTS

©2025 The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original authors and source are cited. No permission is required from the authors or the publishers.



HOW TO CITE THIS ARTICLE

Ahani R. Khalili A. Presentation of a process and content model of the housing planning system and its measurement indicators. *Urban Economics and Planning* 7(12):86-109.

DOI: [10.22034/uep.2026.565225.1794](https://doi.org/10.22034/uep.2026.565225.1794)

Presentation of a process and content model of the housing planning system and its measurement indicators

Razieh Ahani¹, Ahmad Khalili^{2*}

1. Master's student in Urban Planning, Faculty of Architecture and Urban Planning, Iran University of Science and Technology, Tehran, Iran
2. Assistant Professor, Department of Urban and Regional Planning, Faculty of Architecture and Urban Planning, Iran University of Science and Technology, Tehran, Iran

Abstract

United Nations reports indicate that approximately one-third of the global population experiences some form of housing shortage. Most existing solutions tend to be temporary rather than addressing the root causes, resulting in a lack of coordination among different planning levels and limited transparency regarding the roles of involved institutions. A primary cause of this worldwide housing challenge is the absence of a cohesive framework that includes all sectors of the housing planning system – one that clearly defines the mechanisms of its components and offers a comprehensive view of the entire planning system. This research aims to analyze the concept and identify indicators of a housing planning system, and to propose a process- and content-based model as well. Using an inductive part-to-whole approach, the study strives to make housing planning more transparent as a distinct component of urban policymaking. By leveraging credible articles from Scopus and Web of Science alongside global best practices, this work is classified as applied and archival research. The findings include a 72-indicator system for the housing planning system in its broad global sense (e.g., economic indicators like the housing-price-to-income ratio, or institutional indicators like the level of coordination from national to local levels). Additionally, it presents a process and content model consisting of three levels: the outer layer (macro theories and contextual factors), the planning process (legal structure, governance, finance, and demand-supply management), and the measurement and evaluation level (covering housing quality and process assessment), clearly defining the internal relationships between these components.

Keywords

Comparative analysis
conceptual model
housing indicators
housing planning system
housing policies

* Corresponding Author: akhalili@iust.ac.ir

1. Introduction

Raising the issue in the world and Iran: in the current era, despite significant progress in various fields, several countries worldwide still struggle with numerous issues in the field of housing (Gallent et al., 2024; Shama & Motlak, 2019) public planning authorities allocate land for development within local plans. The process is top-down and public-sector led, corralling land value to selected locations in support of the infrastructure investments needed to progress development. But in rural areas in England, an unplanned, exceptional process of selecting land for affordable housing has existed since 1991. 'Rural Exception Sites' (RES. According to the Habitat report in 2023, 2.8 billion people in the world have some kind of housing shortage; in 2020, the total slum population reached 1.1 billion, and even in developed countries, we face at least 318 million homeless people (Silva et al., 2024; UN-Habitat, 2023). Therefore, access to housing is a major challenge not only in Iran but also throughout the world, reflecting the necessity of housing planning (Pastrana & Vols, 2024). In Iran, despite the establishment of numerous but fragmentary laws and policies on housing and their implementation in different periods, the lack of a long-term perspective on how to solve the housing problem and the lack of accurate statistics on the effectiveness of programs, along with obstacles such as lack of financial resources and an incomplete institutional system, have caused numerous gaps in housing programs and policies (Emami Qafari, 2019).

Statement of the need for research: one of the most fundamental reasons for the emergence and continuation of such a major crisis is the lack of a specific framework for the housing planning system and the lack of integrated management of urban housing (Neto & Arreortua, 2020). Despite extensive studies on the right to adequate housing for all individuals and the results of various housing policies worldwide, the housing planning system as a single and distinct whole has not yet been examined in depth (Silva et al., 2024). Various studies have addressed different aspects of this issue, but none of them have recognized it as a comprehensive area with internal mechanisms. Most solutions to address housing problems have also been piecemeal, resulting in a lack of coordination at various levels and the lack of transparency in the roles of the institutions involved (UNDP, 2017). Thus, given the growing housing crisis in the world, addressing this problem fundamentally seems essential.

Research objectives and questions: the present study has two main objectives. The primary objective is to conceptualize and identify indicators for evaluating and measuring the housing planning system in a general sense worldwide. The second objective is to identify the various dimensions of housing planning and present a conceptual, process, and content model of the housing planning system. Therefore, at the end of this research, the questions corresponding to each research objective will be answered.

1. What is the concept of the housing planning system, and what are its evaluation and measurement indicators in a general sense in the world?

2. What are the different dimensions of housing planning, and how are they related to each other in a conceptual, process, and content model?

This research first conceptualizes and analyzes the subject by identifying definitions of the housing planning system in the global literature; it then examines the macro theories supporting the subject, the historical evolution of housing planning, and the conceptual models of the subject. Finally, global theoretical and empirical texts is reviewed with the aim of thematic classification, comparative comparison of texts, and presentation of indicators of the global housing planning system to obtain a process and content model of the subject through the part-to-whole inductive method.

2. Research background

Examining previous studies indicates that a significant number of them have been written to develop an index system in the literature on the subject of the housing planning system (Adabre & Chan, 2020; Baratta et al., 2023; Faraji et al., 2024; Gan et al., 2017; Nuuter et al., 2015; Ng et al., 2017). Another group of studies has presented stakeholder-oriented models in the housing system and has demonstrated the mechanism of the three sectors: government, private, and public (Angel et al, 1993; Olanrewaju et al., 2017). Some researchers have presented key success criteria for housing planning (Beard, 2021; Orihuela et al., 2017) and how of inter-institutional relations and participation in the housing system (Angel et al, 1993; Hofmann, 2022). Others have examined the vital indicators of the housing system from policy-making and need-assessment to planning, design, and implementation (Adabre & Chan, 2018). Some studies have presented a model for assessing the quality of sustainable and affordable housing in design and implementation, proposing design standards and the

degree of compliance with various criteria (Orihuela et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021), while others have examined the planning constraints and management challenges of the housing system (Berglund et al., 2020; Bramley, 1998, 2013). Finally, some have described the significant differences in housing indicators between different countries and the economic and social conditions in dealing with the housing system and have compared the housing systems of countries (Bramley, 1998; Miao & Maclellan, 2017; Nuuter et al., 2015). Some domestic studies have also emphasized the dimensions and components affecting housing prices (Aras et al., 2024; Varahrami, 2025), proposed policies for investment and prosperity in housing markets (Sabermanesh et al., 2020; Piri et al., 2023), housing planning foresight (Salavati et al., 2023), and quantitative indicators of strategic planning for sustainable urban housing (Arian Kia et al., 2023). However, none of the previous studies has presented a comprehensive framework that considers all dimensions of the housing system in a comprehensive and unobstructed manner. This means that each of these studies has focused on a part of the overall housing planning system without considering the overall framework that includes the components and relationships of this system in relation to each other. Therefore, the present study seeks to fill this gap by examining authoritative global texts.

3. Methodology

This section describes the layers of research onion and the research method. The research onion is a six-layer pattern that identifies the philosophy, approach, strategy, method selection, time period, and data collection and analysis method. The current study is practical in nature, based on its philosophy and relevance to solving real-world problems. Therefore, it is classified as action-oriented research, with an analytical-explanatory research method. The second layer indicates an inductive approach, as it proceeds from details to generalities. The third layer involves archival research, examining theoretical and empirical studies and documents to develop a comprehensive pattern. The subsequent layers involve a single-method approach with a cross-sectional time horizon. Data collection is library-based, focusing on theoretical texts and empirical documents from both domestic and international sources to identify components of the housing planning system and their current processes. Primary sources include authoritative documents and specialized articles systematically

gathered from Scopus, Web of Science, and Google Scholar using keywords such as housing planning, urban planning, and housing policy. While this study does not focus on a specific case, it analyzes empirical documents related to housing planning in 12 countries, providing valuable lessons and some success in this area. Singapore's public housing program, Vienna's social housing program in Austria, Denmark's Housing for All program, Japan's public housing program, Germany's social housing program and its sustainable and affordable housing plan, South Korea's public housing program and its long-term rental program, Australia's national housing program and its housing allowance program, England's national housing program and its sustainable communities program, the US public housing program, the US rental housing subsidy program for low-income households, China's social housing program including the affordable housing plan, public rental housing and shared housing in China, Brazil's My Home-My Life program, and India's Affordable Housing for All program are among these empirical study examples. The research explores the global housing planning system through literature review and case studies. It involves seven stages: examining concepts, historical development, macro theories, conceptual models, and related theoretical and empirical texts. Through comparative analysis and thematic classification of 18 theoretical studies, the research concludes with a content and process model for the housing planning system, along with 72 related indicators. As part of this process, an inductive approach is used to synthesize components from various sources into a unified content and process model that clarifies both the content and components of the housing planning system, as well as the ongoing processes within it.

4. Findings

In this section, the concepts of the housing planning system in the global literature, the historical evolution of housing planning, and supporting macro theories and conceptual models of the subject will be examined, along with a review of 18 theoretical studies and 12 empirical documents in the field of housing planning systems.

4.1 Housing planning system in world literature

The concept of the housing planning system has undergone profound changes during political and social developments, and despite many similarities,

there are also differences between these definitions. For example, some studies have seen the definition of housing planning system from a process perspective and described the components of this process. A group of authors believed that the housing planning system consists of a complex network of institutions and actors, both governmental and non-governmental, whose interrelationships constitute all stages from demand management to supply within the framework of legal and financial relations (Arku, 2019; Robinson, 2003; Yan et al., 2021; X. Q. Zhang & Ball, 2016; Zhao & Zou, 2025). Others proposed their definition from a managerial and content perspective, based on the role of stakeholders and beneficiaries and their relationship in the housing system. They believe that housing management includes governance practices with varying degrees of concentration, meaning a combination of administrative systems and market mechanisms and a housing delivery process that requires the simultaneous participation of public and private institutions, based on complex patterns of interaction between them and the arrangement of tasks, institutions, and resources (Beer, 2011; Lin, 2018; McDermont, 2007; Olanrewaju et al., 2017; B. Zhang, 2020; Zhou, 2012). On the other hand, some studies have studied this area from a policy perspective and defined the general concept of housing policy, which is very close to the concept of housing planning system, but they have used the term policy/policy instead of planning system. They believe that this concept is defined based on the dominant political ideology in each country's planning system and consists of planning and policy as a form of intervention in the market, as well as the rules and procedures by which different parties, in cooperation with each other, manage the housing sector using the tools available to them (Gurran & Whitehead, 2011; Kholodilin, 2022; Needham, 2011; Paris, 2007; Silva et al., 2024). Finally, by agreeing on all the definitions mentioned, we can arrive at a comprehensive and complete definition of the housing planning system, which is as follows: the housing planning system consists of an integrated institutional structure, including specific relationships between stakeholders at all levels, with regard to the governance and participation of various sectors of housing demand assessment, financing, and supply, which pursues the goal of identifying and properly managing supply and demand through policy tools and framing laws and regulations.

4.2. Historical evolution of housing planning

The historical development of housing planning can be divided into six main periods. The first period dates back to before housing planning was recognized in the 1940s. Initially, the connection between housing and urban planning was acknowledged in the English Housing and Town Planning Act of 1910. However, until the 1930s, a significant gap persisted between the two, especially in the demand and supply of housing following the war (Gurran & Whitehead, 2011; Marcuse, 1980; Olcay, 2020). The second period, after World War II, in the 1950s and 1960s, saw functional housing policies and the dominance of industrial economic models lead to migration of workers to city outskirts, increased urbanization, illegal land acquisitions, and shortages of services and infrastructure. With support from local institutions and infrastructure development, these settlements were formalized as the primary method of housing production in developing countries. The establishment of housing ministries in the United States in 1959 and the World Bank's involvement in direct housing financing in 1960 marked the formal sector's entry into housing development (Leon, 2020; Ward, 2011). The third period, from the 1970s to the mid-1980s, was characterized by structuralist paradigms, where the independence and industrialization of less developed countries, along with low-cost labor, made informal settlements and self-supporting housing for workers integral to those cities. During the same period, in developed countries, governments played a direct role in financing and housing construction. The 1976 Habitat I conference, also known as the United Nations Human Settlements Programme, laid the groundwork for subsequent Habitat conferences that brought housing issues to the attention of the scientific community and policymakers (Buckley & Kalarickal, 2005; Gurran & Whitehead, 2011; Olcay, 2020; Shucksmith & Sturzaker, 2011; Ward, 2011; Zhang & Ball, 2016). The fourth period coincided with neoliberal paradigms from the mid-1980s to the 1990s, marked by the emergence of the World Bank reducing direct government involvement, eliminating support programs and housing subsidies, and resulting in decreased income and housing affordability. This political shift created a need for policies guiding the private sector and positioned the government as a facilitator in housing markets. The withdrawal of the World Bank from direct interventions also spurred private financial institutions to enter the housing

market. Additionally, the lack of data on housing demand led to the development of the 1989 World Bank Housing Indicators Program and the United Nations Human Settlements Programme to gather data from 53 cities, forming the first empirical basis to assess the global policy impacts on housing supply (Arku, 2019; Buckley & Kalarickal, 2005; Gurran & Whitehead, 2011; Shucksmith & Sturzaker, 2011; Ward, 2011; Zhang & Ball, 2016). The fifth period, from the late 1990s to the 2010s, viewed housing as a key component of sustainable cities. International development agencies, such as the 1996 Habitat II conference, initially approached housing with a focus on equity and providing shelter for all, but gradually placed greater emphasis on improving housing quality and addressing social issues (Arku, 2019; Baker & Evans, 2016; Leon, 2020; Olcay, 2020). The sixth period, from the 2010s onward, has emphasized decentralization, institutional strengthening, and good governance in housing. Practical participatory governance has become more prominent. Developments in new housing finance systems influenced by complex economic factors, discussions about housing policy as a coordinating framework, the introduction of rental and other tenure options, and concerns such as sustainable housing, urban regeneration, slum upgrading, managing urban sprawl, protecting cultural heritage, and incorporating digital technologies (including recent efforts in affordable housing management in China) have all marked this period (Arku, 2019; Buckley & Kalarickal, 2005; Leon & Leon, 2020; Olcay, 2020; Ward, 2011; Zhao & Zou, 2025).

4.3. The macro theories supporting the topic

There are many theories in urban planning, each related to housing planning in some way. The following introduces five macro theories that support the research topic, which include principles related to the housing system. The first theory is sustainable development, which is defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. In the housing debate, it is marked with ensuring access for all to adequate, safe, and affordable housing with basic services, and upgrading slums while realizing all dimensions of sustainability – that is, socially acceptable, economically appropriate, technically and physically feasible, robust and environmentally compatible, and managerially and institutionally integrated (Aliu, 2022;

Habitat for Humanity, 2021; Ibrahim, 2020; Meshkini, 2023; Silva et al., 2024; Thörn et al., 2018; Wang et al., 2021). The next theory is participatory planning, a political practice in which state and non-state actors, together with the local community and all marginalized groups, reach a consensus on setting development goals and visions. In the participatory housing planning process, facilitated by planners, all involved groups reflect their priorities and combine expert and local knowledge to address issues such as participation in land use regulations, especially residential, urban renewal and redevelopment, conflicts of interest in neighborhood degradation and transformation interventions, interagency partnerships in financing, and national housing subsidy models (Ahmadova & Yamacli, 2022; Ben-meir, 2017; Friendly, 2019; Kantemeridou et al., 2013; Legacy, 2017; Nae et al., 2019; Shapely, 2011; Zonke & Matsiliza, 2015). The third theory is urban governance. Good urban governance is a set of governance mechanisms that extend beyond the state, combining horizontal networks of public, private, and civil society actors to coordinate, implement, and monitor policies, roles, responsibilities, and resources within the framework of institutional capacity to respond to challenges through participatory processes. In discussions of governance in urban planning and development, the governance of the housing planning system, or housing governance, means the analysis of demand, production and financing system, and supply and housing management; it consists of various institutions that, in coordination with each other, shape the development process (Barakpou & Keivani, 2016; Beer, 2011; Brill, 2022; Deng, 2018; Flint, 2004; Galuszka, 2019; McCann, 2017; Noring et al., 2022; Olanrewaju et al., 2017; Zhou, 2012). The fourth theory, urban renewal, is defined as a process of slum clearance and physical reconstruction that considers other elements, such as heritage conservation, revitalization of economically and socially deprived areas, infrastructure, urban design, as well as achieving the goals of housing sustainability, land value enhancement, and environmental quality improvement. Given the relationship between urban renewal and housing prices, as well as the role of the government in the governance structure of urban renewal and national housing loans, urban renewal is essential to maintain the economy and image of the city and promote the economic benefits of neighborhoods, while the role of markets cannot be ignored in urban housing renewal, housing market prosperity, and attracting capital to

deprived areas by restoring public and private services to them (De Jong & Verkuyten, 1996; Du et al., 2020; Hyra, 2012; Liang et al., 2020; Pezzica et al., 2022; Smets & Watt, 2017; Webb, 2010; Zheng et al., 2014). The fifth theory, the right to the city, refers to a socio-economic and legal-moral right that every citizen has by virtue of being part of the city and belonging to it. It is manifested in various social, political, and economic dimensions, including housing in the urban context and the right to urban life in general. This definition criticizes the privatization and commodification of housing and urban justice. It emphasizes the city's use value over its exchange value, the slogan "cities for people, not for profit," and the extension of the right to residence to the right to participate in placemaking (Aalbers & Gibb, 2014; Attoh, 2011; King, 2019; Pastrana & Vols, 2024; Pérez, 2017; Rolnik, 2014).

4.4. Conceptual models of the housing planning system

This section briefly introduces 14 conceptual models in the field of housing planning systems, explaining their main components to provide a background for the comprehensive conceptual model of the housing planning system presented in this study. The first model is the research by Silva et al., which considers different dimensions of the housing system, including technical and technological aspects, institutional aspects, and economic/social/environmental factors (Silva et al., 2024). Raco et al. demonstrate the role of each in the multi-center regulatory environment of housing institutions in England (Raco et al., 2024). The four main components of Erlwein et al.'s model are actors, rules of the game, distribution of power and resources among the actors involved, discourses, and relationships of the stakeholders (Erlwein et al., 2023). Brill's model describes development actors and their relationships, the role of private institutions in the housing system, the impact of regulatory environments, and how institutional investment in private rental housing is conducted (Brill, 2022). Yu and Xu's research proposes a process model for China's national low-income housing policies, examining the alignment of local government policies with the central government and the balance between them (Yu & Xu, 2022). Zhang's model for Canada's multi-level housing finance

system outlines the components of federal and provincial government partnerships in housing construction and management by the Canada Mortgage and Housing Corporation (Zhang, 2020). Ekpo's research provides a model that encompasses the concept of the context and policies of the housing system, as well as interaction patterns including land, capital, and labor, the scope of action, actors, and outputs (Ekpo, 2019). Lin presents a model for inter-institutional relations involved in the provision of social housing, showing the structure of power relations and their mechanism in providing affordable housing and the role of the public and private sectors (Lin, 2018). Tsemberis' model includes recognizing the characteristics of the demographic and environmental context, the context of intervention in the housing system, and the objectives and outputs of the housing system (Tsemberis & Asmussen, 2016). Ogunnaike et al.'s model consists of four main components and the relationships among them, including enablers (public and private sectors), drivers and organizations (regulatory and financing institutions), residents with different incomes, and housing tenure (Ogunnaike et al., 2013). Bramley's model, which illustrates institutional integration at all levels of housing, consists of needs assessment, supply, financing systems, development control, and land provision, taking into account environmental capacity (Bramley, 2013). Abramsson's model consists of a housing needs assessment to its supply, including household characteristics, income, capital and local housing market, institutional structure of planning and policy-making, and choosing between opportunities despite the constraints for specific actions of the housing system (Abramsson, 2011). Johnson's model shows the position of each component, including the way capital is supplied and secured, and the evaluation of policy outcomes, the method and amount of production, housing development plans, type of ownership, income diversity, and development duration (Johnson, 2007). Yarwood's model is a process model derived from the experience of regional housing management and planning in England with the participation of the public, private, and voluntary sectors, and neighborhood councils, from planning to housing construction (Yarwood, 2002).

Table 1. Conceptual models of the housing planning system

Row	Author's name	Publication year	Model introduction	Main components
1	Silva et al.	2024	Dividing thematic areas of affordable housing based on different dimensions of the housing system	Technical and technological aspects, institutional aspects, economic and social factors, and environmental dimensions
2	Raco et al.	2024	Including the multi-center regulatory environment, housing system institutions, and their duties	Regulation, financing, complaint handling, policy implementation, determining the location, nature, and extent of residential development
3	Erlwein	2023	Components of the housing system in interaction with each other, including actors, power and resources, laws, and discourse	Housing planning actors, rules of the game, power and resources, their distribution among the actors involved, and discourses of the stakeholders
4	Brill	2022	Actor relationships in the London housing system	The role of real estate developers and the private sector, supervision of investors, institutional investment in rental housing
5	Yu & Xu	2020	Process model of China's national low-income housing policies	Institutional adaptation of housing policy at the local and central scales, and balancing local incentives and central government restrictions
6	Zhang	2020	A model for a multi-level institutional and financial housing system in Canada	Limited participation of the federal and provincial governments in housing investment and construction, and management of the Canada Mortgage Corporation
7	Ekpo	2019	The housing development framework and its constituent institutional and non-institutional components	Context, including laws and policies; scope, including government officials and developers; interaction patterns, such as land, capital, and labor; and production of desired outputs
8	Lin	2018	Inter-institutional relations in housing provision and how they work	The role of institutions in providing housing, the role of government and private sector in planning, policy-making, financial management, monitoring, and implementation
9	Tsemberis & Asmussen	2016	Housing system, including context, intervention, and outcome areas	Demographic characteristics and environmental context, intervention section including presentation of a housing model with consumer preference, and outputs and results
10	Ogunnaike et al.	2013	The housing system includes four main components and an explanation of the relationships among these components	Public and private enablers, regulatory framework and financing, income diversification, and housing type and tenure
11	Bramley	2013	Housing system stages and institutional integration up to the local housing level	Forecasting and needs assessment, supply, financing systems, land supply and capacity, and household economics and demography
12	Abramsson	2011	Housing system model, including stages, choices, and limitations	Household characteristics, local housing market, institutional structure, laws and regulations, and choices and constraints in housing actions
13	Johnson	2007	Classification of the housing system structure by defining the position of each component	Characteristics (type of enterprise and subsidy), production structure (cost, method, environment, production rate, density, and scale), and development type (type of ownership, income diversity, compatibility in the vicinity, and development duration)
14	Yarwood	2002	A process model with participation between the public, private, and voluntary sectors in the housing system	Objectives and limitations, housing needs assessment and tenure and preferences, suitable site and verification of plan details, permit application, and proposal of subsidy to housing and construction company

Examining the main components of the conceptual models of the housing planning system, in Table 1, demonstrates that some models achieve the desired goals and outcomes of the housing system in terms of thematic dimensions or the division of tasks of the involved institutions; some other models provide a pyramid of the involved areas or a multi-level model based on the tasks of different levels of planning and financing, or by specifying the factors of the context, its characteristics, and the actors of the field of action based on interaction and intervention patterns. Another type of conceptual models consider the process of determining housing development policies and programs based on need-assessment and existing demand, and providing the required material and non-material resources, up to the implementation stage of housing projects, as a process in the housing planning system. Thus, to present a comprehensive conceptual model that combines all these models, we must use all the aforementioned approaches, both in a process and in the form of examining the various components of the housing planning system, to explain the process and content of the conceptual model.

4.5. Theoretical and empirical texts and identification of housing planning system indicators

This section reviews global literature and reputable international articles as well as housing plans and programs in different countries around the world. After a comparative comparison of these two types of texts and a summary of this literature and studies, an index system for the housing planning system is presented. Through an advanced search in the Scopus and Web of Science databases for a thematic connection with housing planning, as well as the search in housing documents of various successful countries in the field of housing, 18 reputable international articles from 1993 to 2024 and 12 housing programs from 12 countries, covering 2012 to 2023, were selected to be examined in this section. Table 2 represents the 18 studies reviewed to find a system of global general indicators in the field of housing planning, based on the criteria of the expert, study title, year of publication, number of indicators, objective, method, and findings. The studies covered 1993 to 2024. Half of studies belonged to the 2010s (especially 2017, with five studies); and more than a third of the studies belonged to 2020s. Excluding overlaps, a total of 271 indicators were extracted from

these 18 studies, among which the articles Barata et al. (2023) and Gan et al. (2017) provided the highest number of indicators, with 30 and 22 indicators, respectively.

Table 1 suggests that in terms of content, the general trend has been to examine housing indicators across different countries with different economic conditions, income levels, land and housing prices, infrastructure costs, and the impact of regulatory frameworks and financial institutions on access to housing and its quality (Angel et al., 1993; Bramley, 2013; Nuuter et al., 2015; Ng et al., 2017). Some studies have focused on housing planning constraints, including formal constraints and the impact of planning policies on land supply and housing prices, highlighting the improved housing policies to increase the stability of the housing market and the importance of changes in political systems and their impact on the housing system. The prominent role of governance and stakeholders in the supply of affordable housing, the financing sector, and most importantly, coordination between the pillars of governance in housing have been emphasized in recent decades. This category raises issues such as pre-planning and implementation assessments and indicators, including appropriate location and consideration of services and employment for residents, criteria for selecting and prioritizing target groups, as well as integrated management of housing programs and diverse but dedicated funding and revenue streams (Beard, 2021; Bramley, 1998; Gan et al., 2017; Hofmann, 2022; Miao & MacLennan, 2017; Olanrewaju et al., 2017; Scally & Koenig, 2012). Another group of studies has focused on sustainability in the design and implementation of housing projects, focusing on its various dimensions in design standards, such as the degree to which the housing program or plan complies with technical, safety, climate, security, aesthetics, local culture, etc., underscoring the critical success indicators of sustainable affordable housing (Adabre & Chan, 2018, 2020; Faraji et al., 2024; Wei & Wang, 2021). Some researchers have also focused on decision-making methods and tools and fair and transparent allocation of resources in housing projects, as well as the lack of attention to social and welfare services and to the housing planning process as a political and ideological matter, not just a technical one (Baratta et al., 2023; Berglund et al., 2020; Orihuela et al., 2017).

Table 2. Summary of global theoretical literature studies in the field of housing planning systems.

Author	Study name	Year	Number of indicators	Purpose	Method	Findings
Faraji et al.	Affordable housing development criteria	2024	22	Identifying indicators that affect the success of mass housing projects	Delphi technique, AHP method, and case study	Adhering to design principles that are compatible with optimal energy consumption, local materials, and methods, and adapting the design to the local climate
Baratta et al.	New housing policy tools	2023	30	Defining an indicator system for assessing housing quality	Document analysis and literature review	Possibility of evaluating and comparing projects with the designed index system and improving housing quality and reducing energy consumption
Hofmann & Zavare	Better reconstruction and long-term housing recovery	2022	5	Examining housing resilience and the role of insurance in post-disaster recovery	Case study, interview and document analysis	Significant impact of insurance and governance systems on recovery speed
Wei & Wang	Assessing the impact of public housing service quality	2021	15	Determining key factors of public housing service quality in Shanghai	Hierarchical analysis of indicators	Government support and market drive, interaction between factors, and focus on demand-side factors rather than just emphasizing supply
Beard	Housing trust funds at the city level	2021	9	Identifying success factors and lessons from successful examples	Comparative analysis of interviews and policy documents	Empirical data priority (housing needs, incomes), integrated management with other programs, and dedicated revenue streams
Berglund et al.	Inter-sectoral planning for housing provision	2020	11	Examining the political dimensions of inter-sectoral housing planning processes	Multiple case studies and interviews	Technical rather than political perspective, lack of a comprehensive housing policy, and priority of statistical knowledge over objective knowledge
Adabre & Chan	Sustainability assessment model for housing projects	2020	14	Developing a sustainable assessment model for affordable housing projects in Ghana	questionnaire and fuzzy hybrid assessment	Development of the final affordable housing assessment model, including five main criteria, along with 14 corresponding indicators
Adabre & Chan	Criteria for the success of affordable and sustainable housing	2018	17	Developing a conceptual framework to assess the success of these projects	Systematic review and analysis with VOSviewer	Identifying 17 success indicators for sustainable, affordable housing and providing a conceptual framework including product, project, and project management success
Ng et al.	Sustainable housing development indicators	2017	14	Providing a comprehensive conceptual framework for assessing sustainable housing development	Systematic review	Providing a conceptual framework in all dimensions of sustainability and emphasizing the adaptation of indicators to the context
Orihuela et al.	Residential design performance indicators	2017	13	Providing a structured control panel for the housing design phase	Literature review and comparative analysis of programs	Providing a control panel for housing project success criteria and improving monitoring of residential projects
Olanrewaju et al.	Developing a business framework for housing governance	2017	13	The impact of governance on ownership and identifying factors for supply success	Completing the questionnaire and factor analysis	The impact of governance on improving supply, the challenge of financing and shortage of raw materials, and the need for a housing governance framework

Author	Study name	Year	Number of indicators	Purpose	Method	Findings
Gan et al.	How can affordable housing become more sustainable?	2017	24	Identifying sustainability indicators for affordable housing development	Literature review, questionnaire, and nonparametric test	Identifying 24 indicators, emphasizing incentive policies for developers to integrate housing sustainability
Miao & Maclellan	Exploring the middle ground between government and market	2017	7	A categorized framework of changes in the contemporary housing system	Literature study and experiences review	Emphasis on changes in political systems and their impact on the housing system, along with the results and outputs of this system
Nuuter et al.	Comparing the sustainability of the European housing market	2015	18	Assessing housing sustainability in Estonia and developing an assessment system for it	Multi-criteria proportional evaluation method	The impact of economic indicators and social rental housing policies on increasing the sustainability of the housing market
Bramley	Housing market models and planning	2013	11	Examining the impact of housing market economic models on planning in the UK	Econometric model analysis and comparative comparison	Land constraints reduce supply and increase prices, local policies lead to reduced supply in high-demand areas
Scally & Koenig	Redefining the outcomes of affordable rental housing development	2012	19	Providing a framework for evaluating the results of affordable rental housing development	Systematic review and presentation of a conceptual framework	The positive effects of affordable housing at the household/project/community levels, the need for a comprehensive assessment of housing policy, and the lack of household-based data
Bramley	Planning restrictions and the impact on residential land supply	1998	11	Investigating the impact of land use planning on residential land supply, density, and the housing market	Cross-sectional statistical analysis, regression modeling, and factor analysis	Identifying the four main dimensions of planning constraints, the greater tendency of wealthy regions towards restrictions and poor regions towards policies facilitating construction
Angel et al.	Housing indicators program	1993	10	Developing new institutional frameworks for managing the housing sector	Questionnaire and secondary data analysis	Strong relationship between infrastructure costs and housing prices, and the impact of regulations and financial institutions on housing access and quality

In the next section, the experiences studied in 12 countries, including successful programs in housing systems in various European, American, Asian, and Australian countries, published between 2012 and 2023, is reviewed. Table 3 represents each experience, including the goals, methods, and outputs and results of the program or plan. The oldest plans in the global experiences is a housing program in Australia in 1912, and the newest plan is in Denmark in 2023. However, the share of experiences in the two decades of 2010 and 2020 is equal. The experiences in the housing field of Singapore, Austria, Denmark, Japan, Germany, South Korea, Brazil, and India were selected as successful examples with remarkable results in housing planning. The experiences in Australia, England, the United States, and China were also selected and reviewed due to the detail of their plans and programs, as well as the presence of comprehensive

and complete indicators for the success of housing programs. After extracting, selected for review due to the detail of their plans and programs, as well as their comprehensive and complete indicators for the success of housing programs. After extracting, reviewing, and analyzing the approaches, objectives, methods, and results and outputs of these experiences in Table 3, it was revealed that, generally, in Asian countries such as Singapore, Japan, South Korea, China, and India, the dominant approaches in housing planning have been to emphasize the role and duties of the government in providing affordable housing for the general public, especially low-income groups, and comprehensive planning and developing a supportive, but precise, and strict legal framework to provide land and housing through long-term leasing and entrustment or increasing ownership, as well as controlling housing speculation (Keon et al., 2015;

PMAY Guidelines, 2021; Ummah, 2019; Urban Renaissance Agency, 2021; Yu & Xu, 2022). In European countries, such as Austria, Denmark, Germany, and the United Kingdom, policies such as rent control, sustainable construction incentive policies, housing construction subsidies for private developers, increased government budgets for social housing, and the development of laws in accordance with energy efficiency requirements in housing, as well as financial support programs, such as low-interest loans and rental subsidies, have been on the agenda, and government relations are less visible in empirical studies of these countries (Ameew Chew, 2022; Bramley, 2016; Brill, 2022; Denmark Statistics, 2024; Droste & Knorr-Siedow, 2014; Raco et al., 2022; "German Social Housing," 2017). In addition, in countries such as Brazil, the focus has been on policies to reduce the population living in informal settlements, improve the quality of housing construction, and better location of projects near urban centers and services, as well as the impact of housing programs on poverty reduction and job creation (De Brito et al., 2020). In countries like the United States, some European nations, and particularly in South America, such as Brazil, policies aimed at reducing homelessness and enhancing quality of life are implemented by evaluating the impact of various programs, as well as providing financial assistance and housing loans (Ameew Chew,

2022; De Brito et al., 2020; Olsen & Zabel, 2015). In Australia, improvements to housing laws are achieved through state and local government executive guidelines, alongside support programs such as low-interest loans and rental subsidies. This approach reflects a more comprehensive focus on various aspects of the housing planning system, particularly its institutional and governance dimensions, to offer multifaceted solutions to its challenges and obstacles (Davison et al., 2012; Gurran et al., 2018). The results of these studies, such as annual housing policy reports, controlling rents and housing prices, reducing inequality in housing allocation, constructing housing projects, etc., have been in line with achieving goals such as responding to potential housing demand and meeting its needs fairly and for all income groups, especially the low-income group, reducing the gap between supply and demand, reducing homelessness, improving living conditions in deprived neighborhoods, and encouraging sustainable urban development and the participation of various institutions in housing planning. The total number of indicators mentioned in all 12 experiments was 277, excluding possible overlaps. The Japanese housing program, with 30 indicators, and Vienna, Austria, with 27 indicators, had the highest number of indicators among these experiences.

Table 3. Summary of global experience studies on housing planning system

Program name	Organization	Year	Number of indicators	Purpose	Method	Outputs
Singapore's public housing program	Development Board of Singapore	2018	20	Providing housing for the general public, reducing housing shortages, and strengthening ownership and ethnic diversity in neighborhoods	Housing data analysis, field studies, and comparative studies	Designing a 99-year lease system for government lands and annual reports on housing market developments
Vienna's social housing program	Municipality of Vienna and public housing development companies	2022	27	Providing quality housing for all citizens, maintaining social diversity, environmental sustainability, and strengthening public ownership	Demographic data analysis, comparative studies, and economic evaluation	Construction of more than 220,000 social housing units, creation of mixed neighborhoods, reduction of housing inequality, and rent control in the project samples
Denmark's housing for all program	Ministry of Transport and Housing of Danish	2023	20	Providing affordable housing for all segments of society, sustainable urban development, and promoting social and cooperative housing	Field studies, demographic data analysis, and public participation	Social housing development reports, land use maps and areas allocated to housing, and incentive policies for sustainable construction

Program name	Organization	Year	Number of indicators	Purpose	Method	Outputs
Japan's public housing program	Housing Office of the Ministry of Land and Infrastructure of Japan	2020	30	Providing housing for low- and middle-income groups, and sustainable urban development with urban compaction and density restrictions	Analyzing statistics and successful examples, and simulating the effects of programs on the market	Construction of large residential complexes, development of earthquake-resistant housing construction standards, and private sector incentive policies for social housing construction and renovation
Germany's social housing program and sustainable housing plan	Federal Ministry for Housing, Urban Development of German	2014 & 2017	21	Providing housing for low-income groups in large cities, increasing social housing with controlled rents, and promoting sustainability	Statistical analysis, economic modeling, and comparative comparison with other countries	Construction subsidies for private developers, energy efficiency requirements, increased government budget allocated annually to social housing, and implementation of pilot projects
South Korea's public housing program and long-term rental program	Ministry of Land, Infrastructure, and Transport of South Korea	2015	25	Controlling the increase in housing prices, reducing speculation in the real estate market, sustainable development with a focus on renovating run-down neighborhoods, and increasing the share of rental housing in the housing market	Secondary data analysis, field studies, economic modeling, and comparative studies	Increasing the construction of public housing with controlled rents, introducing a variety of tenancy models (such as rent with the right to buy), developing stricter laws to control housing speculation, and developing urban regeneration projects in large cities
Australia's national housing program	Department of Housing and Community Services of Australia	2012 & 2018	24	Increasing access to housing, reducing homelessness, improving housing security, diversifying housing types, and reducing market pressure	Statistical and field studies, comparison with other countries, and economic simulation	Policy reports to improve housing laws, implementation guidance for state and local governments, financial support programs, and model social housing projects
England's National Housing Program	UK Department for Housing and the Centre for Housing Studies	2021	22	Increasing housing supply, improving quality, reducing the gap between supply and demand, and supporting local communities and sustainable development	Quantitative and qualitative analysis and modeling to predict needs	Policy reports for the government, a database of housing prices and access, implementation plans for new housing construction, and socio-economic impact assessments of programs
America's public housing program	US Department of Housing and Urban Development	2015	20	Providing housing for low-income families and the homeless, improving conditions in deprived neighborhoods, and promoting private participation in housing construction	Analyzing statistical and field data and assessing socio-economic impacts	Annual reports on the number of housing units built or renovated, assessments of the impact of programs on reducing homelessness and improving quality of life, and mortgage data
China's social housing program	Ministry of Housing and Urban-Rural Development of China	2020	21	Reducing the class gap in access to housing, controlling the housing price bubble, and promoting sustainable urbanization	Big data analysis, qualitative and comparative studies, and economic simulation	Declining rental prices in second and third-tier cities, increasing home ownership rates in urban areas, and criticism of construction quality and unfair distribution in some provinces

Program name	Organization	Year	Number of indicators	Purpose	Method	Outputs
Brazil's My Home, My Life Program	The Brazilian government, in collaboration with the Ministry of Cities	2020	24	Creating jobs in the construction sector, improving access to housing with government subsidies, and reducing informal settlements	Statistical and field data, program impact assessment, and comparison with global programs	Relative decrease in the population living in informal settlements, criticism of the quality of construction and location of some projects, and impact on poverty reduction and job creation
India's Affordable Housing for All Program	Ministry of Housing and Urban Affairs, Government of India	2020	23	Providing housing for low-income groups, developing infrastructure along with housing, and using sustainable construction technologies	Statistical, field, and comparative analysis, and economic modeling of housing financing	Development of rapid construction technologies and socio-economic impact assessment reports (such as reducing slums in some cities)

4.6. Comparative comparison of theoretical and empirical studies

A closer examination of the theoretical and empirical literature reveals that housing demand and access management is the most frequently addressed category, comprising 27.7 percent of the studies. This is followed by finance and land and resource provision, as well as housing management and evaluation during and after supply, both at approximately 18 percent. The housing legal and planning structure ranks third with 15.2 percent, while housing system governance accounts for 11.1 percent. Notably, the housing physical-spatial-environmental quality has the lowest representation, at about 9.7 percent. This indicates a need for further research in the areas of planning, governance, and the quality of housing provided.

However, if we examine separately which fields each type of study has been included in, and then compare theoretical and empirical studies to determine which type of texts each field has been studied in, we can see that among theoretical texts, the subject area that has received the most attention is finance and land and resource provision, with 27.2 percent. The lowest percentage is housing governance, with 1.5 percent. After the financial field, the following are the housing physical-spatial-environmental quality, with 24.4 percent, housing demand and access management, with 19.3 percent, housing legal and planning structure, with 13.6 percent, and housing management and evaluation during and after supply, with 10.2 percent. In contrast, empirical studies show the highest percentage of housing demand and access management, with 26.9 percent, and the lowest percentage of housing legal and planning structure, with 9.1 percent. Meanwhile, in the second to fifth place, respectively, are housing management and

evaluation during and after supply, with 17.8 percent, housing system governance, with about 17 percent, finance and land and resource provision, with 16.1 percent, and housing physical-spatial-environmental quality, with 12.8 percent.

These studies show that the most and least discussed topics in theoretical and empirical texts differed. Theoretical texts have primarily addressed the financing and resource provision in the housing system and the physical quality of housing, with little attention paid to housing system governance and management during and after supply, as well as the housing legal and planning structure. On the other hand, empirical and practical studies have primarily focused on managing demand and access to housing, with little attention to issues such as governance, financial and resource provision, housing quality, and legal structure and planning in the housing system.

5. Discussion

After thematic classification of the material and presentation of the indicators mentioned in theoretical and empirical studies, as well as finding points of commonality and difference between them, this section presents a process and content model of the housing planning system.

5.1. Thematic classification of studies

Based on the review of these studies, the issue of the housing planning system can be broken down into its constituent areas, which can be divided into six subject categories. These categories are presented in Table 4, along with explanations and theoretical and empirical sources for each. The first category, titled housing demand and access management, examines socio-

economic areas such as the income level of the target household, the level of equitable access of people and low-income groups to housing, calculating the affordability of housing prices relative to annual income, the level of housing shortage, the level of adequate/unauthorized/dilapidated/vacant housing stock, homelessness, and the level of housing ownership. Housing legal and planning structure is the second subject category. This category describes the functions of housing programs, including determining the location of housing projects, the number of units planned for different income groups, the program's schedule, the waiting time for applicants, the approval rate, the time required to issue permits, and the impact of policies on housing prices. Additionally, the flexibility, reviewability, and the degree of compliance of housing programs with superior programs fall in this category. In the third category, called the finance and land and resource provision, the amount and diversity of income sources in financing housing construction, the financial sustainability of housing institutions and programs, the amount of government subsidies for the housing sector, housing loans and their interest rates and repayment terms, calculating the operating costs of implementing a housing construction project, the return on private investment in housing, and the correct forecasting of housing budget allocation relative to implementation costs are examined. In addition, concerning land and resources, issues such as the share of land for housing development, land use efficiency in terms of optimizing housing density per hectare, human resource provision, and optimal use of local resources and forces are examined. The fourth category, housing management and evaluation during and after supply, deals with the number of residential units built annually, the rate of progress and completion of housing projects, the ratio of supply to

potential housing demand, and the use of new technologies and methods in housing construction. This category also measures the satisfaction of residents and beneficiaries with housing, the impact of new housing on the value of surrounding properties and the residents' health, the legal impact on the housing project, social impacts, the level of construction violations, and in general, the efficiency of housing management after construction. The fifth category, called housing physical-spatial-environmental quality, examines the quality of housing construction, meaning the compliance of the housing project with various standards in design, as well as the design of housing in accordance with human scale and with sufficient space. It emphasizes the use of environmentally friendly materials, energy efficiency in residential units, and proper access to various infrastructures and facilities. In addition, the average life of buildings and the rate of reconstruction of dilapidated housing are among the important physical criteria in this category that are used to measure the quality of existing housing. Finally, the last category is housing system governance, which fully describes the type of governance and innovative management model in the housing system, mentioning issues such as coordination between national and local institutions to reduce conflicts and duplication of roles in the housing system, the existence of oversight committees in the planning process to the implementation of housing projects, the diversity of stakeholders involved in decision-making and their level of participation, transparency at all levels, especially in housing allocation, as well as public access to housing information, the level of efficiency and responsiveness of the responsible institutions to residents' complaints, and finally, the level of public presence and influence in housing planning and policy-making meetings.

Table 4. Thematic classification of the housing planning system

Row	Category title	Description	Resources
1	Housing demand and access	Examining the economic-demographic areas of demand management, access to housing for low-income groups, affordability of housing prices, housing supply and shortage, homelessness, and the impact of population growth and inflation on demand	(Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Denmark, 2024; Droste & Knorr-Siedow, 2014; Gurrán et al., 2018; Keon et al., 2015; Olsen & Zabel, 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022) (Adabre & Chan, 2018, 2020; Angel, S., Mayo, S. K., & Stephens, 1993; Baratta et al., 2023; Beard, 2021; Berglund-Snodgrass et al., 2020; Bramley, 1998, 2013; Faraji et al., 2024; Gan et al., 2017; Miao & MacLennan, 2017; Nuuter et al., 2015; Olanrewaju et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021; Ng et al., 2017)

Row	Category title	Description	Resources
2	Housing legal and planning structure	Housing plans and their functions, including determining housing locations, the number of planned units, the time from planning to implementation, approval of building permits, the impact of financial and planning constraints on supply, the ability to review policies, and the degree to which housing plans are consistent with upstream plans	(Adabre & Chan, 2018; Baratta et al., 2023; Beard, 2021; Bramley, 1998, 2013; Faraji et al., 2024; Hofmann, 2022; Nuuter et al., 2015; Olanrewaju et al., 2017; Orihuela et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021; Ng et al., 2017) (Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Droste & Knorr-Siedow, 2014; Gurran et al., 2018; Keon et al., 2015; Olsen & Zabel, 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022)
3	The finance and land and resource provision	Financing implementation costs and diversifying its revenue sources, financial sustainability of institutions, government subsidies and loans, private investment in housing, proportional allocation of budget to implementation, land provision and efficiency of its use, and provision of human resources and resources	(Adabre & Chan, 2018, 2020; Angel, S., Mayo, S. K., & Stephens, 1993; Baratta et al., 2023; Beard, 2021; Bramley, 1998, 2013; Faraji et al., 2024; Gan et al., 2017; Hofmann, 2022; Miao & MacLennan, 2017; Nuuter et al., 2015; Olanrewaju et al., 2017; Orihuela et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021; Ng et al., 2017) (Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Denmark, 2024; Droste & Knorr-Siedow, 2014; Gurran et al., 2018; Keon et al., 2015; Olsen & Zabel, 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022)
4	Housing management and evaluation during and after supply	Number of units built annually, the ratio of supply to potential demand, progress and completion rate of housing projects, new construction methods, residents' satisfaction, impact of housing on surrounding property values and residents' health, legal and social impacts of housing projects, rate of construction violations	(Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Denmark, 2024; Droste & Knorr-Siedow, 2014; Gurran et al., 2018; Keon et al., 2015; Olsen & Zabel, 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022)(Adabre & Chan, 2018, 2020; Angel, S., Mayo, S. K., & Stephens, 1993; Baratta et al., 2023; Berglund-Snodgrass et al., 2020; Faraji et al., 2024; Gan et al., 2017; Miao & MacLennan, 2017; Nuuter et al., 2015; Olanrewaju et al., 2017; Orihuela et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021)
5	Housing physical-spatial-environmental quality	Housing construction quality, compliance of the housing project with safety/environmental/aesthetic/local standards, design appropriate to human scale and per capita, use of environmentally friendly materials and energy efficiency, appropriate access to facilities and infrastructure, and average life of buildings and renovation rate of dilapidated housing	(Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Denmark, 2024; Droste & Knorr-Siedow, 2014; Gurran et al., 2018; Keon et al., 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022) (Adabre & Chan, 2018, 2020; Angel, S., Mayo, S. K., & Stephens, 1993; Baratta et al., 2023; Berglund-Snodgrass et al., 2020; Bramley, 1998; Faraji et al., 2024; Gan et al., 2017; Hofmann, 2022; Nuuter et al., 2015; Olanrewaju et al., 2017; Orihuela et al., 2017; Scally & Koenig, 2012; Wei & Wang, 2021; Ng et al., 2017)
6	Housing system governance	The type of governance and innovative management model, coordination between national and local institutions and preventing conflicts and duplication of roles, oversight in the planning process from planning to implementation, participation among diverse stakeholders in decision-making, transparency in housing allocation, and efficiency and responsiveness of institutions to residents' complaints	(Adabre & Chan, 2020; Baratta et al., 2023; Beard, 2021; Berglund-Snodgrass et al., 2020; Hofmann, 2022; Wei & Wang, 2021) (Alleviation, 2022; Amee Chew, 2022; Bramley, 2016; Brill, 2022; Davison et al., 2012; De Brito et al., 2020; Denmark, 2024; Droste & Knorr-Siedow, 2014; Gurran et al., 2018; Keon et al., 2015; Olsen & Zabel, 2015; PMAY Guidelines, 2021; Raco et al., 2022; "Social Housing," 2017; Urban Renaissance Agency, 2021; Ummah, 2019; Yu & Xu, 2022)

5.2. Indicators for measuring the housing planning system

In this section, the indicators examined in the 30 mentioned sources are marked with a solid black circle in Table 5, along with the studies that included these indicators. The total repetition of each indicator in these theoretical and practical sources is indicated in the last column of the table. In total, 54 distinct

indicators were extracted from theoretical studies, and 61 distinct indicators from empirical studies. The highest repetition belonged to an indicator in the supply area, entitled "adequate access to housing infrastructure and facilities" (education, work, shopping, health and treatment, recreation and culture, green spaces, and transportation), with 20 repetitions in theoretical and empirical texts. This is

followed by two indicators: the ratio of average housing price to average annual household income and housing construction quality inspection (the degree to which the housing project complies with safety, environmental, social, indigenous, aesthetic, etc.) standards, with 18 repetitions. It can be inferred from this table that more than half of the indicators, i.e. about 60 percent of them, are mentioned in both theoretical and empirical studies. However, the amount of attention paid to some indicators and their subject categories in theoretical or empirical studies has been greater than the other. For example, theoretical studies have primarily addressed the finance and resource provision, with indicators such as the amount and diversity of sources of financing income, land use efficiency (optimization of housing density per hectare), and optimal use of local resources and forces, as well as the issue of housing construction quality with indicators such as appropriate access to infrastructure and facilities (education, employment, shopping, treatment, recreation, and transportation), design of housing space in proportion to human scale and per capita, and inspection of housing construction quality. In contrast, empirical literature has addressed other issues such as housing demand and access management, as well as housing management and evaluation during and after supply, referring to indicators such as the ratio of housing price to household income, the rate of home ownership, the diversity of income levels of target households, the use of new technologies and methods in design and construction, the ratio of supply to potential housing demand, and measuring the satisfaction of residents and beneficiaries with the housing project. Thus, we can conclude that in the field of housing planning systems, practical experiences have generally suggested a more pragmatic index system, and the main approach of this type of empirical studies has

been to focus solely on the issue of housing planning and delivery, from the process of measuring demand to housing supply. On the other hand, theoretical literature has sought to solve potential challenges in the practical experiences by raising more issues, such as financing and resources, and construction quality, and focusing more on them.

Finally, the indicators of the housing system governance and its legal and planning structure have received less attention in empirical and theoretical studies. Together, these two areas, with 19 indicators, about 26 percent of the total global indicators of the housing planning system, have a smaller share among other areas. This is while the field of maneuver in the housing system should be the structure of housing programs, policies, and laws, as well as its driving engines, namely institutions and the governance system in the housing sector. Among the indicators of these two areas, we can mention the degree of coordination between national and local institutions to reduce conflicts and duplication of roles, the existence of housing program oversight committees, the diversity and extent of participatory meetings of stakeholders in decision-making, transparency in housing allocation, the timing of planning, approval and implementation of the housing program, the impact of financial and planning constraints on housing supply, and the degree of compliance with other upstream programs. Therefore, we can conclude that, given the low share and lack of repetition of indicators of the governance and legal and planning structure of housing in theoretical and empirical studies, these two sectors should be included more practically in the literature on the governance and planning system of housing; the housing planning system should not only include policy-making, planning, and measuring demand and supply.

Table 5. Indicators of housing planning system, extracted from theoretical and empirical texts, source: authors

[illegible]

5.3. Presenting a process and content model for the housing planning system

In this section, after integrating the various parts of this study, a final process and content model for the housing planning system globally was developed, illustrating the overall internal relationships of the components. This model consists of three levels: the outer layer (including macro theories supporting the subject and influencing factors of the context), the housing planning system process (covering legal and planning structures, governance and institutional management, demand management, financial and resource procurement, and supply management), and the measurement and evaluation level (including the assessment of the physical-spatial quality of the housing provided and the review of policies and processes). As shown in Figure 1, at the first level – located in the outer layer of the housing system and indirectly influencing it - the macro theories supporting housing planning are examined. These include principles of sustainable development – ensuring social, technical, physical, environmental, and economic considerations; urban renewal – focusing on physical reconstruction of housing while protecting heritage and revitalizing deprived areas; the theory of the right to the city – emphasizing housing as a fundamental right of all individuals and the right to participate in the social, economic, and political process of place-making in the place of residence; participatory planning – covering land use regulation, urban renewal, and housing financing; and urban governance, which addresses institutional capacity and inter-institutional planning across all levels of demand to supply measurement. The effective factors of the context, another part of the first level located in the outer layer of the model, influence the potential demand for housing through economic and social constraints, and affect supply and affordability via financial and planning constraints. While these factors cannot directly intervene, they influence planning conditions, the financial sector, legal structures, policies, and demand and supply levels within the housing system.

At the second level, the legal and planning structure – serving as the motivating and implementation engine – includes developing housing programs and national to local policies aligned with overarching plans; crafting land use, financial, construction, and affordable pricing regulations; planning for housing unit numbers, scheduling, facilities, and infrastructure; and maintaining policy flexibility for review and updates.

Governance and institutional management focus on creating effective governance mechanisms to reduce role duplication, organize inter-institutional cooperation at all levels with stakeholder participation, and establish oversight committees involving government, public, and private entities to enhance efficiency, accountability, transparency, and information openness within the housing system. Demand management considers demographic shifts, household economics, access for low-income groups, housing shortages, homelessness rates, and informal housing, alongside forecasting future needs and assessing affordability. The financial and resource provision component accounts for diverse income sources, financial sustainability, subsidies, tax policies, capital for construction, budget allocation, and human resources – forming a crucial part of the process. Supply management involves decisions on housing tenure and ownership types, project timelines, new methods for mass production and renovation of dilapidated housing, annual production levels, demand response, and supply-demand ratios.

The third level – measurement and evaluation – is interconnected with earlier stages and involves ongoing assessment during planning, implementation, and post-completion. It includes evaluating the physical and spatial quality of housing, such as access to facilities and infrastructure and the degree of compliance with standards, minimum per capita, technical, safety, climate, security, and aesthetics criteria, in addition to measuring and evaluating the average lifespan of buildings and their physical quality, the use of environmentally friendly materials, and the efficiency of energy consumption in the units. The final level, process evaluation and policy review, monitors process performance and policy effectiveness by examining the rate of progress and completion of housing projects, measuring residents' satisfaction by responsible institutions, examining the level of construction violations during implementation, the impact of new housing on the value of surrounding properties, and the mental and physical health of residents. Legal and social impact assessments of housing policies and projects help provide a comprehensive understanding of legal adherence, social outcomes, and policy effectiveness. Continuous monitoring and evaluation across all stages enable adjustments and improvements within the housing system, ensuring responsive and effective housing development.

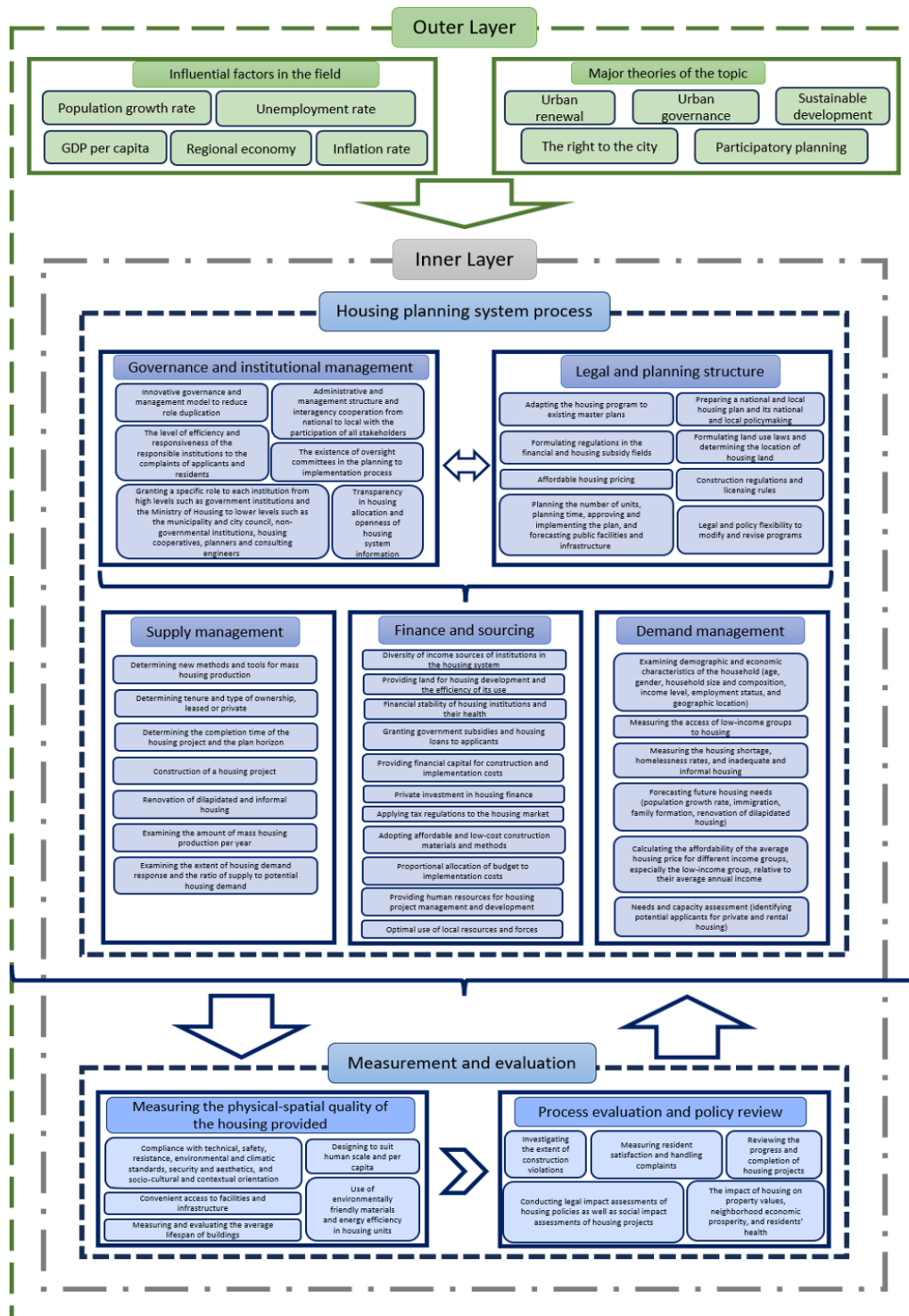


Figure 1. Process and content model of the housing planning system in a general sense in the world

6. Conclusion

In this research, world-renowned studies on the housing planning system were reviewed across various sections, including definitions and concepts, historical development, supporting macro-theories, conceptual

models from global literature, and the extraction of indicators from theoretical texts and experimental documents. The goal was to analyze the housing planning system and present its evaluation index system, along with its process and content model.

These surveys revealed that many studies in this field lack a comprehensive view of the housing planning system and its components due to its multidimensional nature, which necessitates integrating different aspects across various studies of the housing system. This research aimed to address this by providing a comprehensive model of the housing planning system. Reviewing the definitions and concepts from global research clarified the different dimensions of the topic and offered a clear, all-encompassing definition. The historical development of the subject showed that initially, housing planning focused on construction and supply during post-war reconstruction and on self-supporting workers' housing, primarily in a functional manner, neglecting other aspects. Later, political and economic developments worldwide steered housing planning toward a more participatory approach. This shift led to more accurate demand measurement through the development of various programs, highlighting social and environmental concerns, especially after UN-Habitat conferences. In recent decades, issues like good housing governance, decentralization of authority, and innovative financing methods have gained prominence, alongside main challenges. This evolution illustrates that the main challenge in housing planning is not supply or demand but creating a governance model suitable for each country's political and economic context. A proper governance model is essential to successfully guide programs and policies, ultimately improving housing access through various methods. The examination of conceptual models revealed that researchers define the housing system differently, including process-, content-, and stakeholder-oriented perspectives, but these models alone cannot serve as the sole criteria for housing planners' actions. Additionally, analyzing 30 theoretical texts and experimental documents provided a more precise identification of evaluation and measurement indicators for the global housing planning system, enriching the research findings. After categorizing the studies into six subject categories and comparing theoretical and empirical works based on their focus levels, 72 indicators related to the housing planning system were identified along with their sources. Finally, the study proposed a process and content model comprising three levels: the outer layer, the housing planning process, and the measurement and evaluation phase. Relationships among these components demonstrate how the system functions and can serve as a benchmark for housing planners worldwide. Specifically, the governance department

and housing legal and planning structure act as two key drivers of the housing planning system that simultaneously develop and implement processes, including supply and demand management, financing, and measurement and evaluation.

Authors' Contributions

The authors contributed equally to the different parts of the article.

Acknowledgments

This article has been extracted from Raziye Ahani's master's thesis titled "Comparative analysis of the global housing planning system and providing a framework suitable for Iranian cities."

Conflict of Interest

The authors declare that they have no conflicts of interest.

References

- Aalbers, M. B., & Gibb, K. (2014). Housing and the right to the city: Introduction to the special issue. *International Journal of Housing Policy*, 14(3), 207–213. <https://doi.org/10.1080/14616718.2014.936179>
- Abramsson, M. (2011). Housing Careers. In *International Encyclopedia of Housing and Home* (Vol. 3). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-047163-1.00635-4>
- Adabre, M. A., & Chan, A. P. C. (2018). The ends required to justify the means for sustainable, affordable housing: A review of critical success criteria. *Sustainable Development*, 27(4), 781–794. <https://doi.org/10.1002/sd.1919>
- Adabre, M. A., & Chan, A. P. C. (2020). Towards a sustainability assessment model for affordable housing projects: The perspective of professionals in Ghana. *Engineering, Construction and Architectural Management*, 27(9), 2523–2551. <https://doi.org/10.1108/ECAM-08-2019-0432>
- Ahmadova, S., & Yamacli, R. (2022). Konut Tasarımında Katılımcı Planlamanın Önemi: Bakü Örneği. *Sürdürülebilir Mühendislik Uygulamaları ve Teknolojik Gelişmeler Dergisi*, 5(1), 92–107. <https://doi.org/10.51764/smutgd.1058574>
- Aliu, I. R. (2022). Sustainable housing development dynamics in the Global South: Reflections on theories, strategies and constraints. *Bulletin of Geography. Socio-Economic Series*, 56(56), 83–100. <https://doi.org/10.12775/bgss-2022-0014>
- Alleviation, U. P. (2022). Everon Project Consultants Ltd. 1–46.
- Amee Chew. (2022). Social housing for all: A vision for thriving communities' social housing for all. March. <https://popular-democracyinaction.org/publication/socialhousingforall/>
- Angel, S., Mayo, S. K., & Stephens, W. L. (1993). The housing indicators program : A report on progress and plans for the future. *Journal of Housing and the Built Environment*, 8(1), 13–48.
- Oskouee Aras A., Teimouri, I., Hosseini A., Badamchizadeh P., & Aghdam B. (2024). Explaining the mediating role of influential variables in determining housing prices (case study: Tabriz Metropolis). *Journal of Urban Economics and Plan-*

ning. 5(3), 58-78. <https://doi.org/10.22034/024.471664.1523uep10.22034/>. [In Persian]

- Arian Kia M., Rezaei Kalaki F., & Gorbazadeh Zafarani S. (2023). Leveling and upgrading of quantitative indicators and residential function in line with strategic planning and sustainability of urban housing (case Study : Armenian Quarter, District 7, Tehran Municipality). *Journal of Urban Economics and Planning*, 4(3): 118-141. <https://doi.org/10.22034/UEP.2023.416479.1409> [In Persian]
- Arku, G. (2019). Housing policy in developing countries. In *International Encyclopedia of Human Geography*, Second Edition (Second Ed, Vol. 7). Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10395-6>
- Attoh, K. A. (2011). What kind of right is the right to the city? *Progress in Human Geography*, 35(5), 669-685. <https://doi.org/10.1177/0309132510394706>
- Baker, T., & Evans, J. (2016). 'Housing First' and the changing terrains of homeless governance. *Geography Compass*, 10(1), 25-41. <https://doi.org/10.1111/gec3.12257>
- Barakpou, N., & Keivani, R. M. (2015). The relationship between urban governance and sustainable urban development in Iran. In *Urban change in Iran: stories of rooted histories and ever-accelerating developments* (pp. 153-169). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-26115-7_12
- Baratta, A. F. L., Calcagnini, L., Finucci, F., & Magarò, A. (2023). Innovative housing policy tools: Impact indicators in the NRRP Urban Regeneration Programs. *Vitruvio*, 8(1), 58-69. <https://doi.org/10.4995/vitruvio-ijats.2023.19476>
- Beard, V. (2021). City-level housing trust funds: Lessons from key case studies. *Poverty and Public Policy*, 13(4), 351-367. <https://doi.org/10.1002/pop4.328>
- Beer, A. (2011). Housing Governance. In *International Encyclopedia of Housing and Home* (Vol. 3). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-047163-1.00704-9>
- Ben-meir, Y. (2017). Participatory planning of housing and community development. *Journal of Business and Economics*, 8(1), 80-96. [https://doi.org/10.15341/jbe\(2155-7950\)/01.08.2017/010](https://doi.org/10.15341/jbe(2155-7950)/01.08.2017/010)
- Berglund-Snodgrass, L., Högström, E., Fjellfeldt, M., & Markström, U. (2020). Organizing cross-sectoral housing provision planning: Settings, problems, and knowledge. *European Planning Studies*, 0(0), 1-21. <https://doi.org/10.1080/09654313.2020.1792416>
- Bramley, G. (1998). Measuring planning: Indicators of planning restraint and its impact on housing land supply. *Environment and Planning B: Planning and Design*, 25(1), 31-55. <https://doi.org/10.1068/b250031>
- Bramley, G. (2013). Housing market models and planning. *Town Planning Review*, 84(1), 9-35. <https://doi.org/10.3828/tpr.2013.2>
- Bramley, G. (2016). Housing need outcomes in England through changing times: Demographic, market, and policy drivers of change. *Housing Studies*, 31(3), 243-268. <https://doi.org/10.1080/02673037.2015.1080817>
- Brill, F. (2022). Governing investors and developers: Analyzing the role of risk allocation in urban development. *Urban Studies*,

59(7), 1499-1517. <https://doi.org/10.1177/00420980211017826>

- Buckley, R. M., & Kalarickal, J. (2005). Housing policy in developing countries: Conjectures and refutations. *World Bank Research Observer*, 20(2), 233-257. <https://doi.org/10.1093/wbro/lki007>
- Davison, G., Gurran, N., Van Den Nouwelant, R., Pinnegar, S., Randolph, B., & Bramley, G. (2012). Affordable housing, urban renewal, and planning: Emerging practice in Queensland, South Australia, and New South Wales. <https://www.ahuri.edu.au/research/final-reports/195>
- De Brito, G. B., Araújo, J. S. B., & Marafon, G. J. (2020). Minha Casa, Minha Vida Program and Its Spatial Distribution in Rio De Janeiro State. *Geo UERJ*, 37, e51548. <https://doi.org/10.12957/geouerj.2020.51548>
- De Jong, W., & Verkuyten, M. (1996). Urban renewal, housing policy, and ethnic relations in Rotterdam. *Journal of Ethnic and Migration Studies*, 22(4), 689-705. <https://doi.org/10.1080/1369183X.1996.9976568>
- Deng, F. (2018). A theoretical framework of the governance institutions of low-income housing in China. *Urban Studies*, 55(9), 1967-1982. <https://doi.org/10.1177/0042098017692934>
- Denmark, S. (2024). Documentation of statistics for sales of housing cooperatives 2024.
- Droste, C., & Knorr-Siedow, T. (2014). Social housing in Germany. *Social Housing in Europe*, 183-202. <https://doi.org/10.1002/9781118412367.ch11>
- Du, T., Zeng, N., Huang, Y., & Vejre, H. (2020). Relationship between the dynamics of social capital and the dynamics of residential satisfaction under the impact of urban renewal. *Cities*, 107(August), 102933. <https://doi.org/10.1016/j.cities.2020.102933>
- Ekpo, C. (2019). Impact of planning and building regulations on affordable housing development by the private sector in South Africa. https://open.uct.ac.za/bitstream/handle/11427/31522/thesis_ebe_2019_ekpo_christiana.pdf?sequence=4&isAllowed=y
- Erlwein, S., Meister, J., Wamsler, C., & Pauleit, S. (2023). Governance of densification and climate change adaptation: How can conflicting demands for housing and greening in cities be reconciled? *Land Use Policy*, 128(February), 106593. <https://doi.org/10.1016/j.landusepol.2023.106593>
- Faraji, A., Meydani Haji Agha, T., Homayoon Arya, S., Ghasemi, E., & Rahnamayiezekavat, P. (2024). A hybrid study of quantitative-qualitative analysis to recognize the most cost-effective criteria to develop affordable mass housing. *Buildings*, 14(4). <https://doi.org/10.3390/buildings14041057>
- Flint, J. (2004). The responsible tenant: Housing governance and the politics of behavior. *Housing Studies*, 19(6), 893-909. <https://doi.org/10.1080/0267303042000293991>
- Friendly, A. (2019). The contradictions of participatory planning: Reflections on the role of politics in urban development in Niterói, Brazil. *Journal of Urban Affairs*, 41(7), 910-929. <https://doi.org/10.1080/07352166.2019.1569468>
- Gallent, N., Purves, A., Stirling, P., & Hamiduddin, I. (2024). Enabling the delivery of rural affordable housing in England. *Journal of Rural Studies*, 111(April), 103433. <https://doi.org/10.1016/j.jrurstud.2024.103433>

- Galuszka, J. (2019). Co-production as a driver of urban governance transformation? The case of the Oplan LİKAS Program in Metro Manila, Philippines. *Planning Theory & Practice*, 20(3), 395–419. <https://doi.org/10.1080/14649357.2019.1624811>
- Gan, X., Zuo, J., Wu, P., Wang, J., Chang, R., & Wen, T. (2017). How can affordable housing become more sustainable? A stakeholder study. *Journal of Cleaner Production*, 162, 427–437. <https://doi.org/10.1016/j.jclepro.2017.06.048>
- Curran, N., Gilbert, C., Gibb, K., Van Den Nouwelant, R., James, A., & Phibbs, P. (2018). Supporting affordable housing supply: Inclusionary planning in new and renewing communities. *AHURI Final Report* (Issue 297). <https://doi.org/10.18408/ahuri-7313201>
- Curran, N., & Whitehead, C. (2011). Planning and affordable housing in Australia and the UK: A comparative perspective. *Housing Studies*, 26(7–8), 1193–1214. <https://doi.org/10.1080/02673037.2011.618982>
- Habitat for Humanity. (2021). Housing and the sustainable development goals: The transformational impact of housing. 6–7. <https://www.habitat.org/sites/default/files/documents/Housing-and-Sustainable-Development-Goals.pdf>
- Emami Ghafari, Z. (2019). A study of changing house welfare policies in Iran (1979–2013). *Social Development & Welfare Planning*, 10(38), 76–120. <https://doi.org/10.22054/qjsd.2019.10344>
- Hofmann, S. Z. (2022). Build back better and long-term housing recovery: Assessing community housing resilience and the role of insurance post-disaster. *Sustainability (Switzerland)*, 14(9). <https://doi.org/10.3390/su14095623>
- Hyra, D. S. (2012). Conceptualizing the new urban renewal: Comparing the past to the present. *Urban Affairs Review*, 48(4), 498–527. <https://doi.org/10.1177/1078087411434905>
- Ibrahim, I. A. (2020). Sustainable housing development: Role and significance of the satisfaction aspect. *City, Territory, and Architecture*, 7(1). <https://doi.org/10.1186/s40410-020-00130-x>
- Johnson, M. P. (2007). Planning models for the provision of affordable housing. *Environment and Planning B: Planning and Design*, 34(3), 501–523. <https://doi.org/10.1068/b31165>
- Kantemeridou, C., Tsantopoulos, G., Tampakis, S., & Karanikola, P. (2013). Participatory planning and local economic development: A case study of Northeast Halkidiki. *Procedia Technology*, 8(Haicta), 459–464. <https://doi.org/10.1016/j.protcy.2013.11.059>
- Keon, S., Heeyoun, L., Heeseo, Y., & Kwon, R. (2015). Korea's pursuit of sustainable cities through new town development: Implications for the LAC knowledge sharing forum on development experiences. Comparative Experiences of Korea and Latin America and the Caribbean. June.
- Kholodilin, K. A. (2022). 3.4 Demand for housing. *Lectures on Housing Economics: A European Text*, 41–43. https://kholodilin.github.io/Test_HE/Housing_economics_text-book.pdf
- King, L. (2019). Henri Lefebvre and the right to the city. *The Routledge Handbook of Philosophy of the City*, October 2018, 76–86. <https://doi.org/10.4324/9781315681597-7>
- Legacy, C. (2017). Is there a crisis of participatory planning? *Planning Theory*, 16(4), 425–442. <https://doi.org/10.1177/1473095216667433>
- Leon, J. K., & Leon, J. K. (2020). The global governance of housing : 1945 – 2016 The global governance of housing : 1945 – 2016. *Planning Perspectives*, 0(0), 1–20. <https://doi.org/10.1080/02665433.2020.1803120>
- Liang, C. M., Lee, C. C., & Yong, L. R. (2020). Impacts of urban renewal on neighborhood housing prices: Predicting response to psychological effects. *Journal of Housing and the Built Environment*, 35(1), 191–213. <https://doi.org/10.1007/s10901-019-09673-z>
- Lin, Y. (2018). An institutional and governance approach to understand large-scale social housing construction in China. *Habitat International*, 78(June), 96–105. <https://doi.org/10.1016/j.habitatint.2018.06.001>
- Marcuse, P. (1980). Housing in early city planning. *Columbia University, Graduate School of Architecture and Planning, Reprint Series*, 6(R10), 153–176.
- McCann, E. (2017). Governing urbanism: Urban governance studies 1.0, 2.0 and beyond. *Urban Studies*, 54(2), 312–326. <https://doi.org/10.1177/0042098016670046>
- McDermont, M. (2007). Mixed messages: Housing associations and corporate governance. *Social and Legal Studies*, 16(1), 71–94. <https://doi.org/10.1177/0964663907073448>
- Meshkini, A., Vahedi Yeganeh, F., & Alipour, S. (2023). Analysis of sustainable housing indicators and their role in improving physical security (case study: District 17 of Tehran Metropolis). *Geography and Environmental Sustainability*, 13(4), 103–126. <https://doi.org/10.22126/GES.2023.9348.2672> [In Persian]
- Miao, J. T., & MacLennan, D. (2017). Exploring the ‘middle ground’ between state and market: The example of China. *Housing Studies*, 32(1), 73–94. <https://doi.org/10.1080/02673037.2016.1181723>
- Nae, M., Dumitrache, L., Suditu, B., & Matei, E. (2019). Housing activism initiatives and land-use conflicts: Pathways for participatory planning and urban sustainable development in Bucharest City, Romania. *Sustainability (Switzerland)*, 11(22). <https://doi.org/10.3390/su11226211>
- Nascimento Neto, P., & Salinas Arreortua, L. (2020). Financialization of housing policies in Latin America: A comparative perspective of Brazil and Mexico. *Housing Studies*, 35(10), 1633–1660. <https://doi.org/10.1080/02673037.2019.1680815>
- Needham, B. (2011). Institutions for housing supply. In *International Encyclopedia of Housing and Home* (Vol. 4). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-047163-1.00399-4>
- Ng, M. Y., Jamilah, M., & Goh, H. C. (2017). Indicators of sustainable housing development (SHD): A review and conceptual framework. *International Journal of Scientific & Engineering Research*, 8(9), 306–316. <http://www.ijser.org>
- Noring, L., Struthers, D., & Grydehøj, A. (2022). Governing and financing affordable housing at the intersection of the market and the state: Denmark's private non-profit housing system. *Urban Research and Practice*, 15(2), 258–274. <https://doi.org/10.1080/17535069.2020.1798495>
- Nuuter, T., Lill, I., & Tupenaite, L. (2015). Comparison of housing market sustainability in European countries based on multiple criteria assessment. *Land Use Policy*, 42, 642–651. <https://doi.org/10.1016/j.landusepol.2014.09.022>
- Ogunnaike, A., Squires, G., & Booth, C. A. (2013). A pluralistic conceptual model for affordable housing in Lagos, Nigeria. *WIT*

Transactions on Ecology and the Environment, 179, 523–533. <https://doi.org/10.2495/SC130441>

- Olanrewaju, A., Tan, S. Y., & Lee, K. F. (2017). Developing a business case for housing governance. *Procedia Engineering*, 196(June), 195–202. <https://doi.org/10.1016/j.proeng.2017.07.191>
- Olçay, G. P. (2020). Housing agenda: Past-Present-Future. In *the AMPS conference 10 – cities, communities, and homes: Is the urban future livable?* Derby- UK, April.
- Olsen, E. O., & Zabel, J. E. (2015). US Housing Policy. In *Handbook of Regional and Urban Economics* (1st ed., Vol. 5). Elsevier B.V. <https://doi.org/10.1016/B978-0-444-59531-7.00014-4>
- Orihuela, P., Pacheco, S., & Orihuela, J. (2017). Proposal of performance indicators for the design of housing projects. *Procedia Engineering*, 196(June), 498–505. <https://doi.org/10.1016/j.proeng.2017.07.230>
- Paris, C. (2007). International perspectives on planning and affordable housing. *Housing studies*, 22(1), 1-9. <https://doi.org/10.1080/02673030601024531>
- Pastrana, A. Q., & Vols, M. (2024). Tracing the right to access to housing: insights from human rights theory and practice. *European Journal of Homelessness*, 18(2), 39-66.
- Pérez, M. (2017). Reframing housing struggles: Right to the city and urban citizenship in Santiago, Chile. *City*, 21(5), 530–549. <https://doi.org/10.1080/13604813.2017.1374783>
- Pezzica, C., Cutini, V., Bleil, C., Souza, D., & Aloini, D. (2022). The making of cities after disasters: Strategic planning and the Central Italy temporary housing process. *Cities*, 131(October), 104053. <https://doi.org/10.1016/j.cities.2022.104053>
- Piri F., Amanpour S., & Meshkini A. (2023). Housing investment model with a parallel markets approach. *Urban Economics and Planning*, 4(2): 134–149. <https://doi.org/10.22034/UEP.2023.390253.1350> [In Persian]
- PMAY guidelines. (2021). PMAY, housing for all, scheme guidelines. *Ministry of Housing and Urban Affairs, Government of India*, 2(2), 103–111.
- Raco, M., Freire Trigo, S., & Webb, A. M. (2024). The rise of polycentric regulation and its impacts on the governance of housing associations in England. *Housing Studies*, 39(8), 2095–2116. <https://doi.org/10.1080/02673037.2022.2156984>
- Raco, M., Ward, C., Brill, F., Sanderson, D., Freire-trigo, S., Ferm, J., Hamiduddin, I., & Livingstone, N. (2022). Progress in planning towards a virtual statecraft: Housing targets and the governance of urban housing markets. *Progress in Planning*, 166(February), 100655. <https://doi.org/10.1016/j.progress.2022.100655>
- Robinson, D. (2003). Housing governance in the English regions: Emerging structures, limits, and potentials. *Housing Studies*, 18(2), 249–267. <https://doi.org/10.1080/0267303032000087757>
- Rolnik, R. (2014). Place, inhabitation, and citizenship: The right to housing and the right to the city in the contemporary urban world. *International Journal of Housing Policy*, 14(3), 293–300. <https://doi.org/10.1080/14616718.2014.936178>
- Sabermanesh A., Tavasoli N., & Sabermanesh A. H. (2020). Builders Club; Proposal for the Deputy of Urban Planning and Architecture of Tehran Municipality to create prosperity in the housing market. *Urban Economics and Planning*, 1(3): 164–177. <https://doi.org/10.22034/UE.2020.09.03.04> [In Persian]
- Salavati S., Alavi S., Karimi B., & Ramezanipour K. (2023). The foresight of housing planning suitable for vulnerable urban strata (case study: Nayer, Sanandaj). *Economics and Urban Planning* 4(1): 180–196. <https://doi.org/10.22034/UEP.2023.370969.1309> [In Persian]
- Scally, C. P., & Koenig, R. (2012). Beyond NIMBY and poverty de-concentration: Reframing the outcomes of affordable rental housing development. *Housing Policy Debate*, 22(3), 435–461. <https://doi.org/10.1080/10511482.2012.680477>
- Shama, Z. S., & Motlak, J. B. (2019, May). Indicators for sustainable housing. In *IOP conference series: materials science and engineering* (Vol. 518, No. 2, p. 022009). IOP Publishing. <https://doi.org/10.1088/1757-899X/518/2/022009>
- Shapely, P. (2011). Planning, housing, and participation in Britain, 1968–1976. *Planning Perspectives*, 26(1), 75–90. <https://doi.org/10.1080/02665433.2011.527550>
- Shucksmith, M., & Sturzaker, J. (2011). Rural housing. In *International Encyclopedia of Housing and Home* (Vol. 6). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-047163-1.00515-4>
- Silva, L. P. P., Najjar, M. K., da Costa, B. B. F., Amario, M., Vasco, D. A., & Haddad, A. N. (2024). Sustainable affordable housing: State-of-the-art and future perspectives. *Sustainability* (Switzerland) 16(10). <https://doi.org/10.3390/su16104187>
- Smets, P., & Watt, P. (2017). Social housing and urban renewal: Conclusion. *Social Housing and Urban Renewal*. <https://doi.org/10.1108/978-1-78714-124-720171013>
- Kulić, V. (2017). Social housing. In *Architectural Record*, 205(4), 193–199. <https://doi.org/10.5040/9781472596154-bed-s073>
- Thörn, H., Larsen, H. G., Hagbert, P., & Wasshede, C. (2018). Co-housing, sustainable urban development, and governance: An introduction. <https://doi.org/10.4324/9780429450174-1/>
- Tsemberis, S., & Asmussen, S. (2016). From streets to homes: The pathways to a housing consumer preference-supported housing model. *Homelessness Prevention in Treatment of Substance Abuse and Mental Illness: Logic Models and Implementation of Eight American Projects*, 17(1), 113–131.
- Ummah, M. S. (2019). Housing Practice Series – Singapore. UN-Habitat. <https://unhabitat.org/housing-practice-series-singapore>
- UN-Habitat. (2023). Rescuing SDG 11 for a resilient urban planet. SDG 11 synthesis report.
- UNDP. (2017). Institutional and coordination mechanisms: Guidance note on facilitating integration and coherence for SDG implementation. 59. https://sustainabledevelopment.un.org/content/documents/2478Institutional_Coordination_Mechanisms_GuidanceNote.pdf
- Urban Renaissance Agency. (2021). Overview of the Urban Renaissance Agency and Rental housing management in Japan. Japan Local Government Centre. <https://www.jlgc.org.uk/en/wp-content/uploads/2021/03/UR-Presentation-1.pdf>
- Varahrami, V. (2025). Estimating the effects of economic factors on housing prices in selected major industrial cities original article. *Journal of Urban Economics and Planning*. 6(4). 6-15.

- <https://doi.org/10.22034/UJEP.2025.539881.1686> [In Persian]
- Wang, L., Rong, X., & Mu, L. (2021). The coupling coordination evaluation of sustainable development between urbanization, housing prices, and affordable housing in China. *Discrete Dynamics in Nature and Society*, 2021(1), 3937226. <https://doi.org/10.1155/2021/3937226>
- Ward, P. M. (2011). Housing policies in developing countries. In *International Encyclopedia of Housing and Home* (Vol. 3). Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-047163-1.00232-0>
- Webb, D. (2010). Rethinking the role of markets in urban renewal: The housing market renewal initiative in England. *Housing, Theory and Society*, 27(4), 313–331. <https://doi.org/10.1080/14036090903160026>
- Wei, C. R., & Wang, Y. (2021). Research on the evaluation and influence mechanism of public housing service quality: A case study of Shanghai. *Sustainability (Switzerland)*, 13(2), 1–22. <https://doi.org/10.3390/su13020672>
- Yan, J., Haffner, M., & Elsinga, M. (2021). Inclusionary housing: an evaluation of a new public rental housing governance instrument in China. *Land*, 10(3), 305. <https://doi.org/10.3390/land10030305/>
- Yarwood, R. (2002). Parish councils, partnership, and governance: The development of “exceptions” housing in the Malvern Hills District, England. *Journal of Rural Studies*, 18(3), 275–291. [https://doi.org/10.1016/S0743-0167\(01\)00042-0](https://doi.org/10.1016/S0743-0167(01)00042-0)
- Yu, L., & Xu, W. (2022). Institutional conformity, entrepreneurial governance, and local contingency: Problematizing central-local dynamics in localizing China’s low-income housing policy. *Environment and Planning A*, 54(3), 508–532. <https://doi.org/10.1177/0308518X211061400>
- Zhang, B. (2020). Social policies, financial markets, and the multi-scalar governance of affordable housing in Toronto. *Urban Studies*, 57(13), 2628–2645. <https://doi.org/10.1177/0042098019881368>
- Zhang, X. Q., & Ball, M. (2016). Housing the planet: Evolution of global housing policies. *Habitat International*, 54, 161–165. <https://doi.org/10.1016/j.habitatint.2015.11.028>
- Zhao, W., & Zou, Y. (2025). Smart governance for affordable housing in China: Preparation, practice, and paradoxes. *Cities*, 156(September 2024), 105500. <https://doi.org/10.1016/j.cities.2024.105500>
- Zheng, H. W., Shen, G. Q., & Wang, H. (2014). A review of recent studies on sustainable urban renewal. *Habitat International*, 41, 272–279. <https://doi.org/10.1016/j.habitatint.2013.08.006>
- Zhou, Z. (2012). China’s way to good housing governance. *China: Development and Governance*, 351–360. https://doi.org/10.1142/9789814425858_0037
- Zonke, N., & Matsiliza, N. (2015). Community participation in housing development trends: A selected case of Khayelitsha Township, Cape Town, South Africa. *Africa Insight*, 45(2), 86–100.