

Measuring Housing Competitiveness Indicators in Residential Investment Projects in Iraq

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I. INTRODUCTION

Abstract This study examines the competitiveness of residential investment projects in Iraq's housing sector, identifying challenges and proposing sustainable solutions through competitive strategies. Iraq's housing sector, a critical component of economic and social stability, faces significant structural, regulatory, and economic challenges, including rising costs, inadequate legislation, and insufficient funding. Additionally, demographic pressures and environmental issues exacerbate the housing deficit. Drawing on economic and managerial theories, the study categorizes housing competitiveness indicators into economic, quality, value-added, and diversity metrics, while identifying internal and external competitive drivers such as administrative efficiency, innovation, and government policies. Using a mixed-methods approach, the study integrates theoretical and applied analyses. Data were collected through expert interviews, surveys, and secondary sources, with findings analyzed using the Analytic Hierarchy Process (AHP) and SPSS. The study evaluates the competitiveness of four major housing projects: Bismayah Residential City, Badur Baghdad, Bayti, and Jasmine Garden. Results highlight disparities in economic competitiveness, quality, market value, and diversity indicators, with Bismayah outperforming in economic metrics but facing challenges in design innovation and inclusivity. Conversely, Jasmine Garden struggles with low market value and project delays, negatively impacting its competitiveness. The study concludes that enhancing competitiveness in Iraq's housing sector requires innovative cost-reduction strategies, robust regulatory frameworks, improved infrastructure, and targeted support for social housing. By aligning local housing policies with global best practices, the study offers actionable insights to address Iraq's housing challenges and foster sustainable development.

Keywords: Housing competitiveness, residential projects, Iraq, economic indicators, housing quality, value-added indicators, diversity and allocation, Relative Importance Index (RII), Analytic Hierarchy Process (AHP).

The housing sector is one of the most prominent sectors reflecting the state of a nation's economy and level of social development. In Iraq, this sector faces significant challenges driven by a range of external competitive drivers that directly and indirectly influence the dynamics of the housing market. These drivers include economic, demographic, environmental factors, and government policies, which collectively shape a comprehensive framework for guiding investment and development in this sector.

The housing sector in Iraq serves as a cornerstone for achieving social and economic stability. However, it is confronted by numerous structural, regulatory, and economic challenges that negatively affect the quality and availability of housing. Drawing on global experiences, competitiveness has played a pivotal role in enhancing performance and solving challenges in the construction and real estate sectors, making it a strategic option for overcoming Iraq's housing challenges. These challenges are exemplified by regulatory and institutional barriers, such as the absence of effective legislation. Local studies, such as the work by Alanizi and Alsayed (2022), reveal that current housing-related regulations, including those governing the Housing Fund, impose burdensome requirements and inefficient mechanisms on citizens, hindering access to loans and reducing the effectiveness of housing projects.

Additionally, the housing sector suffers from overlapping roles between government institutions and the private sector, leading to inefficiencies in project management and an inability to meet the growing demand for housing units. Economic challenges include rising land and construction material costs, where land often constitutes a substantial portion of project expenses, sometimes exceeding half the value of a property. Dependence on imports to meet construction material needs further results in price fluctuations and increased overall costs.

Moreover, Iraq's housing sector experiences a funding shortfall, whether from government or private sector sources, limiting the market's capacity to execute new housing projects.

Demographic and social challenges, such as rapid population growth and internal migration, have led to increased demand for housing units, exacerbating the housing deficit, which is estimated at millions of units. Furthermore, poverty and inequality have reduced the chances of low-income citizens accessing adequate housing, contributing to the spread of informal settlements. Environmental challenges also persist, including the lack of sustainable practices in housing projects, which amplifies negative impacts on natural resources and increases maintenance costs.

On the other hand, competitiveness has been utilized as a solution to address various challenges in global experiences within the housing and adjacent sectors, such as construction and real estate. For example, Sutrisna et al. (2022) demonstrated that adopting off-site construction (OSC) techniques could reduce construction costs and enhance quality. Petryshyna (2024) highlighted that improving knowledge management among construction sector employees enhances competitiveness and minimizes knowledge loss. Wang et al. (2020) noted that adopting sustainable designs contributes to resource consumption reduction and improves project efficiency. Furthermore, competitiveness has been employed as a tool to incentivize public-private partnerships. Pavlov et al. (2019) emphasized that fostering collaboration between governments and investors could enhance supply and demand in the real estate market.

To harness competitiveness as a pioneering solution to the challenges facing the housing sector, it is essential to study the effectiveness of competitive drivers in improving housing indicators for Iraq's housing sector. This study aims to develop an objective understanding of the competitiveness level of current residential investment projects in Iraq.

II. METHODOLOGY AND MEASUREMENT TOOL

This study aims to analyze the challenges facing the housing sector in Iraq, with a particular focus on utilizing competitiveness as a sustainable strategic tool to address sector-related issues. The methodology is based on a descriptive analysis that examines competitive indicators and both internal and external drivers affecting the sector, integrating theoretical and applied analysis to provide a comprehensive perspective.

The study seeks to achieve key objectives, primarily developing an objective assessment of the competitiveness level of current residential investment projects in Iraq to propose sustainable solutions that align with local market needs.

The study adopts a combination of theoretical and applied analysis. The theoretical component includes a literature review on housing competitiveness, as well as the classification of key indicators and influential drivers. The applied component employs the Analytic Hierarchy Process (AHP) to evaluate the relative importance of each indicator and driver while drawing comparisons between local findings and global experiences in sectors such as construction and real estate.

Data is collected from primary sources, including expert interviews and structured surveys, as well as secondary sources such as previous studies, official reports, and academic literature. The data is analyzed using statistical software such as SPSS and Excel, with internal consistency measured through Cronbach's alpha reliability test. This approach enables a precise understanding of the current situation and facilitates the development of actionable improvement recommendations.

The theoretical framework of the study identifies housing competitiveness indicators within four main categories:

1. Economic indicators, which include housing costs, prices, and expected financial returns.
2. Housing quality indicators, which relate to design quality, construction, and location.
3. Value-added indicators, which encompass innovation in design and market value.
4. Diversity and housing allocation indicators, which focus on tenure types and target groups.

Competitive drivers are classified into external drivers—including economic, governmental, environmental, and demographic factors—and internal drivers, which focus on administrative efficiency, innovation, and technology.

The analytical process involves reviewing the theoretical framework to extract key indicators and drivers, followed by data analysis using the AHP method to establish priorities and determine the relative importance of each factor. The results are then compared with successful international case studies to evaluate the feasibility of implementing these solutions in Iraq.

The expected outcomes of the study include identifying key gaps within the housing sector, assessing the relative importance of competitive indicators and drivers, and developing a competitive model suited to the Iraqi context. Additionally, the study will provide practical recommendations to enhance sector performance through implementable competitive strategies.

The study is limited to Iraq's housing sector, focusing on measurable housing indicators and external competitive drivers. The findings are based on available data and expert opinions, providing a robust foundation for policy development

aimed at improving the sector and achieving sustainable

Theory	Key Factors	Application in the Housing Sector
Porter's Competitive Advantage Theory	Factor conditions, local demand, supporting industries, competition strategy	Improving design quality, innovating in housing services, and meeting local market needs at competitive prices.
Resource-Based View (RBV)	Tangible and intangible resources, dynamic capabilities	Efficiently utilizing local resources, such as land and construction materials, to enhance cost and quality.
Product Life Cycle Theory	Innovation, growth, maturity, and decline stages	Introducing innovative designs in the early stages and improving quality while reducing costs during maturity stages.
New Institutional Economics	Laws, government policies, institutional regulations	Supporting infrastructure, simplifying licensing procedures, and providing direct financial support to housing projects.
Innovation-Driven Competitiveness	Innovation in product, process, or service	Employing modern technologies, such as 3D printing or eco-friendly materials, to enhance efficiency and appeal.
Value-Added Theory	Improving product or service quality	Adding services such as community facilities, long-term construction warranties, and improved maintenance to increase project value.
Comparative Advantage Theory	Leveraging natural resources or production advantages	Reducing costs by utilizing abundant local land and materials to deliver affordable housing units.

development.

III. THEORETICAL FRAMEWORK

FIRST: Theories Defining Competitiveness Indicators in the Housing Sector

Competitiveness is a fundamental concept for improving the performance of various sectors, including the housing sector, which is experiencing growing demand and multiple challenges. Economic and managerial theories provide guidance on how to enhance competitiveness through the development of accurate measurement indicators. This theoretical framework clarifies how these theories can be utilized to define and formulate housing competitiveness indicators that achieve quality and sustainability.

A. Porter's Competitive Advantage Theory: Michael Porter introduced a framework for understanding how to achieve long-term competitive advantage. This theory emphasizes four key factors:

1. Factor Conditions: Such as skilled labor, technology, and infrastructure.
2. Demand Conditions: Local demand that drives companies to meet needs and improve quality.
3. Supporting Industries: The presence of suppliers or partners that contribute to efficiency improvement.
4. Competitive Environment: Stimulating companies to innovate.

In housing projects, this theory highlights the importance of quality design, meeting local demand at competitive prices, and fostering innovation in housing services.

B. Resource-Based View (RBV): This theory focuses on the resources available within an organization. Efficient utilization of resources can lead to a competitive advantage. These resources include:

1. Tangible Resources: Land and construction materials.
2. Intangible Resources: Skills and knowledge.
3. Dynamic Capabilities: The ability to adapt to changes.

Housing projects that rely on local resources, such as land and available materials, while enhancing management efficiency, can achieve cost reductions and value increases.

C. Product Life Cycle Theory: This theory posits that products pass through four stages: innovation, growth, maturity, and decline. These stages influence product development strategies. Housing projects in the innovation phase can focus on introducing new and sustainable designs, while in the maturity phase, they can emphasize improving quality and reducing operational costs.

D. New Institutional Economics Theory: This theory emphasizes the significant role of government policies and legal regulations in enhancing competitiveness. It argues that markets become more competitive when the institutional environment is transparent and well-organized.

Supportive government policies, such as simplifying licensing procedures or providing infrastructure support, enhance the competitiveness of housing projects.

E. Innovation-Driven Competitiveness Theory: This theory identifies innovation as the primary driver of sustainable competitiveness. Innovation can be in products, services, or processes. The adoption of modern technologies, such as 3D printing or environmentally friendly designs, can improve the efficiency and appeal of housing projects.

F. Value-Added Theory: This theory focuses on enhancing consumer value through the quality of products or services. Providing additional services, such as recreational facilities or long-term construction guarantees, can increase the value and competitiveness of housing projects.

G. Comparative Advantage Theory: This theory suggests that sectors achieve competitiveness by leveraging their natural resources or unique production advantages.

Utilizing abundant land and local materials can reduce production costs and enhance the competitiveness of housing projects.

These theories underscore the importance of understanding competitiveness and how to develop it in the housing sector. Applying these theories can improve the quality of housing projects, increase their sustainability, and efficiently meet local market needs. By integrating these theoretical frameworks, developmental strategies can be established to support the competitiveness of the housing sector and address future challenges. As illustrated in Table 1, these theories can guide

the identification and implementation of competitiveness indicators.

SECOND: The Concept of Housing Competitiveness and Its Indicators

The formulation of housing competitiveness indicators is based on a set of economic and managerial theories that provide frameworks for understanding the factors influencing the competitiveness of housing projects. These theories help identify practical indicators for measuring and improving the performance of housing projects, with a focus on economic, social, and quality aspects. By integrating these theories, sustainable strategies can be developed to meet both local and international market needs.

According to the "Comparative Advantage" and "Resource-Based View (RBV)" theories, cost and economic quality play a pivotal role in determining the competitiveness of housing projects. These theories emphasize the efficient utilization of available resources to achieve low costs and high quality. In the housing sector, this is reflected in the use of local building materials and innovative techniques to reduce overall costs and increase production efficiency, thereby enhancing project competitiveness.

The quality of design and construction is heavily influenced by the "Value-Added" and "Porter's Competitive Advantage" theories. These theories highlight the significance of innovation and quality in achieving a competitive edge. In housing projects, this is achieved through offering unique and sustainable architectural designs and using high-quality building materials. Such practices not only increase the market value of housing units but also meet consumer expectations for quality.

The "Product Life Cycle" theory underscores the importance of managing housing projects across the stages of innovation, growth, maturity, and decline. During the innovation and growth phases, the focus can be on introducing new designs tailored to market needs. In the maturity phase, the emphasis shifts to improving quality and reducing operational costs, thereby enhancing project sustainability.

Based on the "New Institutional Economics" theory, government and regulatory support play a critical role in enhancing the competitiveness of housing projects. Governments can improve competitiveness indicators through policies such as financial support, affordable land provision, and infrastructure development. Clear and effective legislation can reduce administrative costs and encourage investment in the housing sector.

The "Innovation-Driven Competitiveness" theory emphasizes the role of innovation in improving housing project competitiveness. This includes adopting modern technologies such as 3D printing and sustainable construction techniques that reduce environmental impact and lower long-term costs.

Additionally, sustainability can be enhanced through energy-efficient designs and the use of eco-friendly materials.

According to the "Value-Added" theory, market value is a key indicator of housing project competitiveness. This can be achieved by offering additional services such as community facilities, long-term construction warranties, and excellent maintenance services. These factors contribute to increasing the project's value and appeal to consumers.

The "Porter's Competitive Advantage" theory highlights the importance of meeting local demand. In the housing sector, this involves providing housing units that cater to the needs of different groups, whether in terms of pricing or ownership types (e.g., rental or purchase). Meeting these needs enhances the project's competitiveness in the local market.

From the adaptation of these theories, housing competitiveness refers to two key aspects: competitive features or indicators and competitive drivers. These drivers influence the control, number, and sustainability of indicators, which ultimately shape competitiveness. These aspects are outlined as follows:

A. Competitive Housing Features (Indicators)

Companies and institutions in the housing sector compete to meet consumer and community needs regarding economic cost and housing quality in design and execution, as well as sensory requirements, such as aesthetic and formal needs. These indicators serve as fundamental criteria for the success of one project over another. Focusing on housing competitiveness indicators enables private sector project management to improve and develop in ways that maintain profitability, market share, cash flow, and public trust.

Residential real estate holds significance not only as a source of shelter but also as an important asset class, reflecting social status, demand, and aesthetic or innovative value. This diversity results in a wide range of competitive features in the housing sector (Jansen et al., 2011). Competitiveness indicators consist of measurable standards and criteria within the Iraqi housing sector, as detailed below:

1. Economic Housing Competitiveness Indicators: These indicators address the economic aspects of housing and include eight sub-indicators: housing prices, production costs, land costs, expected financial returns, ownership and acquisition costs, operational costs, maintenance costs, and housing service costs.

2. Quality Housing Competitiveness Indicators: These indicators focus on housing quality aspects and include eight sub-indicators: quality of the housing location, land quality, construction and execution quality, architectural design quality, finishing quality, building technologies quality, architectural and structural typology quality, and environmental treatment quality.

3. Value-Added Competitiveness Indicators for Housing: These intangible indicators cover economic and quality aspects, with eight sub-indicators: architectural aesthetic appeal, innovative architectural design, attractive finishing quality, spatial appeal, economic advantages of housing, attractive design based on housing demand, and market value trends of housing.

4. Diversity and Housing Allocation Competitiveness Indicators: These indicators address the flexibility of housing ownership and the targeting of specific social or economic groups. They include seven sub-indicators: cash sales, sales through large or medium installments, sales through affordable installment plans, rental or lease-to-own housing, housing for low, middle, or high-income groups, housing tailored to specific professions or jobs, and housing appealing to particular social groups.

As illustrated in Table 2, these indicators form a comprehensive framework for assessing competitiveness in housing projects.

Table 2: Competitive Standards and Indicators

No.	Housing Standards and Indicators	Details
1	Economic Housing Competitiveness Indicators	Housing prices / Housing production costs / Land costs / Expected financial returns / Ownership and acquisition costs / Operational housing costs / Maintenance costs / Housing service costs.
2	Quality Housing Competitiveness Indicators	Quality of housing location / Land quality / Construction and execution quality / Architectural design quality / Finishing quality / Building technology quality / Architectural and structural typology quality / Environmental treatment quality.
3	Value-Added Competitiveness Indicators for Housing	Architectural aesthetic appeal / Innovative architectural design / Attractive finishing quality / Spatial appeal / Economic advantages of housing / Attractive design based on housing demand / Market value trends of housing.
4	Diversity and Housing Allocation Competitiveness Indicators	Cash sales / Sales through large or medium installments / Sales through affordable installment plans / Rental or lease-to-own housing / Housing for low, middle, or high-income groups / Housing tailored to specific professions or jobs / Housing appealing to particular social groups.

VI. PRACTICAL ASPECT AND DISCUSSION

This section addresses the design of the survey to evaluate projects competitively and to assess their competitive value using the housing competitiveness indicators survey. The competitive values of the projects are then analyzed in detail and in summary. Four selected local housing projects in Iraq's housing sector are introduced, and the survey is applied in light of the theoretical framework derived from competitiveness indicators to determine competitive values and discuss the results.

A. Housing Projects Survey

A specialized survey was designed to evaluate competitiveness indicators. Three questions were prepared for each of the sub-indicators and then applied to the four projects. The relative importance and competitive weight of each project were calculated based on assessments from both the public and experts, using SPSS software.

B. Applying the Results to Selected Projects

Baghdad, the capital of Iraq, serves as a focal point for housing projects due to high housing demand. Therefore, two projects were selected in Baghdad, in addition to two others in provinces north and south of Baghdad. A review of numerous housing projects in Baghdad revealed their diversity and price variations. Two projects were selected: one in the north of the city and the other in the south, resulting in four selected housing projects as follows:

1. Bismayah Residential City Project / Nahrawan, South of Baghdad

Bismayah Residential City is one of the largest development projects in Iraq, designed to accommodate approximately 600,000 residents. The project includes the construction of 100,000 housing units over seven years, along with service facilities, infrastructure, healthcare, educational, cultural, commercial, and communication services.

2. Badur Baghdad Residential Project / Abu Ghraib, North of Baghdad

The Badur Baghdad project spans an area of 1,600 dunams and aims to accommodate 8,000 housing units. The land was planned based on a mixed-use strategy, including residential, educational, recreational, and green spaces. Essential services and commercial centers are located at the project's core, surrounded by clusters of residential buildings in four neighborhoods. The project features a network of main, secondary, and tertiary roads, as well as pedestrian pathways and service streets connecting residential buildings.

3. Bayti Residential Project / Tikrit City

Located in the center of Salah Al-Din Governorate, north of Tikrit, the Bayti project enjoys a strategic location along the Qadisiyah highway. It is a horizontally designed residential city spanning a total area of 791,919 square meters, consisting of 1,720 housing units capable of accommodating approximately 10,300 residents.

4. Jasmine Garden Residential Project / Kut City

Situated at the entrance to Kut City from Baghdad, the Jasmine Garden project is anticipated to become the heart of Kut due to its proximity to the Tigris River and new governmental complexes, including the new judicial complex. The project covers 75,000 square meters and includes mixed housing with horizontal and vertical designs, alongside service buildings such as schools, commercial buildings, a health center, and a mosque. Construction began in 2008, but no housing units were delivered as of June 2024. However, the project is equipped with infrastructure and essential life services, connected to the national electricity grid, and supported by large generators distributed across the buildings to ensure 24-hour electricity availability. Additionally, wastewater treatment units have been established.

C. Measuring the Relative Importance of Selected Housing Projects

This section presents the evaluation of competitive indicators for each project through the survey to determine the overall Relative Importance Index (RII) of the competitiveness indicators. It also identifies the strengths and weaknesses of each competitive indicator. A total of 274 responses were collected: 84 for Bismayah Residential City, 72 for Badur Baghdad, 61 for Bayti, and 57 for Jasmine Garden. The findings are summarized as follows:

1. Relative Importance of Bismayah Residential City Project

The RII survey for Bismayah Residential City involved a broad sample of project beneficiaries. Key findings include:

o **Participant Background Information:** Surveys were distributed through various channels, including site visits to homeowners and tenants, specialized resale companies, and academic and engineering professionals. A total of 88 responses were collected, with 4 excluded due to insufficient familiarity with the project. Respondents included 28 with advanced degrees and 56 with bachelor's degrees or lower. Most participants had high or moderate familiarity with the project as residents or potential buyers.

o **Reliability and Validity:** Prior to analysis, Cronbach's alpha test was conducted in SPSS to determine the reliability and validity of responses. The alpha value was 0.892 (89.2%) across all sections, indicating high reliability.

o **Survey Results:** The housing competitiveness indicators were divided into four categories, each with sub-indicators. The relative importance of the project was calculated based on the values of these sub-indicators.

□ **Economic Indicators:** Over 89% of participants considered housing prices and maintenance and operational costs reasonable, and investment returns satisfactory for the Bismayah project.

□ **Quality Indicators:** Over 79% rated the project location as poor, while more than 85% rated the architectural design and construction quality as average or below. Additionally, over 79% noted the absence of environmental sustainability considerations.

□ **Value-Added Indicators:** While 66% viewed the project's innovative value as poor, 89% responded positively to the market value trend of the housing units.

□ **Diversity and Allocation Indicators:** Over 74% rated the project as above average in terms of housing ownership diversity and inclusivity for various social groups.

The relative importance for Bismayah was calculated by multiplying the RII from the survey with the percentage weight of indicators from expert assessments, as detailed in Table 3 below:

Table 3: Weights of Relative Importance for Bismayah Residential City Competitive Indicators (Detailed data to be included as per original survey results)

No.	Indicator	RII	Relative Weight	Percentage
1	Economic Housing Standards			29.834%
	Housing Price Indicator	0.854	11.061	
	Financial Return Indicator	0.854	9.325	
	Operation and Maintenance Indicator	0.854	9.447	
2	Housing Quality and Excellence Standards			12.91%
	Location Quality Indicator	0.256	2.4	
	Construction and Execution Quality Indicator	0.531	3.587	
	Design Quality Indicator	0.531	4.923	
	Environmental Sustainability Indicator	0.256	1.997	
3	Value-Added Housing Standards			8.2%
	Innovation Value Indicator	0.256	1.841	
	Market Value Indicator	0.854	6.364	
4	Diversity and Allocation Housing Standards			8.775%
	Housing Ownership Diversity Indicator	0.531	4.779	
	Targeted Groups Indicator	0.531	3.995	
Total				%69.726

Relative Importance of the Badur Baghdad Residential Project

The relative importance survey for the competitiveness indicators of the Badur Baghdad Residential Project yielded the following statistics:

- Basic Information About Participants:

The survey was distributed to beneficiaries of the Badur Baghdad project through various channels, including on-site visits to homeowners and tenants in the complex, Al-Ghadir Real Estate Development Company (the project's developer), and individuals interested in living or investing in the project. Participants were also provided with detailed information about the project as part of the survey. A total of 72 responses were collected, with the following distribution:

- o Respondents with advanced degrees: 11
- o Respondents holding bachelor's degrees: 47
- o Respondents with lower education levels: 14

Most participants were highly or moderately familiar with the project, either as current homeowners or tenants or as individuals registered or interested in purchasing property within the project.

- Reliability and Validity:

Cronbach's alpha test was conducted using SPSS software to measure the reliability and validity of the survey responses. The alpha value was calculated as 0.725 (72.5%) across all sections, which falls within the acceptable range.

- Survey Results:

- o Economic Indicators: Participants noted that housing prices and the costs of maintenance and operation in the Badur Baghdad project were high, but the investment returns were considered good.

- o Quality Indicators: Over 79% of respondents rated the project's location as good. More than 82% viewed the architectural design quality and construction execution as good. Additionally, over 62% expressed satisfaction with the environmental sustainability measures implemented in the project.

- o Value-Added Indicators: While 69% of respondents rated the innovative value of the project as moderate, 89% responded positively to the market value trends of the residential units.

- o Diversity and Allocation Indicators: Over 59% of participants considered the project more than adequate in terms of the diversity of housing ownership types and its inclusivity for various social groups in need of housing.

The relative importance of the Badur Baghdad project was calculated by multiplying the relative importance index (RII) derived from the survey with the percentage weight of the indicators obtained from expert assessments. These calculations are summarized in Table 4 below:

Table 4: Weights of Relative Importance for Competitive Indicators of the Badur Baghdad Residential Project

No.	Indicator	RII	Relative Weight	Percentage
1	Economic Housing Standards			15.41
	Housing Price Indicator	0.253	3.27	
	Financial Return Indicator	0.854	9.33	
	Operation and Maintenance Indicator	0.253	2.79	
2	Housing Quality and Excellence Standards			%25.51
	Location Quality Indicator	0.787	7.38	
	Construction and Execution Quality Indicator	0.793	5.35	
	Design Quality Indicator	0.793	7.35	
	Environmental Sustainability Indicator	0.694	5.41	
3	Value-Added Housing Standards			%10.9
	Innovation Value Indicator	0.629	4.52	
	Market Value Indicator	0.854	6.37	
4	Diversity and Allocation Housing Standards			%10.5
	Housing Ownership Diversity Indicator	0.635	5.72	
	Targeted Groups Indicator	0.635	4.78	
Total				%62.33

Relative Importance of the Bayti Residential Project

The survey assessing the relative importance of competitiveness indicators for the Bayti Residential Project provided the following statistics:

- Basic Information About Participants:

A total of 61 responses were collected through the survey, with the following distribution:

- o Advanced degrees: 10 respondents

- o Bachelor's degree holders: 38 respondents

- o Lower education levels: 13 respondents

Most participants had high or moderate familiarity with the project, either as current homeowners or tenants or as individuals registered or interested in purchasing property within the project.

- Reliability and Validity:

Cronbach's alpha test was conducted using SPSS software to measure the reliability and validity of responses. The alpha value was 0.74 (74%), which falls within the acceptable range for statistical analysis.

- Survey Results:

- o Economic Indicators: Over 91% of participants reported that housing prices, maintenance, and operational costs were high in the Bayti project, though investment returns were considered good.

- o Quality Indicators: More than 77% rated the project location as good, while over 80% viewed architectural design and construction quality as good. Additionally, 67% expressed satisfaction with the environmental sustainability measures implemented in the project.

- o Value-Added Indicators: 77% of respondents considered the project's innovative value to be above average, while 90% responded positively to the market value trends of the housing units.

- o Diversity and Allocation Indicators: Over 80% rated the project as more than good in terms of housing ownership diversity and its inclusivity for various social groups in need of housing.

The relative importance of the Bayti project was calculated by multiplying the Relative Importance Index (RII) derived from the survey with the percentage weight of the indicators obtained from expert assessments. The detailed results are presented in Table 5 below:

Table 5: Weights of Relative Importance for Competitive Indicators of the Bayti Residential Project

No.	Indicator	RII	Relative Weight	Percentage
1	Economic Housing Standards			15.3
	Housing Price Indicator	0.242	3.137	
	Financial Return Indicator	0.868	9.487	
	Operation and Maintenance Indicator	0.242	2.68	
2	Housing Quality and Excellence Standards			%25.37
	Location Quality Indicator	0.777	7.293	
	Construction and Execution Quality Indicator	0.785	5.304	
	Design Quality Indicator	0.785	7.279	
	Environmental Sustainability Indicator	0.704	5.501	
3	Value-Added Housing Standards			%1.086
	Innovation Value Indicator	0.624	.4493	
	Market Value Indicator	0.854	.6366	
4	Diversity and Allocation Housing Standards			10.44 %
	Housing Ownership Diversity Indicator	0.632	5.689	
	Targeted Groups Indicator	0.632	4.756	
Total				%61.99

Relative Importance of the Jasmine Garden Residential Project

The survey assessing the relative importance of competitiveness indicators for the Jasmine Garden Residential Project yielded the following results:

- **Basic Information About Participants:**

A total of 57 participants responded to the survey, distributed as follows:

- o Advanced degrees: 13 respondents
- o Bachelor’s degree holders: 27 respondents
- o Lower education levels: 17 respondents

Most participants had high or moderate familiarity with the project, either as residents of nearby areas or individuals interested in purchasing property within the project.

- **Reliability and Validity:**

Cronbach’s alpha test was conducted using SPSS software to measure the reliability and validity of responses. The alpha value was 0.764 (76.4%), which is within the acceptable and reliable range.

- **Survey Results:**

- o **Economic Indicators:** Over 91% of participants reported that housing prices, maintenance, and operational costs were high, while the investment returns were considered good.

- o **Quality Indicators:** More than 78% rated the project location as good, and over 81% evaluated the architectural design quality and construction quality as good. Additionally, 68% expressed satisfaction with the environmental sustainability measures implemented in the project.

- o **Value-Added Indicators:** 68% of respondents rated the project’s innovative value as above average, while 78% had a negative view of the market value trends of the residential units.

- o **Diversity and Allocation Indicators:** More than 86% of participants considered the project more than good in terms of housing ownership diversity and its inclusivity for various social groups in need of housing.

The relative importance of the Jasmine Garden project was calculated by multiplying the Relative Importance Index (RII) derived from the survey with the percentage weight of the indicators obtained from expert assessments. The detailed results are presented in Table 6 below:

Table 6: Weights of Relative Importance for Competitive Indicators of the Jasmine Garden Project

No.	Indicator	RII	Relative Weight	Percentage
1	Economic Housing Standards			15.42
	Housing Price Indicator	0.251	3.25	
	Financial Return Indicator	0.859	9.38	
	Operation and Maintenance Indicator	0.251	2.78	
2	Housing Quality and Excellence Standards			%25.39
	Location Quality Indicator	6.92	7.22	
	Construction and Execution Quality Indicator	7.1	5.33	
	Design Quality Indicator	7.1	7.32	
	Environmental Sustainability Indicator	6.36	5.52	
3	Value-Added Housing Standards			6.95%
	Innovation Value Indicator	5.66	4.52	
	Market Value Indicator	2.92	2.42	
4	Diversity and Allocation Housing Standards			10.53 %
	Housing Ownership Diversity Indicator	5.73	5.73	
	Targeted Groups Indicator	5.73	4.79	
Total				%58.31

V.DISCUSSION AND ANALYSIS OF PRACTICAL STUDY RESULTS FOR HOUSING PROJECTS IN IRAQ

This section presents the results of the analysis of local housing projects in light of housing competitiveness mechanisms. It discusses the causes and proposed solutions to enhance their competitive values and compares the overall results of the selected projects.

1. Results of Housing Competitiveness Indicators for the Projects

The results of the competitiveness indicators varied across the individual and overall assessment of each project, as follows:

A. Economic Housing Indicators Results

According to the results shown in Figure 1, the Bismayah Residential Project ranked highest in economic competitiveness, achieving 85.4% in price, investment, and operational and maintenance cost indicators. In contrast, the three other projects collectively scored only 25.4% in the same

indicators. Based on the competitive drivers analyzed in the previous section, the following conclusions can be drawn:

- **Interest Rates:** This factor has the greatest impact on price indicators. Lowering interest rates for investment projects is essential, as Bismayah has demonstrated a better impact from lower interest rates compared to other residential projects in Iraq.
- **Housing Demand:** The Iraqi housing sector remains highly attractive for investment due to the severe housing shortage and high demand. Despite high housing prices in most developments, demand remains strong, driven by the significant housing deficit.

B. Housing Quality Indicators Results

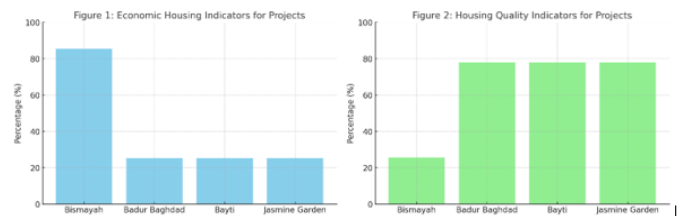
According to the results in Figure 2, the Bismayah Project scored 25.6% in location quality, compared to higher scores (up to 78%) for projects supervised by the Investment Authority in Baghdad and other provinces. However, a major distinction is that infrastructure remains an unresolved issue for Baghdad and provincial investment projects, whereas Bismayah does not face this challenge. Based on the housing competitiveness drivers, the following key insights are derived:

- **Land Availability and Consumer Preferences:**
 - o Bismayah's location quality was rated 25%, compared to 78% for investment projects in Baghdad and other provinces.
 - o To improve this percentage, proposed solutions include:
 - Enhancing transportation infrastructure to link the development with financial, administrative, social, and recreational hubs.
 - Creating specialized cities with integrated employment opportunities, which would increase location quality scores.
- **Administrative Efficiency and Consumer Preferences:**
 - o A clear correlation exists between architectural design quality (spatial planning and solutions) and the execution quality of the projects.
 - o Most projects showed similar performance in terms of design and execution quality, as execution represents the physical realization of the design concept.
 - o However, Bismayah outperformed other projects in operation and maintenance costs, scoring 85% compared to 25% for the other projects.

o To address this discrepancy, improving consumer preference analysis for housing products and enhancing construction technologies in housing projects is recommended.

o Innovation and skilled human resources are critical factors in enhancing design quality. However, due to Bismayah's excessive economic focus, the project consists of overly repetitive housing units.

o To improve competitiveness, integrating innovative design strategies is essential to avoid excessive standardization and to enhance both design and execution quality



. Results of Value-Added Housing Indicators

According to Figure 3, the market value trends for the Bismayah, Badur Baghdad, and Bayti residential projects showed high market competitiveness, reaching 85%. However, the Jasmine Garden project scored significantly lower at only 32%. By analyzing housing competitiveness drivers, the following key insights were identified:

- **Innovative Capacity and Adoption of New Technologies:**
 - o A major challenge for most housing projects in Iraq stems from cost-reduction strategies.
 - o Lowering costs makes housing more affordable, as observed in the Bismayah project. However, it also increases investment returns and private-sector profit margins due to the high and growing housing demand.
 - o Proposed solutions:
 - Utilizing innovative capacities to reduce costs while maintaining quality.
 - Implementing new housing production technologies to add value through innovation, which would positively impact market value trends.
- **Time Management, Project Synchronization, and Brand Reputation:**

o The Jasmine Garden project suffered from construction delays and a decline in the developer's brand reputation, resulting in a drop in market competitiveness to 32%.

o Proposed solutions:

Improving project productivity and brand reputation in the shortest possible time.

Setting a clear and transparent timeline for project completion and strictly adhering to it to restore trust among the target market.

D. Results of Housing Diversity and Allocation Indicators

According to Figure 4, despite the advantageous housing prices in Bismayah, the project failed to accommodate lower and middle-income groups due to resale and speculative trading that increased prices by up to 30% above the original price. Conversely, sales in other projects remained stable but were limited to high-income groups.

By analyzing housing competitiveness drivers, the following conclusions were drawn:

- Regulations and Legislation:

o To prevent excessive price inflation and speculation in Iraq's housing market, laws and regulations should be enacted to segment the housing market into smaller submarkets.

o The goal should be to protect low- and middle-income groups, a practice adopted in many countries through ownership regulations.

o Issues in Bismayah's resale policies:

No restrictions on the number of properties owned per buyer.

No required holding period before resale.

Speculative trading flourished, creating a hotspot for real estate speculation.

Exemptions from the lottery and pre-booking system further facilitated speculation.

- Support for Social Housing:

o To effectively target lower-income groups, government intervention is necessary as a key stakeholder in Iraq's housing sector.

o Regulations should be refined to ensure social diversity within housing developments.

o Current policies require that 10% of housing units be allocated to employees of land-owning entities.

These units are often smaller, in designated high-density buildings.

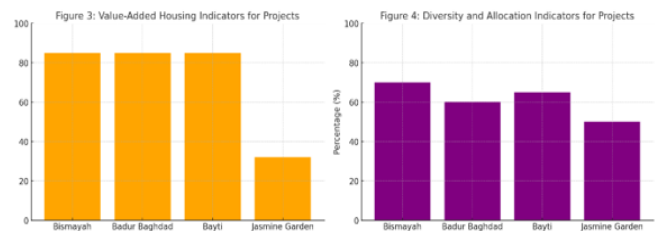
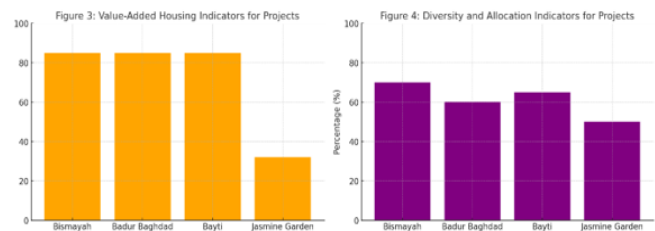
o International housing strategies emphasize:

Social housing policies for low-income groups.

Government-backed financial support or incentives for the private sector.

Nonprofit organizations and World Bank housing programs as alternative funding sources.

o Competitiveness provides multiple channels for supporting social housing, including global financial institutions and nonprofit initiatives, benefiting both housing market stability and low-income communities.



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