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Article

Household Preferences for Apartment Ownership within the Context of Rising Housing Costs in Dammam Metropolitan Area, Saudi Arabia

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Abstract: Housing is both a physical and social system, enhancing and harmonizing the environmental, economic, and socio-cultural dimensions of sustainable and affordable living. In Saudi Arabia, the confluence of housing affordability and homeownership challenges have intensified alongside rapid urbanization. This study investigates preferences for apartment homeownership amidst escalating housing costs in the country. This research employs a mixed-method approach, incorporating a literature review and expert surveys (n = 61) using purposive sampling techniques to examine the factors influencing individuals' decisions on apartment homeownership. Using SPSS software,descriptive (percentages) and inferential (ANOVA and *t*-test) statistics are utilized to analyze socio-cultural and economic factors, including gender, nationality, location, financial considerations, and cultural influences.The findings revealed that nearly 90% of the respondents noted a growing market for apartment housing in Dammam Metropolitan Area (DMA), Saudi Arabia,70.5% expressed that DMAresidents exhibit limited desire for apartment homeownership. Reasons cited include large household size (70.4%), poor apartment design and quality (62.4%), and apartments failing to sufficiently cater to family cultural needs (63.9%). By shedding light on the dynamics that shape residential choices in the face of increased housing expenses, this research provides valuable insights for policymakers, real estate developers, and urban planners working to tackle housing affordability challenges in DMA specifically and Saudi Arabiain general and other developing nations.

Keywords: homeownership cost; housing affordability; apartments; household preferences; residential choices; cultural influences

1. Introduction

Rapid urbanization is reshaping the world, with nearly 70% of the population expected to live in cities by 2050. Developing nations will account for 90% of this urban growth by 2030, intensifying housing affordability and ownership challenges, particularly in the Global South (Coskun, 2023). Sustainable housing policies promoting diverse housing options are essential for urban sustainability, as advocated by organizations like UN-Habitat. Sustainable Development Goal (SDG) 11 aims to ensure universal access to adequate, safe, and affordable housing by 2030 (United Nations, 2016). Despite international support from entities such as the European Union and OECD (UN-Habitat, 2019a), decent housing remains inaccessible to many in the Global South, where governments often view affordable housing as a social burden. While research has examined the effects of housing policies, urban planning, and socioeconomic factors, fewer studies have explored the role of household cultural preferences in homeownership choices (Wu et al., 2024; Huber & Schmidt, 2022; Mulyadi & Ubaidillah, 2024; McCabe, 2018).

Homeownership enhances neighborhood quality by fostering pride, long-term investment, and better

property maintenance, which can lower crime rates. It also promotes civic engagement, as homeowners have a vested interest in local policies and infrastructure. Additionally, homeownership provides housing stability, reducing displacement and strengthening community ties. It also offers financial security, a sense of achievement, and the freedom to personalize living spaces (Yap & Ng, 2018).Homeownership enhances financial stability and encourages responsibility for upkeep, contributing to individual and societal development (Yun & Evangelou, 2016). Saudi cities struggle to provide high-density, mixed-use housing that fosters social diversity and ownership. Challenges include rapid urban growth (Abubakar & Alshammari, 2023), high housing demand from a young population (over 60% aged 15–26), low homeownership rates, and a mismatch between preferences and affordability (Alhefnawi et al., 2023). Over the past decade, Saudi Arabia has witnessed notable fluctuations in residential property prices. Between 2014 and 2019, house prices declined by 18.2% (20.4% inflation-adjusted) due to subdued economic growth and low oil prices. However, from 2021 to 2024, the market rebounded with a cumulative price increase of 26.7% (17.4% inflation-adjusted). In Q4 2024, the real estate index for the residential sector rose by 3.1% year-on-year, up from 1.6% in the previous quarter. Notably, Riyadh experienced a 75% surge in apartment prices and a 39% rise in villa prices over the past five years, underscoring a significant upward trend in housing costs across Saudi Arabia (Delmendo, 2025; Arab News, 2025).

To address these shortages, the government launched various housing initiatives under Saudi Vision 2030, a comprehensive national strategy aimed at diversifying the economy, enhancing quality of life, and promoting sustainable development. As part of its housing objectives, Vision 2030 seeks to increase homeownership from 50% to 70% by 2030 and reduce typical house prices to five times the annual income per capita (Government of Saudi Arabia, 2016). These housing reforms align with broader efforts to improve living standards, strengthen the real estate sector, and foster economic growth.In Saudi Arabia, studies have explored housing prices (Lawal, 2025; Alhajri, 2022), housing types and distribution (Lawal, 2025), demand, affordability, and quality (Alqahtany, 2021; Alzamil, 2014), as well as buyers' preference for larger homes (Alhajri, 2022; Bin Mohanna & Alqahtany, 2020). However, limited studies examine the lack of interest in apartment homeownership (Alhajri, 2022; Alhubashi & Roca Cladera, 2016).

Traditionally, homeownership in Saudi Arabia has centered on single-family villas, standalone residential units designed to accommodate a single household, often featuring spacious layouts, private yards, and multiple bedrooms (Lawal, 2025). This housing model reflects cultural preferences for privacy and larger living spaces, which have historically influenced urban development patterns in the country.Although legal changes in 2015 permitted individual apartment ownership, many Saudis continue to prefer villas, contributing to a limited supply of apartments (Alhajri, 2022). This reluctance is often driven by cultural expectations, lifestyle preferences, and perceptions of privacy and space. Understanding these underlying factors is crucial for decision-makers and real estate developers, as it enables them to design policies and housing projects that better align with citizens' needs. Addressing concerns, such as apartment size, community amenities, and ownership structures, stakeholders can encourage a more balanced housing market that expands affordable options while respecting local preferences.

This study aims to identify the primary reasons for the reluctance towards apartment ownership in Saudi Arabia, focusing on the Dammam Metropolitan Area (DMA). To the authors' knowledge, this is the first study of its kind. The DMA, the third-largest urban area in Saudi Arabia with a high household income of around 4000 USD (SAR 15,000/month), has a low homeownership rate of just 50% in 2022. The paper is organized into five sections: Section 2 reviews the literature on housing preferences, Section 3 outlines the research methodology, Section 4 presents and discusses the results, and Section 5 concludes with the implications of the findings.

2. Literature Review

2.1. Housing Provision and Household Preferences

Selecting a residence is a critical decision influenced by individual and family factors (Fu et al., 2014). Residents may prioritize specific housing types or locations based on amenities, but these choices often involve trade-offs between affordability and accessibility (Dewita et al., 2020). Understanding these factors is essential for providing housing that meets financial constraints while aligning with residents' needs and preferences (Chen et al., 2022). Mulliner & Algrnas (2018) categorize housing preference factors into internal and external. Internal factors include attributes like interior layout, design, size, and room count, while external factors encompass exterior appearance, materials, privacy, and neighborhood quality. Regardless of income, individuals generally prefer spacious homes with multiple bedrooms (Hoxha et al., 2022; Aliyev et al., 2019). Privacy, financial considerations, and aesthetics also influence

home selection. While some opt for mortgages, others prefer renting or financing home construction, with affordability and income levels shaping choices (Thanaraju et al., 2019). Housing quality and availability significantly affect preferences (Rolfe et al., 2020). While preferences reflect housing attractiveness, actual choices depend on government policies, household budgets, national income trends, and housing supply (Gyourko & Molloy, 2015; Molloy et al., 2022).

Additionally, social and cultural factors influence housing decisions. For example, in Saudi Arabia, cultural preferences for privacy and gender segregation often drive demand for larger homes with separate guest areas. Additionally, extended family living arrangements may lead to a preference for multi-generational housing or villas with multiple living spaces. Social expectations around homeownership as a status symbol can also impact housing decisions, making villas more desirable despite economic constraints. Location is crucial in housing decisions. Jung et al. (2022) found that cities cater to diverse housing priorities, with men prioritizing safety, price, and rent, while women focus on transportation convenience and residential safety. Higher-income individuals favor upscale investment areas, whereas middle-aged individuals with young children consider educational environments. Proximity to employment also influences housing choices (Hrast & Dolničar, 2016; Schirmer et al., 2014). These socioeconomic factors affect where individuals are likely to rent or buy homes. Table 1 presents some of these factors.

Table 1. Reviewed studies on factors affecting apartments ownership.

Author	Study Setting	Factors
Christophers (2021).	United Kingdom and Swedish.	▪ Income. ▪ Policies and regulations. ▪ Wealth inequalities. ▪ Inflation.
Andersson and Turner (2014).	Sweden and Stockholm.	▪ Socio-spatial factor. ▪ Population growth. ▪ Age. ▪ Income. ▪ Immigration. ▪ Uneven educational level. ▪ Ethnicity. ▪ Employment. ▪ Policies and regulations. ▪ Social inequalities.
Arundel (2017).	Great Britain.	▪ Income disparities. ▪ Government policy. ▪ Housing price. ▪ Employment insecurity.
August and Walks (2018).	Toronto, Canada.	▪ Affordability. ▪ Income. ▪ Gentrification. ▪ Deregulation. ▪ Financialized landlords. ▪ Real estate market. ▪ State policies.
Hussain et al. (2019).	Islamabad, Pakistan	▪ Proximity to slums.
Muhammad (2017).	Rawalpindi, Pakistan.	▪ Open sewers.
Preez et al. (2016).	South Africa.	▪ Proximity to landfill.
Li and Wei (2020).	Salt Lake County, USA.	▪ Neighborhood conditions. ▪ Urban amenities. ▪ Trees shade. ▪ Proximity to jobs.

		▪ Proximity to places of worship. ▪ Proximity to good public schools. ▪ Racial segregation.
Coskun (2023).	Turkey.	▪ Credit expansion. ▪ Construction costs. ▪ Rent. ▪ Housing market. ▪ Government policies.
Lu (2018).	Shanghai, China.	▪ View orientation. ▪ Dust pollution. ▪ Urban spatial structure. ▪ Internal apartment attributes.
Salisu et al. (2019).	Lagos, Nigeria.	▪ Spatial distribution. ▪ Standard of services. ▪ Infrastructure provisions. ▪ Unreliable electricity supply. ▪ Inadequate parking amenities. ▪ Insufficient drainage and sewer systems
Adegoke & Agbola (2020)	Nigeria.	▪ Income. ▪ Housing expenditure ▪ Access to mortgage
Alhajri (2022).	Saudi Arabia.	▪ Land prices. ▪ Construction costs. ▪ Rapid urbanization. ▪ Preference for villa. ▪ Income. ▪ Housing mortgages and loans challenges. ▪ New household formation. ▪ Increase in foreign labor force.
Yap and Ng (2018).	Malaysia.	▪ Income. ▪ Housing price. ▪ Land cost. ▪ Demand and supply.
Singla and Bendigiri (2019).	Pune, India.	▪ Location factors. ▪ Building factors. ▪ Neighborhood factors
Lawal (2025).	Dammam, Saudi Arabia.	▪ Age of building. ▪ Size of building. ▪ Condition of building. ▪ Parking. ▪ Closeness to transport infrastructure. ▪ Nearness to green areas. ▪ Nearness to amenities.
Chikhmous & Rahman (2024)	Riyadh, Saudi Arabia	▪ Age ▪ Floor area ▪ Proximity to hospitals, colleges, freeways, and proposed metro stations

2.2. Home Ownership Challenges in Saudi Arabia

Homeownership embodies a significant tradition, providing stability and security of tenure, allowing households to amass wealth, and serving as a measure of long-term financial stability. In Saudi Arabia, the primary housing policy focuses on increasing the homeownership rate through the provision of

affordable, decent, and secure housing. These objectives are emphasized in the National Development Plans (NDP) and the Saudi Vision2030 to reduce socioeconomic inequalities, improve quality of life, and foster sustainable development (Ministry of Economy and Planning, 2021; Government of Saudi Arabia, 2016). Currently, Saudi Arabia has a homeownership rate of 60% among Saudi citizens. While this represents a majority, the government aims to increase it to 70% under Vision 2030, emphasizing the need for further housing initiatives. However, homeownership rates vary across the country's 13 regions, ranging from 82% in Jazan Province to 49% in the Eastern Province, where DMA is located. This is despite Eastern Province's high average annual income of approximately 4000 USD (SAR 15,000), which is among the highest in the nation. Housing rental rates vary across cities, with 2023 figures at 26% in Alqatif, 31% in Alhassa, and 41% in DMA, reflecting temporal and regional inconsistencies in relation to household income (General Authority for Statistics, 2023).

Saudi Arabia faces persistent homeownership challenges, including a housing supply-demand gap (Bin Mohanna & Alqahtany, 2020) and inadequate funding for low-cost public housing. Since its establishment in 1975, the Real Estate Development Fund (REDF) has disbursed USD 71.96 billion in housing loans. However, a surge in applications has resulted in a 15-year waiting list, further widening the affordable housing gap. Rapid population growth has exacerbated this issue, with the population rising from 3.8 million in 1950 to 34.2 million in 2020, projected to reach 40 million by 2030 (General Authority for Statistics, 2023). Urbanization has also intensified, with the urban population increasing from 20% in 1950 to 83% in 2015 and an expected 91.5% by 2030 (Abou-Korin & Alshihri, 2015).

Demographic trends further impact housing demand. In 2017, individuals aged 20–49 comprised 47% of the population, while those under 19 made up 40%, indicating rising future demand for homeownership. Declining household sizes, from 7.4 in 1992 to 5.65 in 2018, suggest a growing preference for smaller housing units (General Authority for Statistics, 2023). By 2050, Saudi Arabia will need millions of new homes across 44 cities, each accommodating 250,000 residents (Abou-Korin & Alshihri, 2015). Housing demand is expected to rise from 100,000 units in 2021 to 153,000 by 2030, averaging 124,000 annually, necessitating an additional 1.2 million homes to reach a total housing stock of 5 million by 2030 (PricewaterhouseCoopers International, 2022).

Affordability remains a key challenge, particularly in major cities like Riyadh, Jeddah, and DMA, where young families struggle to purchase homes (Abou-Korin & Alshihri, 2015; Alhowaish, 2015; Alhajri, 2022). For instance, a household earning SAR 12,500 (USD 3,333) per month would need to save their full income for 30 years to afford a four-bedroom villa of approximately 410 square meters in Riyadh. However, housing is considered affordable when costs remain below 30% of household income (Worthington, 2012). A 2015 Dammam Urban Observatory Survey revealed that about 90% of the undeveloped areas in DMA had been earmarked for villa-type housing, despite 80% of the city's residents being unable to afford such residences (Al-Shihri, 2016). Although DMA is among the higher-income regions in Saudi Arabia at 4000 USA (SAR 15,000), villas remain unaffordable to most of its residents, particularly the youth (Abou-Korin&Alshihri, 2015).

Another key challenge is the mismatch between housing development and citizens' preferences. Economic growth, driven by the oil boom and government initiatives like free housing loans and land grants, has raised Saudis' income levels and quality of life, increasing demand for single-family villas over apartments (Alhowaish, 2015; O'Dwyer, 2014). This preference pressures the government to meet housing expectations despite economic fluctuations (UN-Habitat, 2018). Low-density housing demand persists, contributing to low homeownership rates as affordability remains a barrier (Abubakar & Alshammari, 2023; Alhajri, 2022). While many countries increase homeownership through apartment development, Saudi Vision 2030 aims to achieve this by reforming planning regulations and incentivizing multi-unit housing projects. In 2023, 59% of Saudi citizens lived in apartments, yet most were renters, as apartment ownership remains undesirable (General Authority for Statistics, 2023).

Homeownership in Saudi Arabia and Processes Involved

Homeownership in Saudi Arabia encompasses various processes as compiled from Real Estate Saudi (2025). The following are the processes involved:

1. Direct Purchase: Citizens can buy properties outright, with options ranging from apartments to villas.
2. Rent-to-Own Schemes: These programs allow individuals to rent a property with the option to purchase it after a specified period, facilitating gradual ownership.

For non-citizens, property ownership is subject to specific regulations:

1. General Ownership: Foreigners can own property in most parts of Saudi Arabia, subject to government approval. However, ownership in the holy cities of Mecca and Medina is restricted to Saudi nationals.

2. Investment-Based Ownership: Foreign companies and high-net-worth individuals investing in commercial projects can acquire property with authorization from the Ministry of Investment.

These regulations aim to balance attracting foreign investment with preserving national interests.

2.3. Types of Apartments in Saudi Arabia

In Saudi Arabia, residential properties are categorized into several types, each with distinct features as compiled by Alhubashi & Roca Cladera (2016) and Dano (2024a). Below are the common housing types:

3. Apartments in Multi-Storey Buildings: These are self-contained units within larger residential complexes, offering shared amenities and varying in size and layout.
4. Villas: Standalone houses typically feature private gardens and multiple floors, catering to larger families seeking more space.
5. Duplex Villas: Two connected units sharing a common wall, each with separate entrances, providing a balance between apartment living and standalone villas.
6. Penthouses: Luxurious units located on the top floors of buildings, often with expansive layouts and exclusive amenities.
7. Traditional Houses: Residences reflecting local architectural styles, often single-story with courtyards, embodying cultural heritage.

These classifications are influenced by factors such as family income, size, and cultural preferences, ensuring alignment with residents' needs and societal norms (Alhubashi & Roca Cladera, 2016).

2.4. DMA and Its Housing Market

The DMA, situated in Saudi Arabia's Eastern Province, is a rapidly evolving urban center with a dynamic housing market. Recent trends highlight the region's increasing prominence in the real estate sector. In 2024, the average price of apartments in Dammam rose by 0.9%, reaching SAR 2,813 per square meter, reflecting a steady upward trajectory in property values (CBRE, 2024). Additionally, DMA presents lucrative real estate investment opportunities, offering relatively affordable entry prices compared to other major cities in Saudi Arabia. Investors are drawn to the city due to its high rental yields and consistent property appreciation, making it a favorable destination for long-term real estate ventures (Real Estate Saudi, 2025). Moreover, the demand for office spaces in DMA has surged, primarily driven by government-related entities, leading to an increase in average rental prices (JLL-MENA, 2024). These trends collectively underscore DMA's growing importance in Saudi Arabia's real estate landscape, shaped by ongoing economic diversification initiatives and significant infrastructural advancements.

3. Materials and Methods

This research used a structured questionnaire survey to gather primary data from housing experts with a minimum of six to ten years of experience in the housing sector. This is intended to ensure respondents possess sufficient sector-specific knowledge, policy familiarity, and practical insights into the evolving housing landscape in Saudi Arabia. This level of experience ensures that participants have a comprehensive understanding of historical trends, current challenges, and the cultural and economic factors influencing apartment homeownership in the Dammam Metropolitan Area (DMA). Including experts with a range of experience, both senior professionals and mid-career practitioners also helped capture diverse perspectives, balancing strategic insights with on-the-ground realities. The study aims to explore the factors influencing the reluctance towards apartment homeownership in Saudi Arabia, focusing on the Dammam Metropolitan Area (DMA) as a case study. The DMA was selected due to its status as the third-largest urban area in Saudi Arabia and the most rapidly growing metropolis in terms of urban expansion (UN-Habitat, 2019b). Similarly, despite DMA being one of the higher-income regions in Saudi Arabia, with an average income of 4,000 USD (SAR 15,000), it had one of the lowest homeownership rates, at 51% as of 2015 (General Authority for Statistics, 2023).

The questionnaire used in this study was adapted from prior research (Alhajri, 2022; Mulliner & Algrna) and modified to suit the specific objectives of the current research. This method not only saves time and resources, thereby enhancing efficiency but also strengthens the reliability and validity of the collected data. Aligning the questionnaire with the study's objectives, the approach fosters methodological transparency and strengthens the overall credibility of the research. The questionnaire consisted of an introduction note and two main parts. The introduction part outlines the purpose of the study and ethical considerations, emphasizing voluntary participation, informed consent, and guaranteed anonymity and confidentiality. The first part of the questionnaire gathered participants' socio-

demographic profiles, including professional experience and expertise. The second part focuses on the factors influencing individual preferences for apartment homeownership in Saudi Arabia. These factors have been collected from the existing literature. Most questionnaire items featured closed-ended questions measured on a 5-point Likert scale, supplemented by a few open-ended queries in the last section of the questionnaire.

The questionnaire was distributed to housing experts living in Saudi Arabia using a purposive sampling technique. According to Etikan et al. (2015, p. 2), purposive sampling, also called judgment sampling, involves deliberately selecting participants based on specific qualities and qualifications they possess. It is a non-random technique that does not need underlying theories or a predetermined sample size. Simply put, the researcher decides what needs to be known and sets out to find people who are able and willing to provide the information by their knowledge or experience. It is typically used to identify and select the information-rich cases for the most proper utilization of available resources. In this study, housing experts were contacted via email, yielding 61 responses over three months after multiple reminders. The experts included professionals from government ministries overseeing housing and urban development, private consultants, real estate developers, and academicians specializing in housing research and policy. This selection ensures a diverse perspective, combining practical experience from policymakers with theoretical insights from researchers, providing a comprehensive understanding of housing challenges and solutions in Saudi Arabia.

Descriptive statistical techniques were applied to analyze Likert scale (5 point) responses, with Statistical Package for the Social Sciences (SPSS) software employed for data analysis. The analysis included frequency tables to summarize response occurrences, as well as *t*-tests and ANOVA as inferential statistics. A *t*-test (significance level $p < 0.05$), which measures the size of the difference relative to data variation, was used to investigate the influence of gender and nationality on the willingness to own an apartment. Both gender and nationality were treated as binary variables. Globally, gender is a significant predictor, whereas in Saudi Arabia, where one-third of the population consists of expatriates from diverse cultural backgrounds, nationality is expected to play a crucial role. Secondly, ANOVA (significance level $p < 0.05$), a statistical technique for comparing the means of three or more groups to determine significant differences, was employed. These methods were chosen for their relevance in analyzing survey data with ordinal or nominal variables across two or more independent groups.

4. Results and Discussions

This section examines the extent to which people are willing to embrace apartment homeownership and the influence of socio-economic and demographic factors nonindividuals'' preference for homeownership of apartments. Results are then presented as tables and pie charts. Table 2 shows the descriptive statistics of the study participants, which are dominated by males (93.4%), Saudis (91.8%), working mainly in the public (54.2%) and private (37.3%) sectors, and with at least Bachelor's degrees and more than five years of experience.

Table 2. Descriptive statistics of the study participants (n = 61).

Variable		**Frequency**
Gender:	Male Female	57 (93.44%) 4 (6.56%)
Nationality	Saudi Non-Saudi	56 (91.80%) 5 (8.20)
Highest academic qualification	Diploma or less	0.00%
	Bachelor's degree	52.54%
	Master's degree	27.12%
	Doctorate	20.34%
Years of experience in the housing sector (years)	1–5	0.00%
	6–10	8.47%
	11–15	32.20%
	16–20	28.81%
	21–25	15.25%
	More than 25	15.25%
Professional background	Urban planner	27.12%

	Architect	27.12%
	Building Tech.	8.47%
	Landscaper	6.78%
	Civil engineer	5.08%
	Interior designer	16.95%
	Other	8.47%
Type of organization/sector employed.	Government	54.24%
	Private Sector	37.29%
	Academia	8.47%
The organization's main activity	Building Construction	13.56%
	Fittings and finishing work	3.39%
	Building regulatory	28.81%
	Engineering works	35.59%
	Academic/research	15.25%
	Other	3.39%

4.1. Influence of Gender and Nationality on Housing Preferences

Understanding how gender and nationality influence preferences for homeownership is essential for developing inclusive housing policies. This section explores the relationship between these demographics and the willingness to own an apartment, analyzing findings to identify factors shaping attitudes toward apartment ownership. It highlights significant differences in willingness between genders and nationalities, aiming to uncover underlying dynamics that can inform strategies to promote equal access to homeownership for all.

T-test results for gender and nationality are presented in Table 3. Regarding gender, the computed t-value of 33.344 reveals a significant and substantial deviation of the observed mean difference from the expected value. This indicates a noteworthy difference between genders in their inclination towards owning apartments, with a *p*-value of 0.001. The remarkably low p-value suggests that the observed difference is highly improbable to have arisen by chance alone.The p-value is a measure in statistics that helps determine the significance of the results. It represents the probability of obtaining results as extreme as the observed results, assuming that the null hypothesis is true. A lower *p*-value typically indicates stronger evidence against the null hypothesis.This finding aligns with the study conducted by Omagwa and Aduda (2015), which also concluded that gender plays a statistically significant role in home ownership decisions and choices related to residential neighborhoods.The sample distribution reveals a stark difference, with most males (93.4%) and a minority of females (6.6%). This aligns with the findings that women experience gender-specific obstacles, where they must sacrifice personal space to gain spatial access to opportunities. Harten (2021) further highlights that barrier to entry limits women's choices within the housing submarket. The notable gender disparity observed in the sample distribution reinforces the notion that women face challenges and restricted options in terms of willingness to own apartments, potentially due to the barriers they encounter in the housing market.

Similarly, pertaining to nationality, the calculated t-value is 33.344, which indicates a substantial difference between Saudis and non-Saudis in terms of their willingness to own apartments. This large t-value suggests a significant departure from the test value of 0. The *p*-value (0.0001) indicates that the observed difference in willingness to own apartments between Saudi citizens and expatriates is highly unlikely to have occurred by chance alone. The low *p*-value suggests a strong statistical significance. Gender and nationality differences in homeownership can reflect disparities in income levels and access to financial resources. These differences can highlight affordability challenges faced by certain gender or nationality groups. Urban development and community planning efforts need to consider these disparities and work towards promoting affordable housing options that cater to the diverse needs of various groups. Similarly, housing preferences, cultural norms, and lifestyle choices could be one of the reasons for the significant differences between males and females.

Table 3. *t*-test for significant differences in willingness to own apartments by gender/nationality.

	t	**df**	**Sig. (2-Tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
Gender	33.344	60	0.001	1.066	1.00	1.13
Nationality	30.552	60	0.001	1.082	1.01	1.15

4.2. Understanding the Dynamics of Apartment Homeownership

Understanding the dynamics and preferences surrounding apartment homeownership in Saudi Arabia is crucial for developing effective housing policies and meeting the diverse needs of households. Figure 1 presents insights into the desirability of apartment homeownershipin DMA, the perception of apartments as an alternative to villas, the growing market for apartments, and the affordability of apartments. In terms of the desirability of apartment ownership, it is noteworthy that only 29.5% of the experts expressed a positive inclination toward apartment homeownership among Saudi residents, while 70.5%felt that people were against the idea (Figure 1A). This finding is consistent with a study by Alhajri (2022), where more than half (58.8%) of the surveyed participants favored villa homeownership. Another study found that 86% of Saudis respondents preferred owning detached housing units (Alhubashi et al., 2016). Preference of single-family or villa-style housing over apartments in Saudi Arabia has also been corroborated by prior studies (Dano, 2024b; Alasmari, 2018).

The study also explores expert opinion about the marketability of apartments in DMA Saudi Arabia. About half (50.8%) of the respondents strongly agreed and 36.1% agreed that the market for apartment houses is growing (Figure 1B), indicating their availability for sale in DMA Saudi Arabia. Regarding the perception of apartments as a feasible alternative to villas for homeownership, 31.2% of participants strongly agreed and 27.9% agreed with this notion (Figure 1C). On the other hand, 16.4% disagreed, and 11.5% strongly disagreed, indicating a diversity of opinions on the feasibility of an apartment as a homeownership option.

In terms of affordability, the responses indicate that only 4.9% strongly agreed and 14.8% agreed that apartments are affordable in Saudi Arabia (Figure 1D). In contrast, 37.7% disagreed, and 21.3% strongly disagreed that apartments are affordable. Thus, a considerable proportion of respondents perceive apartment prices as relatively high or unaffordable. These findings align with studies conducted in various countries, including Malaysia (Yap & Ng, 2018), Saudi Arabia (Alhubashi, 2016), Nigeria (Adegoke & Agbola, 2020), and Turkey (Coskun, 2023), which indicate that housing affordability is a significant barrier to homeownership. Therefore, the findings from the present study highlight varying perspectives on apartment homeownership desirability, the feasibility of apartments as alternatives to villas, the growth of the apartment market, and the affordability of apartment prices. These findings underscore the importance of considering diverse housing preferences, financial considerations, and market dynamics when addressing housing needs and promoting inclusive housing policies in DMA specifically and Saudi Arabia in general.

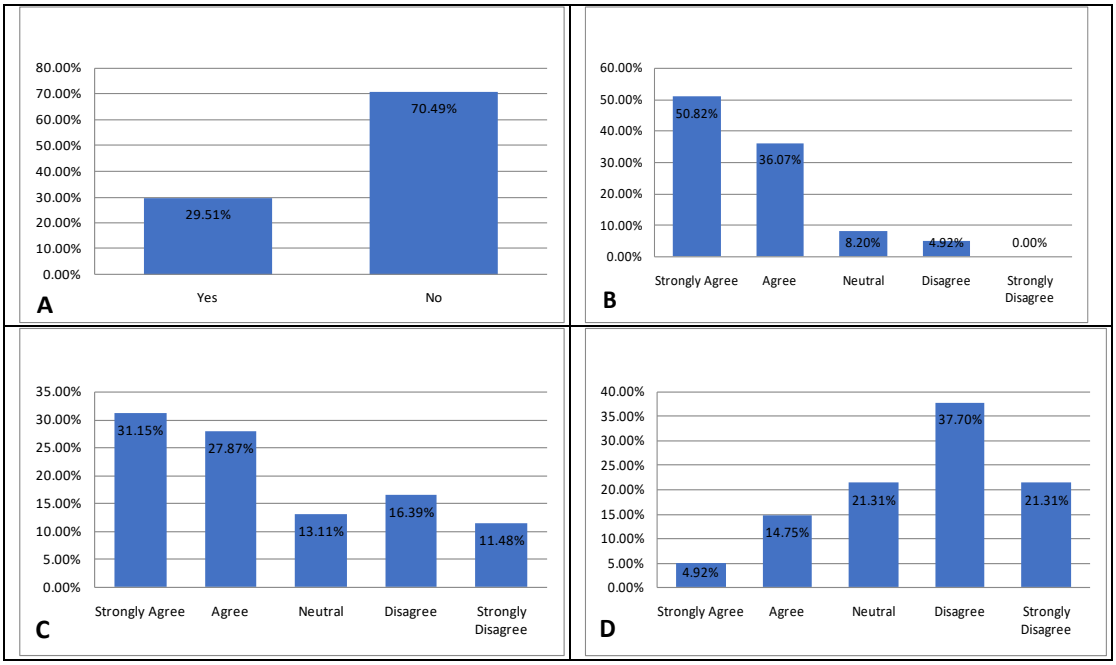


Figure 1. (**A**) Desirability of apartment homeownership in DMA Saudi Arabia; (**B**) growing market for apartments for sale; (**C**) apartment ownership as a feasible alternative to villas for Saudi residents; and (**D**) affordable prices for apartments in DMA Saudi Arabia.

Additional results of ANOVA analyses in Table 4 provided more insights into the findings presented in Figure 2, shedding light on the significance of certain factors related to apartment homeownership in

Saudi Arabia. For the question of whether owning apartments is desirable for individuals residing in Saudi Arabia, the ANOVA results show that there is a slight difference in opinions among the participants, as reflected in the F-value of 2.203. However, the *p*-value of 0.067 suggests that this difference is not statistically significant. This indicates that the level of desirability for apartment ownership is relatively consistent among the surveyed groups.

Similarly, when examining the growing market of apartments for sale in Saudi Arabia, the ANOVA results indicate a moderate difference between groups, as evidenced by the F-value of 2.408. However, the *p*-value of 0.099 suggests that this difference is not statistically significant. Therefore, it can be inferred that the perception of a growing market for apartments is relatively consistent across the surveyed groups. In contrast, the ANOVA results of the feasibility of apartment homeownership as an alternative to villas show a significant difference between groups. The F-value of 2.746 is statistically significant at the 0.05 level, as indicated by the *p*-value of 0.028. This suggests that there are notable variations in the perception of apartments as viable homeownership among the respondents.

Regarding the affordability of apartment prices, the ANOVA results reveal a significant difference between groups. The F-value of 2.896 is statistically significant at the 0.05 level ($p = 0.022$). This indicates that there are notable discrepancies in the perception of apartment prices' affordability among the surveyed groups. Therefore, the ANOVA findings provide additional statistical evidence to support and further elaborate on the trends and variations observed in Figure 1. They highlight the significance of factors such as the feasibility of apartment homeownership as an alternative to villas and the affordability of apartments in shaping individuals' perceptions and preferences in the Saudi Arabian housing market.

Table 4. ANOVA between some dependent variables.

Variables		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Do you think that homeownership via apartments is desirable for households in Saudi Arabia?	Between groups	2.064	5	0.413	2.203	0.067
	Within groups	10.119	54	0.187		
	Total	**12.183**	**59**			
There is a growing market for apartments for sale in Saudi Arabia	Between groups	3.177	2	1.589	2.408	0.099
	Within groups	38.265	58	0.660		
	Total	**41.443**	**60**			
Apartment homeownership is considered a feasible alternative to villas by Saudi residents	Between groups	23.023	5	4.605	2.746	0.028
	Within groups	92.223	55	1.677		
	Total	**115.246**	**60**			
The prices for apartments are affordable to Saudi residents	Between groups	14.885	5	2.977	2.896	0.022
	Within groups	55.515	54	1.028		
	Total	**70.400**	**59**			

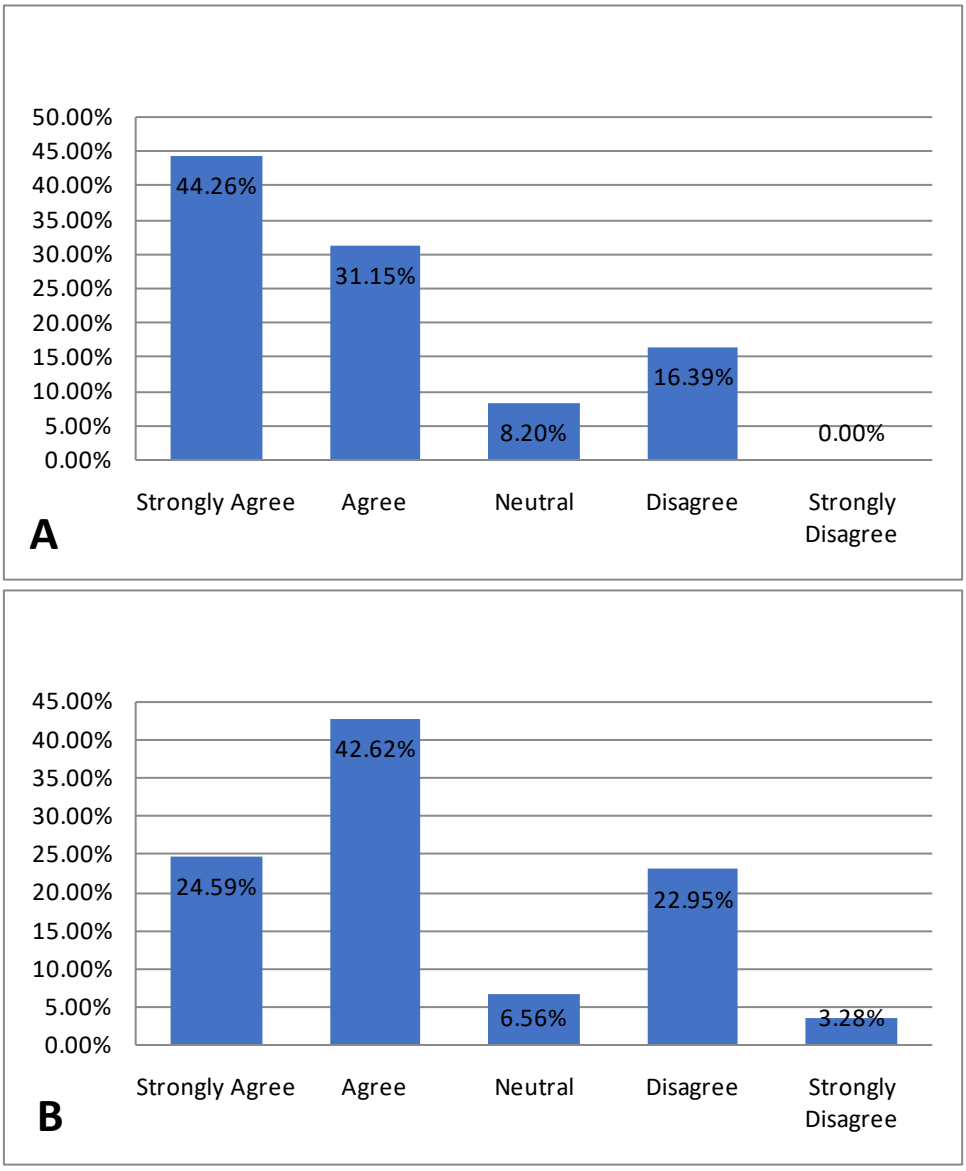
4.3. Perceptions and Preferences on Apartment Ownership, Rental Preferences, and Investment Potential

This section discusses results andunveils the findings related to apartment homeownership, rental preferences, and investment potential in the DMAs housing market. Examining the desirability for apartment homeownership or renting, and the perception of apartments as a viable investment, can help us gain valuable insight into the factors shaping housing choices and the diverse needs and preferences of different demographic groups. These findings provide a deeper understanding for developers, policymakers, and investors to better cater to the evolving demands and create a thriving housing market that meets the varied expectations of Saudi residents. Therefore, Figure 2 provides insights into the appeal of apartment homeownership, the preference for renting among Saudis, and the perception of apartments as a viable investment. In terms of apartment ownership appeal among non-Saudi citizens and low-income households, most respondents expressed positive sentiments.

A considerable proportion (44.3%) strongly agreed and 31.2% agreed that apartment ownership is appealing to them (Figure 2A). This indicates that apartments hold considerable appeal for this demographic, potentially due to factors such as affordability, convenience, or the availability of housing options that suit their needs. For example, low-income households may find apartments more affordable compared to other types of housing, while non-Saudi citizens may prefer apartments due to their transient lifestyle or desire for a compact living space. This finding agrees with the research conducted by Dano

(2024b), which demonstrated that most non-Saudis preferred apartments due to factors such as affordability, temporary residency, and job mobility. On the other hand, when it comes to Saudis, the preference for renting apartments over ownership is evident. Only 24.6% strongly agreed and 42.6% agreed that renting apartments is preferable (Figure 2B). This suggests that many Saudis, for several reasons, prefer the flexibility and convenience of renting rather than committing to ownership. For instance, some Saudis may prioritize mobility or may have financial constraints that make renting a more viable option.

Concerning the perception of apartments as a viable investment, 49.2% strongly agreed and 32.8% agreed that apartments for sale by housing developers are a viable investment (Figure 2C). This indicates a prevalent belief that purchasing apartments for investment purposes can yield favorable returns. The perception may be driven by factors such as the anticipated growth of the real estate market, increasing demand for rental properties, or the potential for capital appreciation. For example, investors may view apartments as a lucrative opportunity due to the rising demand for rental housing in urban areas. Therefore, Figure 2 highlights the nuanced preferences and perceptions regarding apartment ownership, rental preferences among Saudis, and the viability of apartments as investments. These findings provide valuable insights for policymakers, developers, and investors to better understand and cater to the diverse needs and preferences of different demographic groups within the housing market.



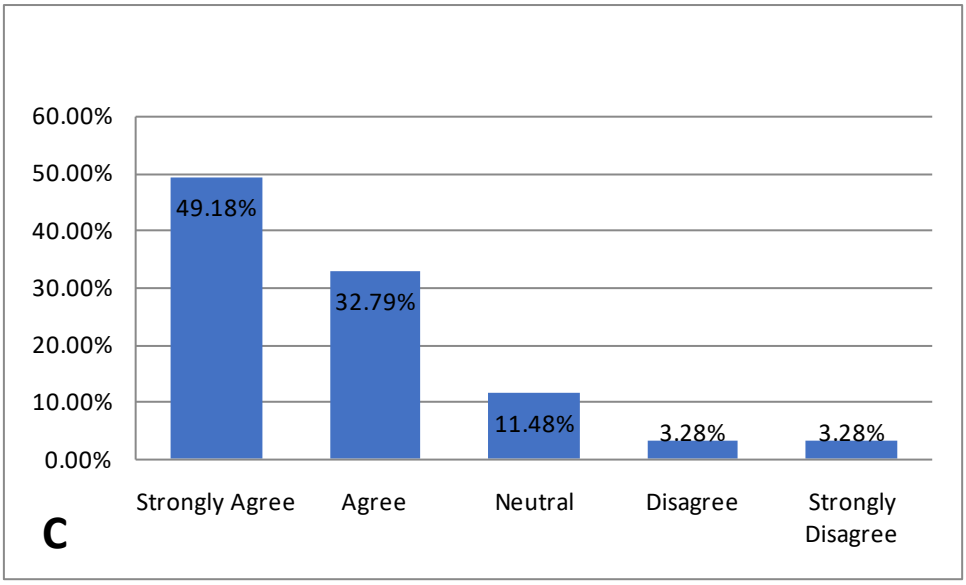


Figure 2. Preference for apartment homeownership: (**A**) byexpatriate and low-income respondents; (**B**) renting apartments preferred over ownership by Saudis; and (**C**) apartments for sale by housing developers are a viable investment.

Furthermore, ANOVA was conducted to gain more insights concerning the findings illustrated in Figure 2. As presented in Table 5, the finding indicates that there is a significant difference between groups regarding the cultural perception of apartments as suitable only for non-Saudi households probably due to factors such as affordability, temporary residency, and job mobility as highlighted by Dano (2024b). The F-value of 21.582 is statistically significant at the conventional significance level of 0.05, as indicated by the *p*-value of 0.022. This suggests that there are notable variations in the cultural perception of apartment suitability among the surveyed groups. This finding revealed that the perception of apartment ownership appeal and rental preferences differs between Saudis and non-Saudi respondents. In Figure 2, it is evident that a larger percentage of expatriates and low-income participants strongly agree or agree that apartment ownership is desirable, whereas most Saudis prefer renting apartments over ownership. This aligns with the ANOVA finding, as it suggests that there is a cultural perception that apartments are more suitable for non-Saudi households.

The ANOVA finding provides statistical evidence to support and further elaborate on the differences in cultural perceptions. It implies that there may be cultural factors or societal norms influencing the perception of apartment suitability for different demographic groups. This finding highlights the importance of considering cultural perspectives and preferences when analyzing housing choices and tailoring housing options to meet the diverse needs of different groups within the Saudi Arabian housing market. In summary, the ANOVA finding underscores the significant differences in the cultural perception of apartment suitability among surveyed groups. These insights emphasize the need for a comprehensive understanding of cultural factors and preferences to effectively address and accommodate the varying housing preferences within the Saudi Arabian housing market.

Table 5. ANOVA on the perception that apartments are suitable for non-Saudisonly.

Variables		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Apartments are culturally seen as suitable only for non-Saudi households	Between Groups	21.582	6	3.597	2.712	0.022
	Within Groups	71.631	54	1.327		
	Total	93.213	60			

4.4. Perceptions and Challenges in the DMA Saudi Arabian Housing Market

This subsection sheds light on the perceptions and challenges within the DMA Saudi Arabian housing market. Figure 3 presents respondents' viewpoints regarding joint apartment homeownership, apartment design and quality, and government incentives for apartment development in Saudi Arabia, which are essential in gaining valuable insights into the prevailing perceptions and concerns that shape housing

preferences. Concerning joint apartment homeownership, two-thirds of respondents expressed agreement with this arrangement 41.0% strongly agreed and 26.2% agreed that joint homeownership is a favorable option (Figure 3A). This suggests a recognition of the benefits of sharing ownership responsibilities and costs, such as pooling resources among neighbors for maintenance in an apartment block.

However, concerns were raised about the design and quality of apartments for homeownership. An equal percentage of respondents (31.2%) strongly agreed and agreed that poor apartment design and quality are prevalent (Figure 3B). This suggests that there are perceived deficiencies in aspects such as construction, layout, functionality, or materials used in apartments intended for homeownership. Issues like inadequate storage space, inefficient floor plans, or the use of inferior building materials can impact the overall satisfaction and desirability of apartment homeownership. The findings also highlight concerns about inadequate apartment design for Saudi families' lifestyles. Almost two-thirds of respondents agreed (39.3% strongly agreed and 24.6% agreed)that apartments do not effectively cater to the family and cultural needs of Saudi society (Figure 3C). Cultural considerations, such as the requirement for separate living quarters for extended family members or the need for larger communal spaces, may not be adequately addressed in current apartment designs. These findings are consistent with the studies conducted by Özsoy & Sahin (2022) and Koohpayma & Argany (2020), which revealed that the quality of housing, availability of storage spaces, and building designs significantly impact housing ownership.

Furthermore, 41.0% of them strongly agreed and 36.1% agreed that the design and size of apartments do not suit families with children (Figure 3D). This perception reflects the belief that apartments may not be well-suited for families with children due to limitations in space, a lack of dedicated play areas, or insufficient room for family activities. Limited indoor play space or a lack of outdoor recreational areas can present challenges for families with young children. Additionally, the findings reveal that respondents feel that apartments are inadequate for families of four or more. A significant percentage, 41.0% strongly agreed and 29.5% agreed, expressed this belief (Figure 4E). This suggests that larger families face difficulties in finding suitable apartments that can accommodate their needs in terms of space and functionality. Additional bedrooms, larger public areas, or adequate storage solutions may be lacking in standard apartment designs.

Lastly, perceptions of limitations on government incentives for apartment development for sale were reflected in the findings. Respondents indicated that 16.4% strongly agreed and 29.5% agreed with this viewpoint (Figure 3F). This suggests that there may be a perception that government support or incentives for developers to build apartments for sale are insufficient or restricted in some way. Such perceptions can impact the availability and affordability of apartments for potential homebuyers. In summary, Figure 3 provides valuable insights into various perceptions and challenges related to joint apartment homeownership, apartment design and quality, and government incentives for apartment development. These findings highlight the need for improvements in design, functionality, and government support to address the concerns and preferences of individuals within the Saudi Arabian housing market. By addressing these issues, stakeholders can work towards creating a housing market that better meets the diverse needs and aspirations of residents.

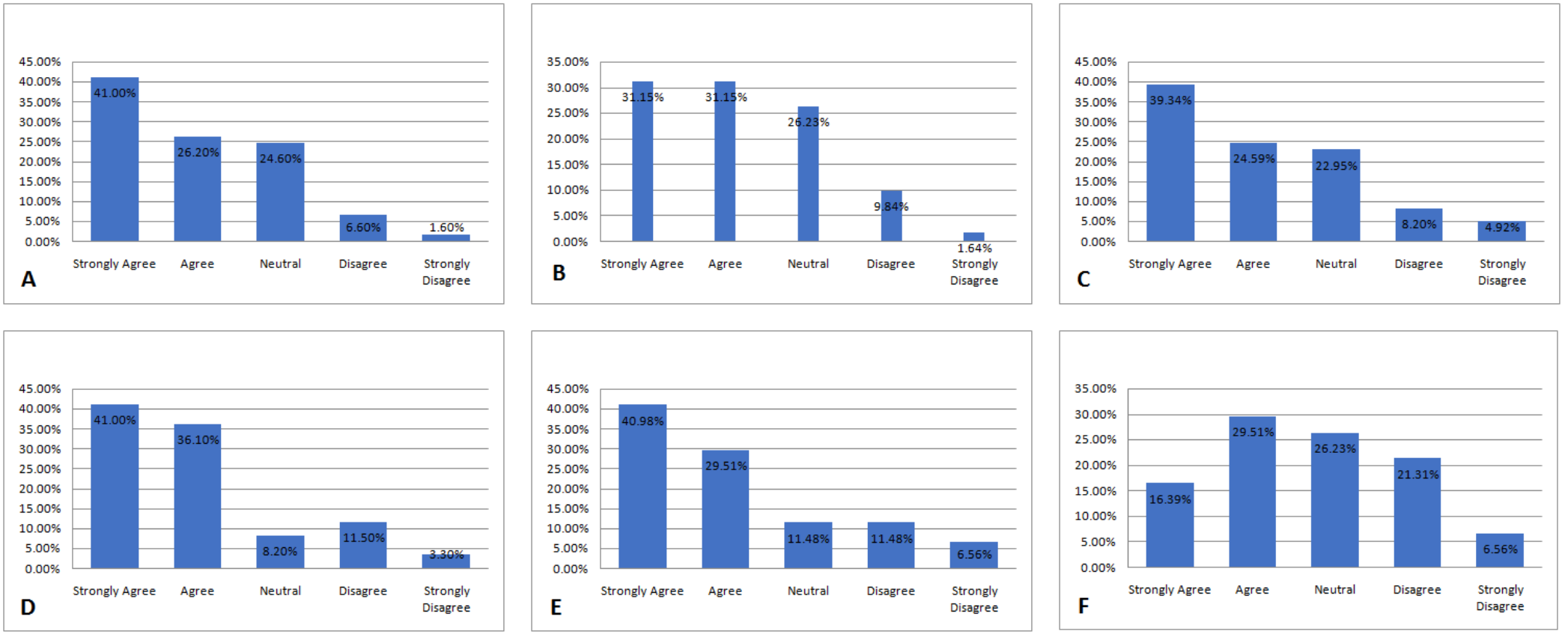


Figure 3. Expert perceptions on housing through (**A**) joint apartment homeownership; (**B**) apartment design and quality for homeownership; (**C**) inadequate apartment design and quality for Saudi families' lifestyles; (**D**) challenges of apartment design and size for families with children; (**E**) inadequate apartments for families of four or more; and (**F**) limitations on government incentives for apartment development for sale.Similarly, the ANOVA results presented in Table 6 offer valuable insights that further illuminate the perceptions and challenges discussed in Figure 3. Firstly, the ANOVA results indicate a statistically significant difference between groups regarding the limited government incentives for apartment development for sale ($F = 11.422$, $p = 0.022$). This finding aligns with the perception expressed in Figure 3, where a notable percentage of respondents (26.23% strongly agreed and 32.79% agreed) believed that government incentives for apartment development were limited. The ANOVA findings provide statistical support to the notion that there is a consensus among respondents regarding the need for more robust government support or incentives to facilitate apartment development for sale.

Secondly, the ANOVA results reveal a non-significant difference between groups concerning participant's wariness of joint homeownership in apartment buildings (F = 11.817, p = 0.082). Although the difference is not statistically significant, it is worth noting that Figure 3 showed a relatively high percentage of respondents (41.00% strongly agreed and 26.20% agreed) expressing strong agreement or agreement with joint apartment homeownership. This suggests that while there may be some wariness, a sizable portion of respondents still view joint homeownership as a favorable option, despite the lack of statistical significance in the ANOVA results. Thirdly, the ANOVA findings suggest a non-significant difference between groups regarding the suitability of apartments for families of four or more people (F = 14.496, p = 0.096). However, it is important to note that Figure 3 highlighted the perception of respondents (40.98% strongly agreed and 29.51% agreed) that apartments are inadequate for larger families. While the ANOVA results do not show a significant difference, the alignment in overall sentiment suggests that there is a general belief that apartments may not adequately meet the needs of larger families in terms of space and functionality.

Lastly, the ANOVA results indicate a statistically significant difference between groups regarding the unattractiveness of neighborhoods where apartments for sale are located (F = 22.904, p = 0.007). This finding aligns with the perception expressed in Figure 3, where respondents (22.95% strongly agreed and 19.67% agreed) perceived that neighborhoods with apartments for sale have low-quality or inadequate services and facilities. The ANOVA findings provide statistical support to the perception that improvements are needed in the overall quality and amenities available in the neighborhoods where apartments are being developed. In summary, the ANOVA results presented in this section offer quantitative insights that further support and reinforce some of the perceptions and challenges discussed in Figure 3. These findings demonstrate consistency between the qualitative and quantitative data, emphasizing the importance of addressing the identified concerns in the Saudi Arabian housing market.

Table 6. ANOVA between some dependent variables.

Variables		Sum of Squares	df	Mean Square	F	Sig.
The current government incentives for apartment development for sale are limited	Between Groups	11.422	5	2.284	2.897	0.022
	Within Groups	43.365	55	0.788		
	Total	**54.787**	**60**			
Households are wary of joint homeownership in apartment buildings	Between Groups	11.817	6	1.969	2.000	0.082
	Within Groups	53.167	54	0.985		
	Total	**64.984**	**60**			
The apartments currently offered for homeownership are not suitable for families of four or more people	Between Groups	14.496	5	2.899	1.982	0.096
	Within Groups	80.455	55	1.463		
	Total	**94.951**	**60**			
The neighborhoods where apartments for sale are located are unattractive due to low-quality or inadequate services and facilities	Between Groups	22.904	6	3.817	3.333	0.007
	Within Groups	61.850	54	1.145		
	Total	**84.754**	**60**			

4.5. Preferences and Perceptions Concerning Willingness to Compromise and Government Incentives

This section reveals respondents' preferences regarding their willingness to compromise on quality and size for improved accessibility and their views on government incentives for apartment development (Figure 4). The findings indicate that 16.39% of respondents strongly agree, and 29.51% agree, that they would compromise on housing quality and size for better accessibility. This suggests that a significant portion of respondents is open to sacrificing certain aspects of their ideal living space for enhanced access to transportation, facilities, and essential services. For example, individuals might be willing to accept a smaller apartment if it is located near public transportation hubs, schools, healthcare facilities, and shopping centers. This willingness to compromise suggests that the convenience and accessibility of amenities hold considerable importance for these respondents. In their respective studies, Nyanda (2023), Shetty et al. (2020), Lawal (2025), Chikhmous & Rahman (2024), and Wu et al. (2018) emphasized the significance of both transportation service accessibility and accessibility to apartments.

Pertaining to government incentives for apartment development for sale, the findings reveal that 26.23% of respondents strongly agree and 32.79% agree that there are limitations on such incentives. This indicates a widespread perception among respondents that the government's support or incentives for apartment development are insufficient. Examples of limitations on government incentives could include a lack of financial assistance or tax breaks for developers, strict regulations that impede the construction process, or limited access to land for development purposes. These limitations might hinder the availability and affordability of apartments for sale, creating challenges for prospective buyers and developers alike.

The distribution of responses in both categories also reveals the presence of neutral, disagreed, and strongly disagreed responses. These variations highlight the diversity of opinions among respondents, indicating that not everyone shares the same views on compromising on quality and size or the limitations on government incentives. For instance, some individuals may prioritize spacious and high-quality living spaces above all else and may not be willing to compromise, while others may have different perspectives on the government's role in incentivizing apartment development.

Finally, Figure 4 provides valuable insights into the trade-off that individuals are willing to make in terms of compromising on quality and size for improved accessibility, as well as their perceptions of limitations on government incentives for apartment development for sale. Through this exploration, valuable perspectives that contribute to the ongoing discussions surrounding housing preferences and the need for adequate incentives in the development sector are uncovered. These findings contribute to a deeper understanding of the housing preferences and concerns of the surveyed population, which can inform policy and decision-making processes related to housing development and urban planning.

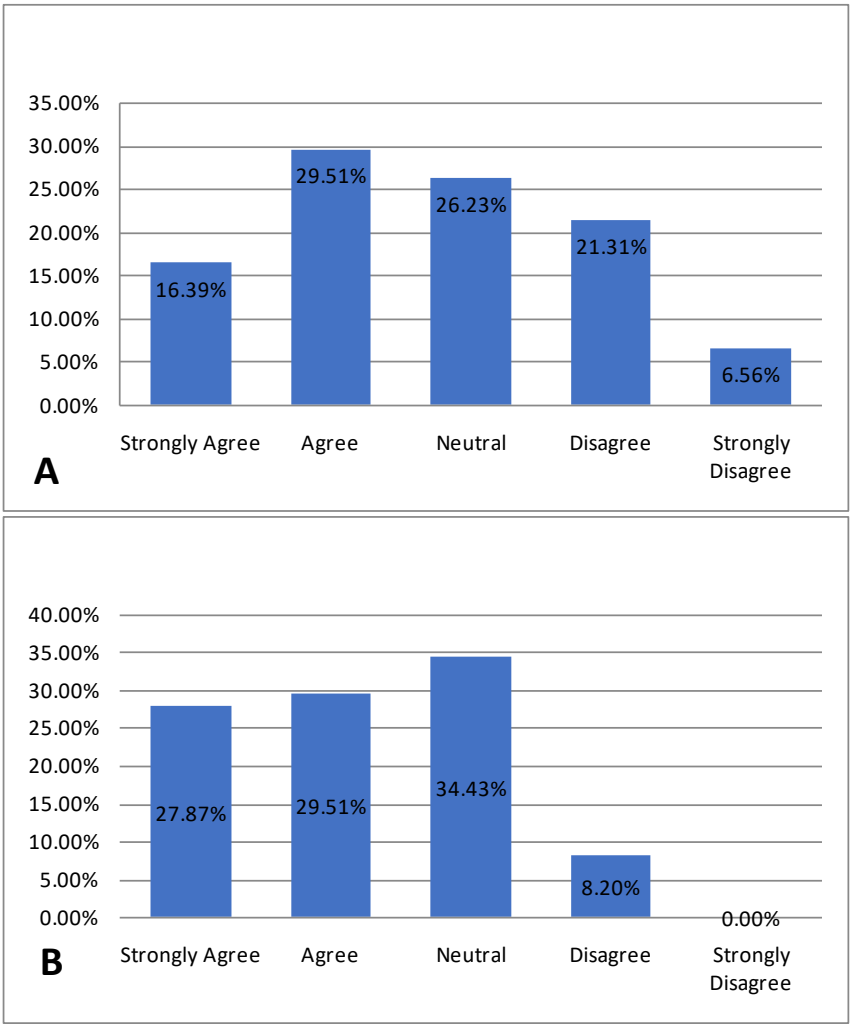


Figure 4. (**A**) willingness to compromise on quality and size for improved accessibility to transport facilities, and (**B**) services and limitations on government incentives for apartment development for sale.

5. Conclusion

This study sheds light on the complexities surrounding preferences for apartment ownership in DMA Saudi Arabia, particularly within the context of sociocultural factors and rising housing costs. Data were collected using a structured questionnaire administered to 61 housing experts with a minimum of ten years of experience in the housing sector in DMA Saudi Arabia. The findings indicate a significant difference in terms of their perception of the extent of family willingness to own apartments. However, concerns were raised about the design and quality of apartments for homeownership. In terms of the desirability of apartment ownership, it is noteworthy that about one-third of respondents expressed a positive inclination towards owning an apartment, while about three out of five agreed that apartment ownership could be a viable substitute for villas. In terms of affordability, only one-fifth of the respondents agreed that apartment prices in DMA Saudi Arabia are affordable. Furthermore, challenges related to apartment design and size for families with children were acknowledged by a considerable number of respondents. Lastly, perceptions of limitations on government incentives for apartment development for sale were reflected in the findings, while providing insights into the trade-off that individuals are willing to make in terms of compromising on quality and size for improved accessibility.

This study contributes to exploring the interplay of sociocultural and economic factors on ownership decisions, underscoring the significance of understanding and addressing the dynamics that influence residential choices in the face of escalating expenses. The findings of this study not only provide valuable insights for policymakers, real estate developers, and urban planners in Saudi Arabia but also offer lessons for other developing countries grappling with similar housing affordability challenges. Moving forward, bridging the gap in the existing literature regarding the undesirability of apartment ownership in Saudi Arabia is crucial for fostering sustainable housing solutions that meet the needs and preferences of citizens while promoting inclusive urban development.

Conflict of Interest Statement

The authors have no competing interests to declare.

Ethical Approval

This research has been reviewed and approved by the Institutional Review Board with NCBE registration number HAP-05-D-003 at the Scientific Research and Innovation, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia. This approval validates the adherence to ethical standards in the research process involving human subjects.

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