

Article

A Conceptual Framework for the Activation of Sustainable Cooperative Housing Production in Saudi Arabia

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Abstract: Despite efforts to solve the housing crisis in Saudi Arabia, there are still many challenges related to providing affordable housing due to the high cost of production. Cooperative housing is an approach that achieves the principle of affordable housing through collective effort and effective management. However, activating sustainable cooperative housing production is a process that involves reforming the entire housing system, including policies, subsidies, management, and financing. This study aims to develop a conceptual framework to activate cooperative housing production in Saudi Arabia so as to achieve affordable housing. The research methodology relies on a theoretical approach to identify the relationship between cooperative housing and urban systems so as to determine the factors of cooperative production, including housing policies, management, subsidies, and financing, within a participatory framework. This study focuses on monitoring the situation of cooperative housing and local housing challenges using theoretical concepts, indicators, and international experiences. This study proposes a comprehensive framework for the production of cooperative housing that effectively affects the Saudi housing market and is compatible with the needs of people with low incomes.

Keywords: cooperative housing; sustainability; affordability; housing; production; Saudi Arabia



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1. Introduction

Housing is one of the most important considerations in achieving sustainable development. Target 11.1 of the United Nations' Sustainable Development Goals emphasizes the following: "By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums" [1]. According to the United Nations [2], 68% of the world's population will live in cities by 2050, and there will be a shortage of affordable housing to meet the demand from these low-income urban dwellers. Housing production is a complex process because it is affected by policies, land systems, ownership, and urban legislation. Many developing countries are trying to develop effective policies to improve the housing market. Formulating housing policy is complex because it depends on an understanding of the demand, the factors affecting the demand, the available options, and population preferences [3]. Cooperative housing is an approach that seeks to counter the rising prices of independent accommodation units in housing markets [4]. Most countries have used cooperatives as an alternative to the third sector and as an enabling option for the housing of low-income groups [5]. The sustainability of cooperative housing contributes to achieving social justice and bridging the gap in the public housing stock [6]. Cooperative housing is seen as a preferable economic alternative in applying sustainable practices because it exploits the collective efforts of participants, is self-managed, and requires less government support [7]. Moreover, cooperative housing achieves social returns, including solidarity, diversity, and social equality [8]. Community and non-profit organizations can play a role in promoting cooperative housing as an affordable, non-commoditized housing alternative. However, local housing policies must support cooperative housing production through recognition, support, and legislation [9].

The housing sector in Saudi Arabia has faced major challenges over the past few decades, including difficulties in obtaining financing, a limited supply of residential units, the weak efficiency of the real estate sector, and the reliance on the largest share of support from government funding [10]. As a result, government agencies have sought to adopt many facilitation policies and provide grants, support programs, and housing finance, which contribute to organizing and facilitating a balanced and sustainable housing environment [11]. The “*Sakani*” program provides support options for financially solvent groups, while development housing provides support options for families most in need. Subsidy housing programs have been diversified to include financing loans, affordable housing projects, and off-plan sales projects [12]. Housing policies focus on increasing the rate of family ownership; the latest statistics from the General Authority for Statistics [13] indicate that the percentage of Saudi families owning homes reached 60.6% by the end of 2022, while the percentage of rented homes occupied by Saudi families reached 29.7%. The total number of housing units in Saudi Arabia is 8,174,674. Statistics confirm that home ownership for Saudi families comprises 36.4% for ownership without a mortgage or loan, 18.8% for ownership with a mortgage or loan, and 5.4% for those with an unspecified mortgage status. Housing ownership is an indicator of families’ ability to afford housing; in Saudi Arabia, housing is divided into owned homes, rented homes, housing provided by employers or charitable entities, and public housing [14]. The total number of public housing units is 20,901, representing 0.2% of the total housing stock in Saudi Arabia [13]. However, efforts to increase ownership have focused on individuals, without effective policies for a cooperative approach. Meeting the future demand for housing in Saudi Arabia requires the development of policies that take into account the social and economic diversity of the population, within a framework that is consistent with land management and urban legislation [15]. This study aims to develop a conceptual framework to activate sustainable cooperative housing production in Saudi Arabia within the targets of Vision 2030. This research seeks to understand the role of cooperative housing and the subsidy housing structure in Saudi Arabia, leading to the proposal of regulatory frameworks that enhance its role in the housing production cycle. The importance of this research is highlighted by the need to conduct studies that frame the activation of the role of cooperative housing as a community effort in housing production in the Kingdom of Saudi Arabia. The results of this study provide decision-makers with a structural framework for the housing system and highlight the roles that cooperative housing can play in housing production in a manner consistent with the directions of Vision 2030.

Research Problem

The cooperative housing sector is widespread globally and is a tributary element that supports general development, as housing cooperatives manage 10–20% of the housing production stock in many European countries [16]. The cooperative sector is also considered an important planning tool in dealing with housing crises and providing affordable housing. Reducing the gap between housing costs and family income requires the diversification of housing support to include the production of collectively owned cooperative housing. The Ministry of Municipalities and Housing [17] launched the Cooperative Housing Initiative in line with Vision 2030. This initiative aims to diversify the support options and provide opportunities for affordable housing. It seeks to regulate and support housing cooperatives, develop legal frameworks for their management, enhance the capabilities of cooperatives, and raise awareness. However, the role of cooperative housing remains unclear due to the limited number of associations and the multiplicity of their roles. Cooperative housing has a limited impact due to the absence of a culture of cooperative work, weak self-financing, and a lack of integration mechanisms between economic and societal sectors related to housing. Therefore, the research problem lies in the need to develop a conceptual framework in which to activate sustainable cooperative housing production in Saudi Arabia, consistent with the Kingdom’s Vision 2030 in supporting cooperation and rationalizing government spending.

2. Theoretical Framework

2.1. The Concept of Cooperative Housing

Cooperative housing is a form of affordable housing that consists of a group of buildings owned by a non-profit company or cooperative in which residents are owners of part of the housing or are shareholders in it [18]. Cooperative housing can consist of affordable units subject to monthly fees or residences with shared amenities, such as kitchens, shared courtyards, or guest suites. The term “cooperative housing” refers to for-profit, non-profit, or co-housing arrangements. However, it focuses on the type of affordable cooperative housing produced by a shared equity system [8]. Cooperative housing production reduces housing costs by restricting profits from resale, self-management, a non-profit status, shared facilities, and subsidies [19]. Many studies focus on the economic dimension of housing and analyze national housing markets through the lens of supply and demand [20]. Morris [21] states that the concept of cooperative housing is more comprehensive than simply the economic product. Rather, it can be considered one of the ways to enhance social integration and meet the needs of families, including vulnerable groups, such as people who are elderly, physically disabled, or unemployed. Cooperative housing is a community-based solution to address rising housing costs. At the same time, housing cooperatives address community issues, such as social marginalization and the ethnic identities of communities [22].

Cooperative housing is a type of affordable housing produced by cooperation and community participation among members [23]. They are collective organizations that are formed to achieve housing goals, including construction, financing, empowerment, and management [5]. Cooperative housing emphasizes community participation in decision-making, especially in financial resources, management, and maintenance [19]. Therefore, housing cooperatives can be more successful with homogeneous social groups. Cooperative housing emphasizes the right of possession of housing and collective ownership in the hands of the cooperative or cooperative association, so that it is not possible to benefit individually from its market value. In other words, cooperative housing is a form of shared ownership where the members own the entire building as a group but do not own part of the building (e.g., an apartment) [20]. The concept of cooperative housing includes housing models whose members have a share of the cooperative, which are self-managed by the cooperative group [24]. Cooperative housing achieves the principle of ownership and collective management [25]; individual units cannot be traded in the housing market. This includes cooperative housing models based on rental tenure, cooperative share ownership, and self-management [9]. Cooperative housing encourages the rationalization of resources, especially energy systems, common spaces, and water supplies. The units are often smaller in size and rely on sharing common spaces, parking, and food gardens. Cooperative housing tends to be located in high-density areas connected to public services, which reduces car ownership [19].

2.2. Cooperative Housing Production

In developing countries, housing is produced through three systems, as shown in Figure 1. The first system is self-construction, which relies on individual ownership but also on support programs, such as financing loans or land grants, to achieve the housing product. The second system is public housing, in which developments are supported by the government and sold or rented to residents. The third system is cooperative housing, which is a combination of the first and second types (social or civil economy), where residents use public assistance from government agencies or non-governmental organizations to obtain land, financing, infrastructure, and tax exemptions; however, the residents themselves work on self-construction, project management, and maintenance. Cooperative housing can target people with low incomes and provide affordable housing because it is based on shared ownership [26].

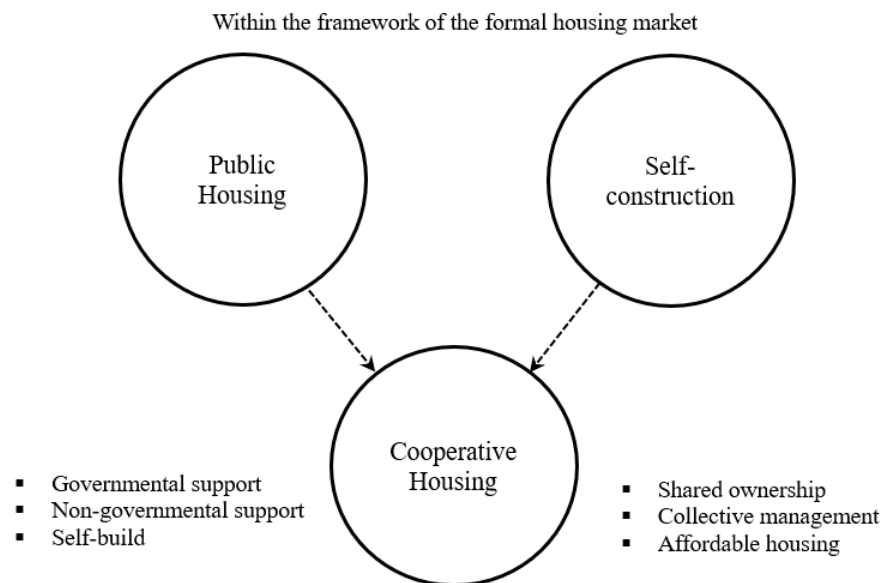


Figure 1. Housing production in developing countries. Source: Author, based on [26].

Cooperative housing production achieves economic capacity, social integration, and environmental sustainability [27]. The process of producing cooperative housing involves creating social entities that are more experienced, organized, communicative, and skilled. The long-term perspective of this form of production emphasizes the evolution of the cooperative model, maintaining non-commodification [9]. Cooperative housing contributes to filling the gap in the housing market because it is a product based on community organization, which is relatively independent of market forces [28]. Moreover, it emphasizes the principle of balanced production, which conserves energy and resource consumption in a manner consistent with sustainability indicators. This helps to provide a legal framework that guarantees equality, justice, and social integration [21].

First, housing policies, including development standards for housing units, parking requirements, and increasing building density in cooperative housing complexes, play an important role in the production of cooperative housing [19]. Housing policies should encourage access to land and buildings, which includes providing developed land at reasonable prices for the building of housing cooperatives. These policies can allocate a percentage of the developed land in new plans to housing cooperatives through real estate development regulations for residential neighborhoods. This model is practiced in Austria and the Netherlands following the introduction of the Spatial Planning Law of 2008. In Denmark, local governments can allocate 25% of new schemes to housing cooperatives. In Germany, some municipalities reserve a percentage of land for cooperatives, which can reach 20% of the newly developed land [24]. The ownership of the land can remain public, with the right to lease granted to the cooperative to establish affordable housing projects. Cooperative housing production can be achieved through rehabilitating existing buildings that include squatters' areas, maintaining them, and transferring their ownership to cooperative administrations. The local government provides rehabilitation programs in exchange for maintaining housing affordability for a specified period [29].

Second, cooperative housing is a legal construct that is structured according to the participation of its members in the management of the cooperative product [23]. Cooperative housing is considered a type of joint ownership because residents own shares in the building, and each family has the right to inhabit a housing unit in the housing cooperative [21]. Cooperative housing can be produced by transferring the ownership of public housing to cooperative housing. In this model, cooperative societies or groups of tenants are granted the right to manage the public housing stock or part of it. Transferring public housing projects to housing cooperatives can increase tenants' control over the residential environment. Rohe [30] analyzed the experience of three housing projects converted from public

housing affiliated with the US Department of Housing and Urban Development. However, this conversion involves numerous challenges, including extensive renovation work required prior to relocation, laws prohibiting the forced relocation of tenants, poor awareness of interest in cooperatives, and difficulties in financing. Residents residing in housing cooperatives also face challenges represented by the difficulty of managing cooperatives, poor communication between the board of directors and residents, a lack of participation of cooperators, and the need for maintenance shortly after purchase [30]. In the Netherlands, the Housing Act 2015 allows tenant housing associations to form a housing cooperative with collective ownership. Managing the cooperative's housing stock includes evaluating the housing product in accordance with sustainability goals, such as goals regarding energy consumption, expenditure, and environmental impacts [19].

Third, financing is an important factor in ensuring the implementation of affordable housing cooperative projects. Financing can take multiple forms, such as financing by banks, public institutions, and public guarantees. Housing loans can be directed to encourage an increase in the cooperative housing stock, including the development of programs and funds with low costs and zero interest rates [19]. In Germany, local agencies provide interest-free loans to build or purchase real estate for cooperatives. The Public Bank in Hamburg offers loans of up to EUR 25,000 with a low interest rate for a term of 20 years. In Austria, Vienna offers EUR 510–700 per square meter with an interest rate of 1% [24]. Financing can also be provided through public guarantees to obtain loans that help to develop housing cooperatives; these are available in many countries, such as Denmark, the Netherlands, Austria, and Italy.

Fourth, direct subsidies are a form of financing provided for the production of housing cooperatives. In some countries, such as Denmark, the local government provides support of up to 10% of the initial costs of establishing cooperatives. Subsidies are provided according to the characteristics of the housing cooperative project, including energy efficiency, parking availability, the provision of electric vehicle charging points, bicycle parking, and the construction of compact housing. Moreover, cooperative housing is financed through its adherence to sustainability indicators, including operating costs, energy, and resource consumption [7]. Housing subsidies can be indirect, such as exemption from real estate taxes or contributions to the developer (see Figure 2).

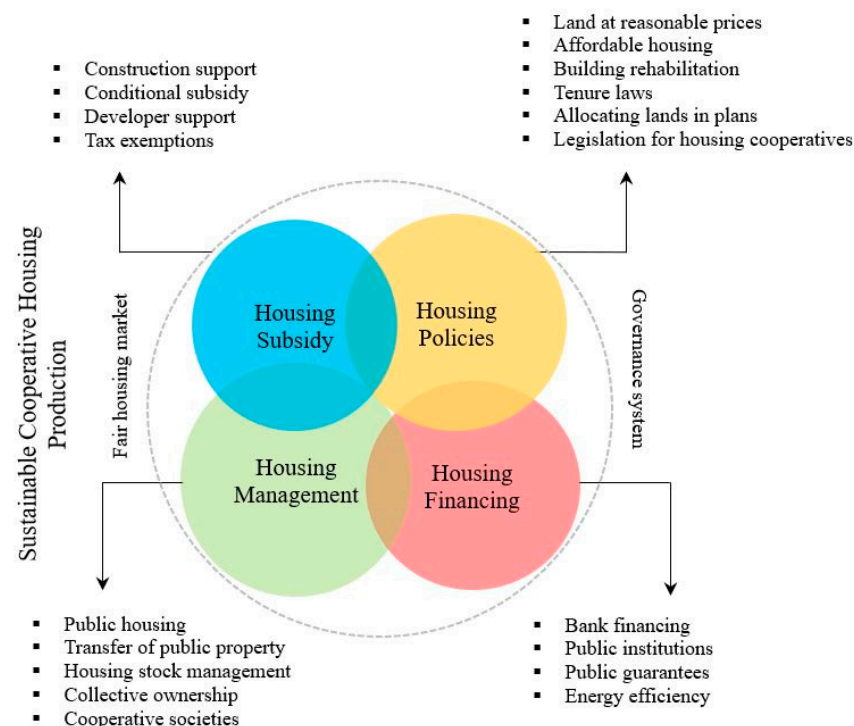


Figure 2. Sustainable cooperative housing production. Source: Author, based on [7,19,23,24,30].

2.3. Practices and Case Studies

Stimulating cooperative housing production involves three stages: (1) promotion, which includes developing a strategic plan for the path of the cooperative sector in the dynamics of the housing market; (2) investment, including financing inputs stimulating production; and (3) construction, which is the actual production of the housing units, including various types of housing that are suitable for all segments of society [31].

Reynolds [8] pointed out the role that cooperative housing production plays in maintaining the balance of the housing market. He compared the affordable housing markets in Germany and the United States of America (USA) to confirm the role of housing cooperatives in this market share. In the USA, there are 425,000 units of affordable cooperatives and 167,000 units still standing. In Germany, there are approximately 2.2 million cooperative housing units, which have contributed to serving more than 4.6 million residents. The procedural policies for cooperative housing production in the USA and Germany are similar, as private companies or non-profit organizations undertake the production of cooperative housing. Individuals can also form legal entities to establish housing cooperatives and internal regulations to manage the cooperative. Many studies suggest that debt-based financing places a heavy burden on households and does not contribute to housing affordability. However, community financial organizations or cooperatives help to achieve financial sustainability and reduce the expenses for members [32]. Cooperatives or groups receive low-interest financing and shareholdings to purchase, build, or renovate housing units as a housing cooperative. Tenants receive the right to housing and access to shared facilities.

In Germany, the government grants loans to finance cooperative housing construction, purchase, or renovation through the housing programs of the KfW banking group. Germany provides many facilities for the setup of cooperative housing, including low-interest mortgages and down payment assistance. On the other hand, obtaining financing loans in the USA is expensive and involves procedural and legal burdens [33]. The trend towards investing in the housing market as an alternative to cash, bonds, and investment funds affects the production of cooperative housing. Housing is not an investment or savings mechanism, and the tendency towards investing in it increases prices and negatively affects low-income groups [8]. Local taxes in Germany play an important role in the production of affordable cooperative housing. Local housing agencies can provide property tax exemptions or transfer of ownership because the local funding source depends on government support and is not affected by fluctuations in the value of the property. In contrast, property tax in USA localities is considered the largest source of revenues, and tax exemptions affect this source. The production of cooperative housing emphasizes the importance of educating housing developers about this housing type, including risk analysis, lending policies, and transferring multi-family buildings to a cooperative owner. Cooperative housing production is subject to an understanding of the nature of city development and household preferences. In Germany, families tend to live in compact urban areas and multi-family housing, which is the most common model in Europe. In the USA, cities tend to expand horizontally, with low densities. Moreover, American society prefers to live in separate groups with one family [8].

In the Netherlands, housing cooperatives play a major role in ensuring that housing remains affordable. Statistics indicate that 900,000 homes will be needed by 2030, 33% of which will be affordable [34]. The housing market can be divided into owner-owned housing, which is usually available for people with high incomes, and rented housing (social housing). The rental market can be owned by housing associations or by landlords within the free market. However, the market will not be sufficient to meet the future demand for housing, and cooperatives are an alternative that increases spatial social cohesion [28]. In the 19th century, many Dutch cities faced a rising demand for housing as a result of the migration of people from the countryside to the cities. The working class was affected by poor housing conditions, accompanied by a lack of water and services and the spread of diseases. Cooperative initiatives were based on the logic that improving the living

conditions of workers could lead to increased productivity and loyalty [34]. Therefore, in 1852, the first housing cooperative was founded, and the contributions of its participants were pooled to build affordable housing for the working class. Housing cooperatives in the Netherlands became self-managed organizations that provided affordable housing for socially homogeneous classes [35]. Cooperative housing in the Netherlands represents a marginal share of the housing stock, with housing associations developing the social rental sector at 30% and the private sector at 70% [28]. However, the government provided political support for cooperative housing initiatives as an important tool for social stability and economic empowerment. The 1901 Housing Act focused on regulating the housing market and setting regulations for the establishment of cooperative housing associations and regulating government subsidies for them [36]. The 2015 Housing Act emphasized the importance of developing cooperatives as one of the options that supports the housing stock and meets the economic and social needs of families. The Housing Act found political support to build a strong social housing sector. In recent years, government practices and initiatives have been increasingly moving towards cooperative housing and self-management. The Dutch government has developed policies to increase the housing stock of cooperative housing to 10% of the total housing stock in Amsterdam by 2045 [37].

In Denmark, housing policies have played a major role in facilitating housing cooperatives as a form of affordable housing. Housing cooperatives in Denmark account for 8% of the housing stock, and more than 75% of them are residential apartments owned by cooperatives [28]. Housing cooperatives are based on the formation of small, independent community groups, which can collectively own and manage the property by purchasing a share of the right to use the property. Housing cooperatives developed out of community practices that created a housing market for financial and construction cooperatives [38]. In other words, the development of housing cooperatives in Denmark is linked to the empowerment of the community to create collective housing projects that meet the needs of the community. Housing policies provided the framework for the cooperative production, consumption, management, and self-governance structures of the community [39]. The principle of use rights in the Danish housing system has enabled communities to develop and manage housing projects independently of housing supply and demand changes. Housing policies in Denmark have granted cooperatives relative autonomy, meaning the ability to produce and manage housing away from the vagaries of the housing market. However, shifts towards commodification are beginning to impact the housing cooperative system negatively and make it unaffordable for some socioeconomic groups. Therefore, housing policies have started to focus on incorporating social justice and sustainability into the organizational structure of cooperatives to reduce the influence of financial and housing speculation [28].

Based on the above, stimulating cooperative housing production consists of three stages. (1) The first phase is planning, which includes providing sources of financing, subsidies, and tax exemptions and measuring community preferences. The Public Housing Authority can provide equitable access to land allocated to cooperatives and provide economic and technical support. (2) The second phase emphasizes the framework that guarantees the success of the plan, including urban laws and legislation, the community participation system, and the participation of stakeholders. The framework should incorporate sustainable design principles into cooperative housing projects in a manner consistent with global sustainability goals, including energy-efficient systems, renewable energy sources, and water-saving technologies [40]. In addition, legislation is developed to ensure that the cooperative sector remains open to all socioeconomic groups. (3) The third stage—production—ensures the sustainability of the cooperative housing product and its adaptation to the fluctuations of the housing market through evaluating cooperative housing patterns and monitoring the market. This illustrates the importance of understanding the dynamic relationship between cooperative housing and the market system, as the commodification of cooperative housing makes it unaffordable for some social and economic groups (see Figure 3).

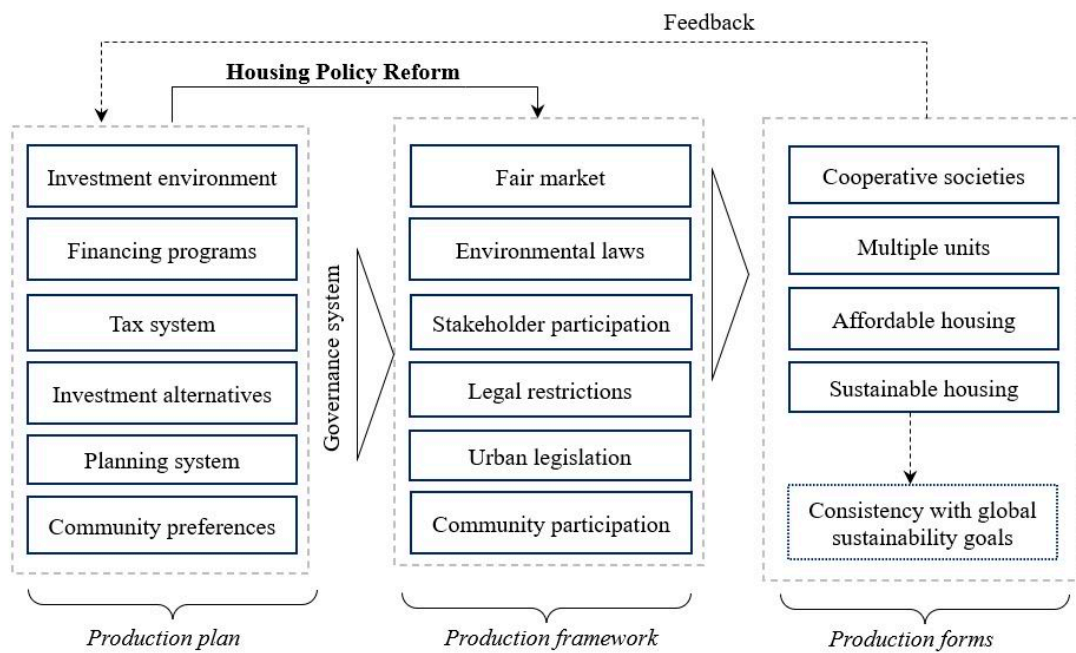


Figure 3. Factors activating sustainable cooperative housing production. Source: Author, based on [8,31,33].

3. Materials and Methods

This study was conducted by analyzing a wide range of literature on cooperative housing production and statistical reports that addressed the research objective. The “conceptual framework” was the researcher’s description of the relationship between the variables in the study, established by formulating the concepts that theoretically addressed the topic and the assumed relationships between them. A conceptual framework determines the researcher’s understanding of the variables or clarifies the assumed links between the concepts being studied and expresses the concepts using the relevant literature [41]. According to Jabareen [42], the development of a conceptual framework depends on the representation of the relationship expected between the variables. The research question can lead to the identification of the types of variables required. This study formulated the following research question: “What are the principles for the activation of sustainable cooperative housing in Saudi Arabia?” Before starting to collect data, the most important variables affecting cooperative housing were derived by reviewing the literature and identifying the variables and their relationships with each other. The study extracted the basic principles of cooperative housing production from theoretical frameworks and international experiences, including housing policies, financing, support programs, and cooperative housing management, as shown in Figure 4. The study compared the objectives of Vision 2030 and local efforts based on the results of the statistical report on the current status of Saudi cities issued by the General Authority for Statistics. Quantitative data on the housing situation in Saudi Arabia were extracted from the General Authority for Statistics, including the housing stock, ownership rates, and housing stock provided by various sectors. The quantitative data were entered into a statistical analysis program (Microsoft Excel 2016), and the results were presented to experts to provide explanations and reasons for the low participation of cooperative housing in housing production in Saudi Arabia. Moreover, the qualitative interviews with experts helped to extract the most important factors influencing the motivation of housing cooperatives in Saudi Arabia and reveal the challenges facing cooperative work. This study developed a conceptual framework to stimulate cooperative housing production that is consistent with the housing structure in Saudi Arabia, based on an analysis of the relationship between the dependent and independent variables and external factors, including legislative, procedural, and executive aspects.

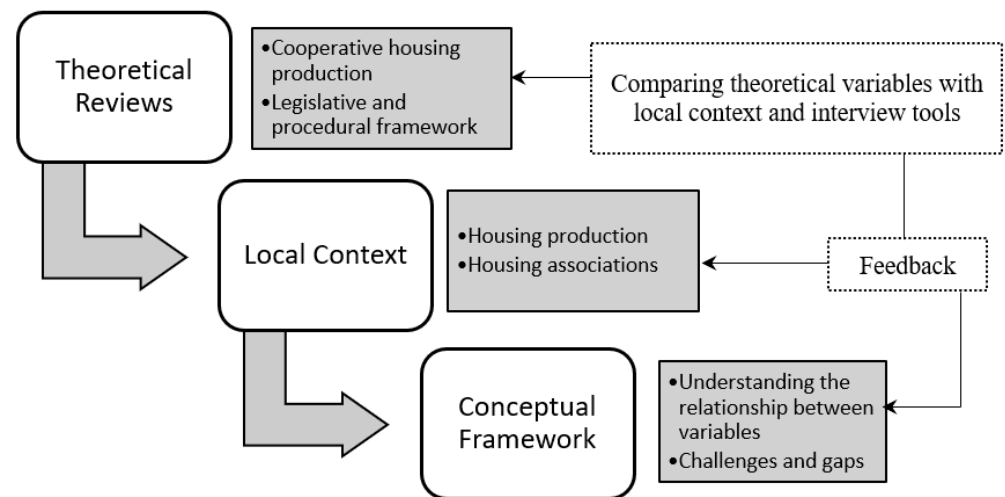


Figure 4. Scheme of the research methodology. Source: Author, based on [29,42,43].

Interview Design

According to Oakley [44], qualitative interviewing is a type of framework that allows for the investigation of the research question, the understanding of the variables, and the testing of practices. Unstructured interviews allow participants to express themselves freely, with minimal control over their answers and without bias from the researcher. This study focused on bridging the gap in cooperative housing data through qualitative interviews with five officials in housing associations (qualitative interview: see the names of the experts in the references). The interviews helped to extract the most important variables affecting cooperative housing in Saudi Arabia and aimed to understand the roles of housing associations within the subsidy housing structure. Experts’ opinions on the shortage of cooperative housing in Saudi Arabia were studied in the context of the current housing stock. Obstacles facing housing associations were also identified, including a lack of funding, partnerships, urban legislation, and procedural aspects. Participants were selected through searching the Council of Cooperative Societies database for those with experience in the field of housing and in managing cooperative housing societies. The interview was designed in an unstructured manner to allow participants to answer freely, as shown in Table 1. The interview focused on five questions to evaluate cooperative housing in terms of its legislative, procedural, and executive framework.

Table 1. Components of qualitative interview questions.

Interview Question	Assessing the Current Framework		
	Legislative	Procedural	Executive
What are the procedures for establishing cooperative housing societies?		×	
How does cooperative housing work in Saudi Arabia?	×	×	
What are the challenges facing cooperative housing in Saudi Arabia?		×	
What support is provided for cooperative housing?		×	×
What are the proposals to activate housing cooperatives in Saudi Arabia?	×	×	×

Source: Author.

4. Local Context

The Kingdom’s Vision 2030 has set the three goals of building a vibrant society, a thriving economy, and an ambitious nation. These goals are integrated within an effective governance system to translate this vision into executive programs and initiatives. Vision 2030 has developed several initiatives and strategies to reform the economic structure and diversify sources of income to enhance the sustainability of cities and transform

them from consuming cities to productive cities. In light of Vision 2030, the housing program emphasizes helping families to own homes, improving the efficiency and quality of the housing product, and providing financing solutions through simple and facilitated procedures [45]. The “Sakani” housing program emphasizes the development of a set of programs and financing solutions for families with financial solvency [46]. However, the Development Housing Program cooperates with the non-profit sector and provides solutions for families most in need, which includes families covered by social security [47].

Cooperative work began in Saudi Arabia nearly six decades ago with the opening of the first cooperative society in 1962. Cooperative housing is one of the initiatives of the Ministry of Municipalities and Housing that contributes to achieving the Kingdom’s Vision 2030. It aims to organize and stimulate the cooperative societies sector for housing purposes, to contribute to providing affordable housing units by developing legal frameworks for cooperative housing, building the capacities of cooperative societies, and spreading awareness [17]. Cooperative housing seeks collective purchasing power to enable and develop cooperative housing societies to build housing at low costs compared with market prices [48]. Therefore, cooperative housing can be considered as a link between developmental housing and the “Sakani” program, because it adds housing units to the market that serve people on middle and low incomes. Social housing development efforts are slow compared with the global context [49]. Although the cooperative housing sector is widespread worldwide, it remains limited in its impact at the local level due to the absence of a culture of cooperative work among individuals and institutions related to the housing sector [50].

4.1. Housing Production

Saudi Arabia has witnessed urban growth and an increase in urbanization rates to reach 82.1%, while 17.9% live in rural areas [51]. The urbanization levels in Saudi Arabia are expected to exceed 90% by 2030 during the transformation of Saudi society and the growth in infrastructure in major cities [52] in light of the limited role of urban planning in achieving sustainable urban development. This rapid urbanization could lead to many urban problems, particularly in housing [53].

As shown in Table 2 and Figure 5, the percentage of housing units in Riyadh, Makkah, and the Eastern Province constitutes more than 70% of the total housing units in Saudi Arabia. Population growth is concentrated in major cities, such as Riyadh, Jeddah, Makkah, and Dammam, due to the development of many investments and job opportunities, which have increased population migration and the demand for housing [53]. Therefore, more than 90% of the demand is concentrated in major cities within regions, at the expense of smaller cities.

Table 2. Housing stock in Saudi Arabia.

Province	Code	No. Housing Units	Percentage
Riyadh	RY	2,273,197	27.8
Makkah	MK	2,134,312	26.1
Eastern	ES	1,349,769	16.5
Madinah	MD	518,683	6.34
Asir	AS	478,970	5.86
Qaseem	QA	313,247	3.83
Jazan	JA	309,401	3.78
Tabuk	TB	207,253	2.54
Hail	HA	177,976	2.18
Najran	NJ	131,480	1.61
Al Jouf	JO	125,030	1.53
Al Baha	BH	82,625	1.01
Northern	NO	72,731	0.89
Total		8,174,674	100

Source: [13].

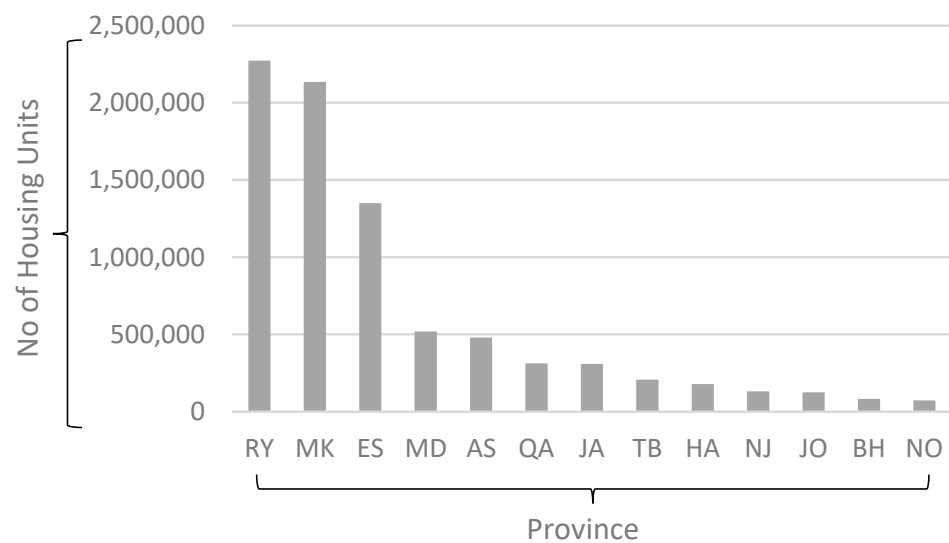


Figure 5. Housing stock in Saudi Arabia. Source: [13].

Housing production in Saudi Arabia faces major challenges due to the growth in demand and the shortage of supply that families on low incomes can afford [54]. Many factors have contributed to the shortage of the housing supply, including high land prices, real estate speculation, inefficient subsidized housing programs, and a lack of diversity in housing types [55]. In addition, there are no effective programs to increase the housing stock through the urban renewal of deteriorating neighborhoods or the maintenance of dilapidated housing [56]. The concentration of urban development in some major cities has contributed to an increased demand, higher prices, and a shortage of supply [57]. Therefore, the public housing stock remains ineffective if provided in small or remote cities. As shown in Table 3, real estate development companies have made great efforts to increase the rate of home ownership through housing programs in partnership with the Ministry of Municipalities and Housing; the rate of home ownership rose to 60.6%, exceeding the goal of the first phase of the housing program plan, between 2018 and 2020. However, many families still suffer from having to repay financing and mortgage loans. The percentage of owned housing by mortgage or loan reached 16% of the total ownership. Moreover, the number of housing units occupied by non-Saudis is 4,021,177, which is 49% of the total housing stock. Most non-Saudi families or individuals occupy low-cost housing units, which affects the affordable housing stock. Locally, housing is influenced by international contexts, investment laws, political implications, and the global economy. The US Federal Reserve and other central banks undertook significant monetary expansion between 2008 and 2021 [58]. These policies have inevitably led to artificially low yields in developed countries, which in turn encourages capital flight from international investors to assets in emerging markets, such as Saudi Arabia. Despite these positive developments, rising inflation has forced the US Federal Reserve to change its policy starting in 2022 [59]. This means that money will have to leave developing economies, which could theoretically lead to higher loan rates in Saudi Arabia and hinder the growth of sustainable housing projects. However, Saudi Arabia is seen as an important geopolitical ally of the United States. Therefore, it may remain an attractive market for foreign direct investment by large US companies and investment management firms. This gives the impression of an unclear direction in capital flows to Saudi Arabia, the impact of monetary policy, and its geopolitical importance.

Table 3. Home ownership in Saudi Arabia.

Ownership Type	Saudi		Non-Saudi		Total	
	No.	%	No.	%	No.	%
Property without mortgage or loan	1,512,762	36.4	127,737	3.2	1,640,499	20.1
Ownership by mortgage or loan	697,528	16.8	32,768	0.8	730,296	8.9
Undefined	304,658	7.3	226,685	5.6	531,343	6.5
Sub-total	2,514,948	60.6	387,190	9.6	2,902,138	35.5
Tenant	1,638,549	39.4	3,633,987	90.4	5,272,536	64.5
Total	4,153,497	100	4,021,177	100	8,174,674	100

Source: [13].

4.2. Cooperative Housing Production

Cooperative housing societies in Saudi Arabia play several roles, including establishing residential complexes in cooperation with the non-profit sector and improving the quality and type of construction at reduced costs, which contribute to increasing the affordable housing stock in line with the needs of Saudi families and their economic capabilities. Housing societies also study the cases of families on low incomes and their eligibility for development housing programs. The Riyadh Cooperative Housing Society indicated that the role of a housing cooperative is to establish low-cost housing complexes and provide them to people on low incomes at competitive prices and improve the quality and type of construction of residential complexes. In addition, the objectives of the society include providing building materials and maintenance services for existing buildings and improving the economic and social status of its members by rewarding them with material and social returns [60]. These targets emphasize the importance of including sustainability and affordability indicators in cooperative housing. Cooperative housing societies still constitute a small percentage that does not match the size of the housing market and the increasing demand for housing units in this vital sector; the percentage of housing cooperatives does not exceed 0.3% of the total size of cooperatives in countries that are similar in terms of area and population [50]. In addition, the financing of cooperatives is subject to self-efforts or charitable donations and lacks effective partnerships with the private sector.

As shown in Table 4 and Figure 6, the housing units provided by the various sectors constitute 14.7% of the total housing stock. The cooperative housing sector remains limited in its impact, and the size of the cooperative supply constitutes a negligible percentage of the housing stock because it is based on the efforts of some cooperative societies; cooperatives are often considered part of the charitable sector.

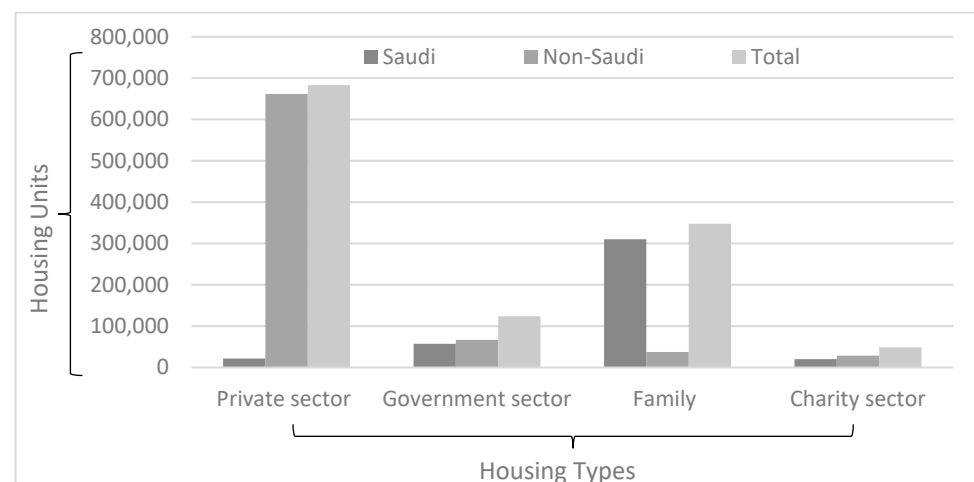
**Figure 6.** Housing stock provided by sector in Saudi Arabia. Source: [13].

Table 4. Housing stock provided by sector in Saudi Arabia.

Housing Provided by Sector	Saudi		Non-Saudi		Total	
	No.	%	No.	%	No.	%
Private sector	21,573	0.5	661,448	16.4	683,021	8.4
Government sector	57,326	1.4	66,609	1.7	123,935	1.5
Family	310,222	7.5	37,623	0.9	347,845	4.3
Charity sector	20,131	0.5	28,700	0.7	48,831	0.6
Total	409,252	9.9	794,380	19.8	1,203,632	14.7

Source: [13].

5. Discussion

Cooperative housing in Saudi Arabia faces challenges in enabling families to obtain affordable housing. These challenges are related to the legislative, procedural, and executive framework of cooperative housing. Cooperative housing requires financial resources, social connections, expertise, and legal regulations [61]. The strategic targets of cooperative housing seek to organize and stimulate the cooperative societies sector for housing purposes so as to contribute to the provision of affordable housing units through developing legal frameworks for cooperative housing, building the capacities of cooperative societies, and spreading awareness. This strategy cannot be implemented without empowering the cooperative sector with land, financing, or the direct purchase of cooperative housing units. Whereas local subsidy housing programs, such as “Sakani” focus on financially solvent families, developmental housing provides opportunities for families on low incomes through the partnership of housing societies and the private sector. Developmental housing provides housing units that are purchased from the housing market, whereas cooperative housing remains far removed from empowerment mechanisms capable of promoting its products or exploiting community efforts in pumping housing stock into the market.

5.1. Procedural Framework

Housing associations are established through the personal efforts of their members, who lack a sustainable program that ensures their governance and measures their performance indicators [62]. Cooperative societies also face delays in approving real estate plans and decisions and issuing licenses [63]. The establishment of housing cooperatives is subject to the procedures of the Ministry of Human Resources and Social Development. The Ministry of Human Resources and Social Affairs [64] has established a series of lengthy procedures, starting from submitting a request from the founders to establish the association, studying the request, collecting capital, and then reviewing the request. The request is accompanied by a set of conditions, including attaching a proposed feasibility study for the association’s projects, a mechanism to attract members, opening a bank account, and establishing headquarters for the association. Ahmed [65] states that establishing an association may take a long time and requires financial contributions from members, which drains their self-resources. As a result, there is a shortage in the number of cooperative housing societies in Saudi Arabia, with a total of no more than 40 societies.

5.2. Support and Advocacy

Support and advocacy are important tools in stimulating cooperative housing. This support can take many forms, such as land grants, loans, and human resources [66]. Land is a crucial factor in facilitating housing, with the value of land accounting for >60% of the cost of housing. Although vacant land is available in urban areas, it is owned by real estate companies or the private sector, which subsequently contributes to its high price [14]. The area of undeveloped land in Riyadh amounts to 20,242 hectares, equivalent to 45% of the total land available for urban development until 2028 [67]. Land shortages affect the available housing stock and contribute to rising prices, as many landlords hold on to land to maximize economic returns; this is despite the implementation of the White Land Fees Program, which aimed to increase the supply of land to address the housing shortage

problem, provide affordable land, and combat monopolistic practices [68]. However, there was no noticeable decrease in land prices, especially in major cities such as Riyadh, Jeddah, and Dammam. Therefore, stimulating cooperative housing can contribute to increasing the housing stock that people on middle and low incomes can afford. Support of the cooperative housing model can be achieved by allocating land for cooperative housing within residential plans and developing the land ownership system in a way that supports the establishment of cooperative projects at affordable prices. Moreover, financing is a challenge to the success of the enabling approach to cooperative housing in Saudi Arabia. There is a need to facilitate financing procedures by establishing a cooperative housing fund to direct collective support.

Financial support or land grants from the Ministry of Municipalities and Housing to develop cooperative housing programs require a set of conditions that confirm the financial solvency, legal status, and construction experience. These conditions may be available in real estate development companies but are difficult to provide in civil cooperative societies. There are difficulties in establishing a cooperative fund, as cooperative societies are linked to the Ministry of Human Resources and Social Affairs and are not commercial companies. Financial support requires many bureaucratic procedures, and obtaining financing from the Social Development Bank requires guarantees [69]. The Housing Cooperative Society in the Al Baha region has identified the scarcity of land and financing as the most prominent challenge, especially with the increase in construction costs. The support provided to cooperatives does not match the characteristics of each region, including the costs of building materials and the housing market [63]. Al-Aufi [70] stated that there are land grants for housing associations, but, sometimes, they are linked to bureaucratic procedures, which negatively affects the final beneficiary. Moreover, support is also linked to the efficiency of the housing association, the program offered, and its experience. However, Al-Essa [71] believes that cooperative housing is a social good that coordinates collective efforts in the context of alleviating the burden of obtaining housing. Therefore, government agencies should play the role of “advocacy” for this type of housing and motivate families to obtain affordable housing.

5.3. Empowerment

Al-Arabi [62] confirms that the concept of cooperatives is still misunderstood, even in the government sector, which sometimes views cooperatives as charitable associations. Empowerment can be achieved by supporting cooperatives with qualified human resources, training, and exchanging experiences. Granting cooperatives legal status as legal commercial entities helps to empower them in the housing market. Moreover, empowerment can be achieved by encouraging developmental housing programs to purchase cooperative housing as an alternative to the market. Cooperatives can help as partners in housing programs, especially development housing for people on low incomes. The interview with Al-Alyan [72] confirms that the purchase of development housing for cooperative housing units helps to achieve the principle of “empowerment”, while, at the same time, ensuring the quality of the technical specifications of the housing units.

5.4. Business Model

Building a legal business model is essential for the sustainability and effectiveness of cooperative housing in Saudi Arabia. Cooperative housing societies can lack professional experience and administrative efficiency. Most cooperative activities come without a business model or strategic plan and often depend on the individual efforts of their members. Transforming cooperative societies into cooperative companies or privatized entities with legal status aligned with the environmental, social, and governance (ESG) investing principle gives them more flexibility and effectiveness in the housing market [73]. This transformation must be coupled with a clear governance framework and business model that elevates cooperative members from traditional to professional work. Supporting cooperative societies with a business model, procedural system, flexible legislation, and

continuous follow-up contributes to their gradual transformation into productive societies. The interview with Ahmed [65] revealed that the most prominent challenge facing cooperative societies is the lack of a business model. It is difficult to compensate for the losses of establishing cooperative societies later because the support is insufficient, the procedures are bureaucratic, and there is no clear plan for cooperative housing societies. Al-Arabi [62] points out that there is no clear mechanism for the selection of members of the board of directors for cooperative societies in terms of experience, competence, and communication skills. Cooperative society meetings become a mere formality because they are not linked to a business model. Al-Aufi [70] stated that many housing associations fail because they are based on the individuals' efforts and not on institutional work linked to strategy and democratic executive management. Investing in social funds promotes sustainable housing cooperatives in the long term because they align investment with social preferences. Investors increasingly apply ESG factors to determine material risks and growth opportunities. Therefore, having ESG criteria helps investors to gain a more comprehensive view of housing cooperatives. Investing in social funds promotes sustainable housing cooperatives in the long term because it aligns investment with social preferences. Investors increasingly apply ESG factors to determine material risks and growth opportunities [74]. These factors contribute to understanding the environmental impacts, including the use of alternative energy systems, sustainable housing design, and waste disposal systems. Social factors explain how housing cooperatives operate in the context of community service, including equality, public interest, and social diversity. Governance factors help to understand the mechanism of operation, transparency, and responsiveness of the work system among shareholders, members, and the community. Therefore, having ESG criteria helps investors to have a more comprehensive view of housing cooperatives [73].

5.5. Partnership and Community Awareness

Partnership and community awareness is one of the important tools in activating cooperative housing. Many studies have proven that the growth of the cooperative sector depends on effective partnerships with the private sector, the local community, and local agencies [7,23,24,30,50]. However, cooperative housing is still far from achieving effective partnerships, particularly with local agencies. The housing units produced by the cooperative sector can be used in the "Sakani" housing program or the Development Housing Program through the exchange of benefits "advocacy". In contrast, the private sector often views cooperative housing as an inexperienced competitor that negatively impacts prices in the housing market. On the other hand, cooperatives in Saudi Arabia are still viewed as housing for "the poor" or people on low incomes. This perception affects the growth of the cooperative sector and limits housing production. The interview with Al-Arabi [62] indicates that the shareholders in housing cooperatives have a problem with the community's awareness of the concept of cooperatives. Sometimes, they are viewed as a charitable association, while some demand that the associations provide housing or financing on the basis that they are charitable housing associations. However, in European countries, cooperatives have become utilitarian, meaning that they own a benefit at a symbolic price for life. However, Al-Essa [71] believes that housing cooperatives should focus on groups with similar characteristics, or what is called a "community", which is important in establishing cooperative entities. Cooperative work depends on the cultural sense of the community, as housing is a social priority that aims to serve the community's interests. Therefore, cooperative housing can be successful in the community of professionals, employees, and engineers.

As shown in Figure 7, the conceptual framework for the activation of sustainable cooperative housing production in Saudi Arabia emphasizes empowerment and advocacy for the cooperative housing model. This is achieved by strengthening partnerships and exchanging benefits and experiences. In return, cooperative housing can contribute to providing housing products that support development housing or the "Sakani" program. This framework provides a business model for cooperatives that are governed and monitored

by independent bodies. Building a business model is based on three main levels, starting with the legislative, procedural, and executive framework. This framework leads to the development of a collaborative product whose effectiveness can be measured through performance indicators. Financial support is provided to cooperatives by the cooperative housing fund based on performance indicators and their compatibility with the global sustainable development goals. Moreover, the performance indicators emphasize ensuring that the cooperative housing product is compatible with the needs of the residents by supporting community and stakeholder participation, affordability criteria, and sustainable design principles.

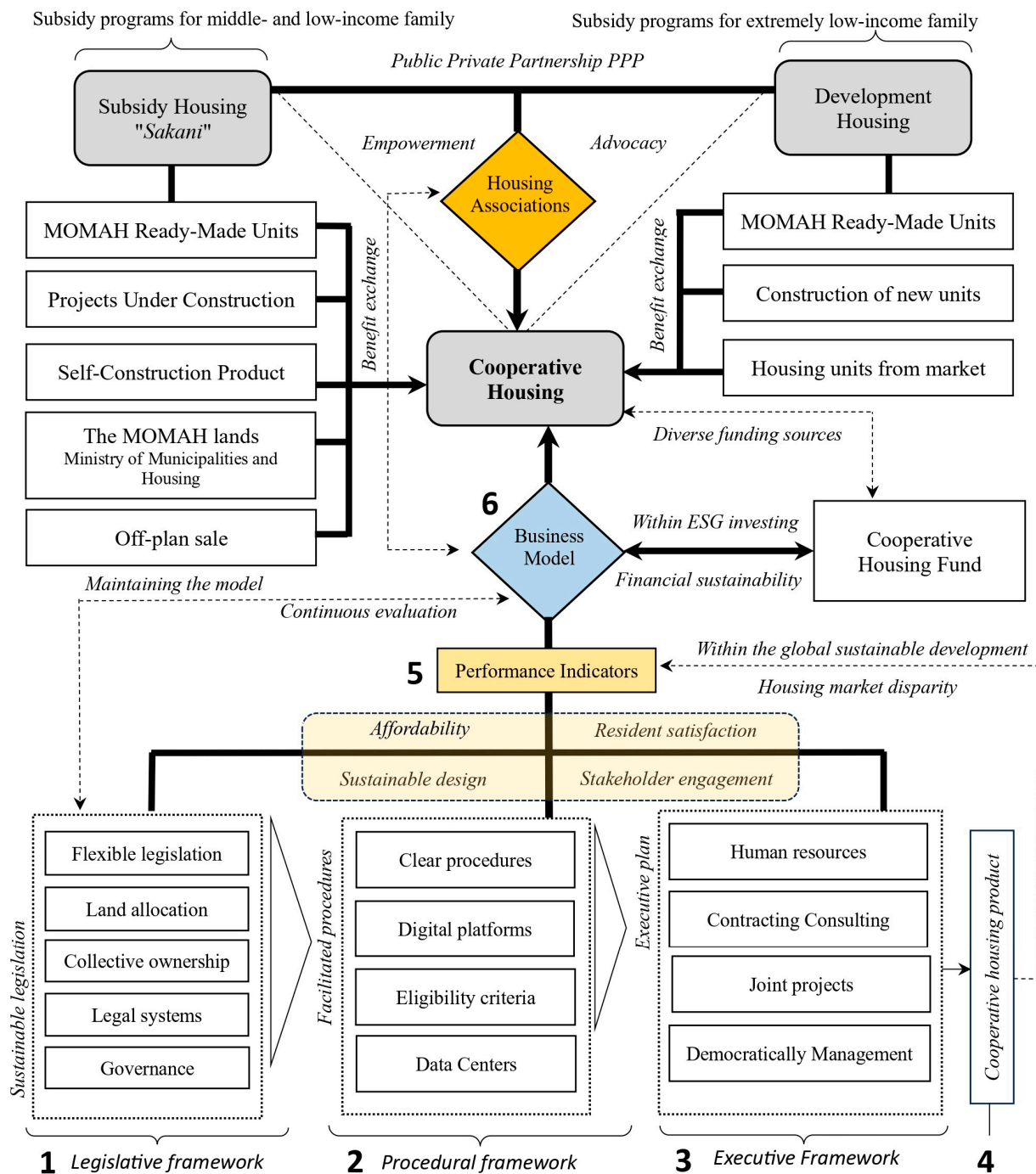


Figure 7. Conceptual framework for activation of sustainable cooperative housing production in Saudi Arabia. Source: Author.

6. Conclusions

Cooperative housing production is one of the most important alternatives within the framework of affordable housing in Saudi Arabia. Vision 2030 adopts the approach of enabling housing as an alternative to direct housing provision. This enabling approach requires strengthening the partnership between the private, public, and charitable sectors to improve the reality of the housing market. Nevertheless, cooperative housing is still unable to play an effective role in the housing market due to legislative, procedural, and implementation challenges. This study aimed to develop a conceptual framework for the activation of sustainable cooperative housing production in Saudi Arabia. The study identified the cooperative housing program as a mediator between developmental housing and subsidy housing, termed “Sakani”. This role gives cooperative housing greater flexibility within the framework of the empowerment and advocacy approach. The research results confirm that housing policies should involve developing diverse housing alternatives to control the challenges facing the housing market, including land scarcity, construction costs, and financing mechanisms. Sustainable cooperative housing relies on a collective community effort, common ownership, democratic management, and cost-based rent to increase the housing stock and provide an affordable alternative for families in the long term. The housing market in Saudi Arabia needs to diversify the forms of housing ownership; therefore, procedures for the establishment of sustainable housing cooperatives should be facilitated, and a legal framework and guidance must be provided during the establishment process. The activation of sustainable cooperative housing in Saudi Arabia can be achieved due to the presence of political will, as it is one of the initiatives of the national Vision 2030. However, stimulating the production of cooperative housing depends on building a business model and developing the role of cooperative housing associations as a partner in the housing support system. Moreover, the Ministry of Municipalities and Housing should update the urban legislation, real estate development procedures, and ownership systems to allocate land to cooperatives and provide legal status for cooperative associations to compete with real estate development companies. Finally, the concept of cooperative housing should be understood comprehensively and not considered as charitable housing or individual efforts.

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