Adoption of Different Housing Models to Access Housing by Households in Nairobi County

Francis Kamande, Wycliffe Oboka, Moses Gweyi and Michael Ngala
Adoption of Different Housing Models to Access Housing by Households in Nairobi County

Francis Kamande, Wycliffe Oboka, Moses Gweyi & Michael Ngala
School of Co-operatives and Community Development, the Co-operative University of Kenya

Abstract

Purpose: This study aimed to evaluate adoption of different housing models to access housing by households in Nairobi County.

Methodology: Employing a descriptive research design, the study investigates the impact of housing regulations on housing access through mortgage and cooperative models. The research sample comprises 385 households, CEOs of housing financing organizations, and government officers.

Findings: The study revealed that adoption of housing model is shaped by diverse factors. The residency duration reflects both long-term and newer residents, highlighting the dynamic interplay of urban growth and migration. Notably, 35.0% of respondents have lived in their current houses for “4 - 6 years,” emphasizing housing stability. The prevalent adoption of the Incremental (34.4%) and Cooperative Models (33.4%), alongside 41.4% awareness of the Mortgage Model, signifies residents’ adaptability in navigating financial avenues for homeownership.

Challenges like high construction costs persist, with 80% of Nairobi’s population residing in informal settlements and slums. Strengthening regulatory frameworks is crucial, and policymakers should address financial barriers. This study provides insights for creating an inclusive and sustainable housing environment, essential for the 59.2% of renters expressing aspirations to transition into homeownership.

Conclusion: The housing landscape in Nairobi County, particularly Ruai Sub-County, reflects a mix of long-term and newer residents, emphasizing housing stability. The prevalent adoption of Incremental and Cooperative Models, along with awareness of the Mortgage Model, indicates residents’ adaptability in pursuing homeownership.

Unique Contribution to Theory, Practice and Policy: Utilizing the Public Interest Economic Regulation Theory (PIERT), the Q Theory of Housing Investment, and the Theory of Distributive Justice, the research explores the interplay between government regulations, market forces, and social equity in the context of affordable housing. To address challenges, policymakers should strengthen regulatory frameworks, enhance financial policies, and promote diverse housing models. Public awareness campaigns are vital. Recommendations include tailored financial products and inclusive strategies to meet the varied needs of the population. These measures aim to create an enabling environment for accessible and sustainable housing in Nairobi County, benefiting both existing and aspiring homeowners.

Keywords: Housing Models, Housing Regulations, Mortgage, Cooperative, Affordability

©2023 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/)
INTRODUCTION

The adoption of different housing models to address the housing crisis in Nairobi County demands an understanding of the multifaceted challenges stemming from the interplay of urbanization, regulatory frameworks, and housing strategies. As Nairobi undergoes rapid urbanization, propelled by economic advancements, the influx of rural-to-urban migration places unprecedented pressure on the available housing resources. With a burgeoning population of 4.3 million, a staggering 80% of whom reside in informal settlements and slums, the urgent need for suitable housing options, particularly for low- and middle-income earners, becomes glaringly evident (KNBS, 2019).

The repercussions of this urbanization surge manifest in challenges such as overcrowding, the proliferation of informal settlements, and a scarcity of quality affordable housing. For many households, the intricate trade-offs between housing, work proximity, and high living costs force them to endure substandard living conditions in close proximity to employment opportunities (Kipkirui & Rotich, 2015). This predicament underscores the formidable hurdles faced by the urban poor in Nairobi in accessing safe and adequate housing, emphasizing the pressing need for comprehensive interventions.

Central to the impediments in achieving accessible housing is the absence of favorable and adequate regulatory frameworks. While housing models like mortgage, cooperative, and incremental strategies present potential solutions, their effective implementation is intricately tied to the regulatory landscape. A discernible research gap exists concerning the impact of regulations on housing delivery within these models in Nairobi County, emphasizing the necessity for a more understanding to inform policy and reform (Giti, K'Akumu & Ondieki, 2020).

The scarcity of suitable housing locations, particularly for low-income households, poses a significant challenge. Even when housing units are constructed, they often prove financially out of reach due to elevated costs and limited income levels. The absence of long-term loan opportunities, coupled with high interest rates and credit risks, impedes the growth of the mortgage portfolio, restricting access for many aspiring homeowners (World Bank, 2017). These financial challenges further exacerbate the difficulties in implementing housing models aimed at democratizing homeownership.

However, amidst these challenges, housing models such as mortgage, cooperative, and incremental approaches present viable solutions. Mortgage models, offering long-term loans secured by the property, provide a tangible pathway to homeownership. Housing cooperatives, where members share ownership and costs, present an alternative communal approach. Incremental housing, allowing flexible construction and remodeling, empowers residents to adapt their homes according to their evolving needs and financial capacities (Darinka, 2018). These models, when supported by appropriate regulations and financial policies, have the potential to significantly enhance housing accessibility for Nairobi's residents.

Addressing the housing crisis in Nairobi County necessitates a comprehensive and conceptual approach. Recognizing the challenges hindering the adoption of various housing models involves navigating regulatory barriers, tackling inadequate housing supply, and addressing financial constraints. By centering on policy reforms, fortifying regulatory frameworks, and championing inclusive urban development, Nairobi County can pave the way for accessible and affordable housing, thereby ensuring a superior quality of life for its residents. This study
endeavors to explore these challenges through a conceptual lens, providing insights into potential solutions to contribute to the ongoing discourse on housing access in Nairobi County.

Statement of the Problem

The provision of living space for households is crucial for improving family living conditions and guaranteeing a higher quality of life. However, the rapid increase in population and rural-urban migration, particularly among low and middle-income households, poses a substantial challenge for both national and local governments in ensuring adequate housing. This challenge has resulted in limited access to housing, creating a significant problem that demands urgent attention. Consequently, governments worldwide have implemented various interventions, including the formulation of policies and regulatory frameworks, to enhance housing access for their citizens. In many developing countries, including Kenya, the government often plays a direct provider role in informal settlements rather than an intermediary role, which would be more ideal given the legal and regulatory framework. Unfortunately, this approach is limited to only a few projects, leading to disparities in access to housing between individuals with low and high incomes (Johnson, 2021).

Despite the efforts to provide affordable housing, several challenges hinder successful implementation. High construction costs, encompassing expensive materials and labor expenses, are major obstacles. Additionally, challenges in land governance, which require a review of land regulations, further complicate the provision of affordable housing. Various studies (De Jorge-Huertas & De Jorge-Moreno, 2021; Olanrewaju and Woon, 2019; Lateef and Idrus, 2020; Giti et al., 2020; Simón-Moreno and Kenna, 2019) have investigated the conditions for accessing affordable housing, identifying determinants for ownership. However, there is a notable gap in the literature regarding the specific impact of housing models on the accessibility of affordable housing in Kenya. While Lupala (2010) conducted research on the impact of macroeconomic policies in Tanzania, there is limited research on the interactions between regulations/policies and access to housing in Kenya.

This study aimed to fill this gap by evaluating adoption of different housing models to access housing by households in Nairobi County. Specifically, the research will explore how mortgage models, cooperative models, incremental models, and housing regulations collectively impact the ability of households to access affordable housing. Understanding these dynamics is essential for developing effective strategies to address the housing crisis in Nairobi County and improve the living conditions of its residents.

Objectives of the Study

To evaluate adoption of different housing models to access housing by households in Nairobi County

LITERATURE REVIEW

Theoretical Review

In evaluating the adoption of different housing models to access housing by households in Nairobi County, The Public Interest Economic Regulation Theory (PIERT) was used which underlines the pivotal role of government regulations in fostering housing affordability and ensuring the efficient allocation of resources. By emphasizing the importance of legislative and administrative controls, PIER asserts that governments play a crucial role in rectifying market failures and promoting optimal outcomes.
Concurrently, the Q Theory of Housing Investment offers valuable insights into the relationship between investment decisions and market valuations, particularly concerning existing and new housing units. This theory illuminates the competitive dynamics within the housing sector, guiding the decisions of builders and developers, thereby influencing housing affordability and accessibility. Moreover, the Theory of Distributive Justice emphasizes the equitable distribution of resources, highlighting the need for government intervention to ensure fair access to housing, particularly for marginalized populations. By comprehensively examining these theories, this study aims to offer a perspective on the intricate interplay between regulations, market forces, and social equity, providing valuable insights into adoption of different housing models to access housing by households in Nairobi County.

**Empirical Review**

**Mortgage Model**

The mortgage model consists of the process by which a developer builds a home and sells it to all interested parties. Individuals interested in buying a home typically take out loans from financial institutions. In mortgage agreements, the lender retains a lien on the property while the borrower does not have full ownership rights until the mortgage is fully repaid. The lender holds both legal and equitable title to the property and can only exercise their right to seize the property to fulfill the mortgage obligation (Farías, 2021).

Bidabad (2017) conducted a study to examine the factors influencing the affordability of mortgage prices. The research involved gathering data through semi-structured questionnaires from a sample of individuals associated with three prominent mortgage financing institutions in West Africa. The participants in the study provided ratings on a five-point Likert scale to assess different factors associated with the affordability of mortgages. The survey responses were subsequently analyzed using exploratory factor analysis. The research identified 11 variables that contribute to the affordability of mortgages, which were further grouped into five main components: economic factors, financial factors, characteristics of the property, factors related to development, and geographical factors.

Simón-Moreno and Kenna (2019) investigated the potential role of the EU Charter on Fundamental Rights in promoting a human rights perspective in the regulatory framework of the European Union (EU), specifically focusing on residential mortgage lending. The research aimed to tackle the difficulties arising from the commodification of housing on a global scale and the EU's limited capacity to effectively address emerging housing issues. By building on the existing correlation established by the Court of Justice of the EU (CJEU) between EU consumer law and the EU Charter on Fundamental Rights, the study explored the implications for residential mortgage lending. The primary finding underscored the potential influence of the EU Charter of Fundamental Rights on EU regulatory measures pertaining to mortgage lending, drawing attention to indications of divergence in mortgage law regimes within the EU, particularly regarding the differentiation between home loans and other types of mortgages.

Tajani and Morano (2018) conducted a study aimed at proposing and testing an innovative approach to evaluating the value of mortgage lending. The proposed method aims to enhance and streamline the appraisal process used by industry professionals, departing from the conventional methods typically employed. The methodology involves examining historical property values in 93 major cities across Italy, encompassing both residential and commercial properties, over a significant period spanning from 1967 to 2015. This analysis enables the derivation of reduction coefficients for market value based on the property's location in central,
semi-central, or peripheral areas. These coefficients serve as the foundation for assessing the mortgage lending value through derivative appraisal. By effectively addressing the need for a rational assessment of property risk and ensuring the appropriate contextualization of risk factors associated with local demand and supply, these coefficients eliminate inconsistencies and the risks associated with relying solely on a simple percentage deduction from the market value. Consequently, this method provides a more comprehensive and accurate evaluation of the mortgage lending value.

Co-operative Model

A collaborative approach is another significant model that can be adopted to facilitate access to housing. For example, the state's slums have been consistently cleared, opening the way for infrastructure growth without resettlement plans, proper security and broad political support for housing stagnation (Darinka, 2018). A housing co-operatives is a model in which a group of people registers their group as a housing cooperative as required by the national law (World Bank, 2017). This means that groups of people banding together to maximize service delivery (homeownership) to themselves through the economies of scale can get decent and affordable homeownership. This is a case where all the members of the housing association save money and borrow the remaining funds from a financial institution to purchase land and build a house. In this case, they buy land, build infrastructure, and take out loans to raise their troops.

Darinka (2018) conducted an extensive survey to examine the dynamics of cooperative housing and housing providers in Vienna, Austria, and Lyon, France. The primary objective of the study was to develop an analytical framework that enables a better understanding of the collaborative efforts among multiple stakeholders involved in the co-production of housing. Through the analysis of case studies, the study uncovered key findings. It was observed that both projects were characterized by strong user-led initiatives, with residents actively shaping the vision and principles from the outset. Notably, residents had significant decision-making power in determining the core values driving the projects. The initiatives aimed to foster social integration and affordability by implementing inventive approaches to tenure and revenue distribution, closely aligned with the allocation systems for community-based affordable housing. In these cooperative housing models, existing housing organizations assumed diverse responsibilities as developers, property administrators, landholders, and intermediary lenders. Additionally, they adhered to local government regulations governing the equitable distribution of affordable housing. The collaborations between resident groups and housing providers were forged early on in the projects, with residents taking a proactive approach. This high level of customer participation was consistently demonstrated throughout the projects, particularly in the formulation of guiding principles and the incorporation of architectural design elements.

Incremental Model

The step-by-step home building approach is a widely utilized construction method employed by numerous private residences globally. A variety of terms are used in the literature to describe the method of housing construction, but it essentially has the character of self-construction of housing by households (Jud & Winkler, 2003). We can explore different housing approaches including 'self-help housing,' 'assisted self-help housing,' 'self-managed housing,' and 'incremental housing.' Numerous scholars have emphasized the importance of incremental self-help housing, also referred to as incremental self-managed housing, as a vital strategy for housing development worldwide. Incremental housing refers to a gradual and step-by-step process in which homeowners construct or improve their homes by adding building
components as they obtain funding, time, or materials. This approach allows for cost reduction in housing construction, particularly when compared to the construction of complete apartments by developers. The effective execution of incremental housing depends on the accessibility of adaptable and relatively small short-term loans that can accommodate the intermittent housing requirements of individuals or communities. This approach provides increased financial flexibility and empowers homeowners to actively engage in shaping their living environments. In contrast, traditional mortgage financing necessitates substantial funds to purchase or construct an entire home. Gradual housing development can serve as a significant driver to involve individuals in underprivileged households and communities (social development) and stimulate local businesses (economic development) (Darinka, 2018).

Jain and Paliwal (2016) conducted a survey in India to investigate the adoption of affordable and efficient housing techniques. The study aimed to provide an overview of the housing landscape in the country. The findings indicated the availability of a variety of technology options for different building components, offering cost-effectiveness while maintaining the essential qualities of a well-designed dwelling. On a different note, Green (2017) attributed Japan’s achievements to a strategic combination of Total Quality Management (TQM), Just-in-Time (JIT) manufacturing, collaborative teamwork, and efficient supply chain management. According to Green, TQM plays a crucial role by encouraging employees to view themselves as integral parts of a supply chain that involves interactions between suppliers and customers. This approach instills a sense of pride in workers, as they prioritize serving others in the chain rather than solely focusing on their individual tasks.

Kamau (2014) conducted a research study in Nairobi County, Kenya, comparing three homeownership models and assessing their impact on low-income families. The study aimed to determine which of the three models - long-term mortgage, short-term loan, or housing cooperative - is most conducive to promoting homeownership among this demographic. Employing a descriptive study design, the research focused on economically active households residing in Ruai settlement within Nairobi County. Respondents were picked through a simple random sampling method, and collection of data involved surveys comprising a use of both open-ended and closed-ended questions. The result showed that the long-term mortgage model was not viable for low-income homebuyers, and the short-term loan model was also found to be less favorable. Conversely, the housing cooperative model emerged as the most suitable and practical approach for facilitating affordable and suitable housing for low-income households.

**METHODOLOGY**

This study employed a descriptive research design aimed at providing a comprehensive representation of the current state of housing models and access in Ruai Sub-Loc, Ward of Kasarani Subcounty, Nairobi County. The research targeted heads of households in single-family dwellings, as well as CEOs of housing financing organizations and government officers responsible for housing issues. The study population was estimated at 32,745 households, and a simple random sampling technique was applied to select a sample size of 385 heads of households. Primary data was collected through questionnaires administered via drop-and-pick method, interviews with key informants and agency heads, and focused group discussions. In-depth interviews and key informant interviews supplemented the quantitative data, providing a better understanding of the research problem. A pilot study was conducted to refine research procedures, and data analysis involved descriptive statistics for quantitative data using SPSS version 24, while content analysis was applied to qualitatively analyze the data thematically.
The research aimed to uncover insights and propose solutions to the challenges hindering the adoption of housing models in Nairobi County.

DATA ANALYSIS, FINDINGS AND INTERPRETATION

Response Rate

Table 1: Response Rate

<table>
<thead>
<tr>
<th>Group</th>
<th>Target Population</th>
<th>Sample Size</th>
<th>Responses</th>
<th>Response Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heads of Households</td>
<td>32,745</td>
<td>385</td>
<td>314</td>
<td>81.6</td>
</tr>
<tr>
<td>CEOs and Government</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>100.0</td>
</tr>
<tr>
<td>Officials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32,752</td>
<td>392</td>
<td>321</td>
<td>81.9</td>
</tr>
</tbody>
</table>

The response rate for this study, which aimed to assess the influence of housing models and regulations on access to housing in Nairobi County, Kenya, is a critical indicator of the research's success and reliability. Out of the targeted 385 heads of households, 314 individuals responded, resulting in a response rate of 81.6%. This response rate is considered quite respectable and indicates a strong willingness among the sampled population to participate in the research.

A response rate of 81.6% is particularly noteworthy in a study of this nature, where data collection involves surveying individuals on a topic as personal and significant as housing access. High response rates like this one often reflect the relevance of the research topic to the participants and their communities. In this case, it suggests that housing is a subject of great concern to the residents of Nairobi County, and they are eager to share their experiences and perspectives. Furthermore, the 100% response rate from CEOs and government officials involved in housing financing and regulation demonstrates the stakeholders' commitment to providing insights and expertise for the study.

A robust response rate is essential for the credibility and representativeness of the study's findings. The fact that over four-fifths of the targeted participants chose to engage in the research suggests that the collected data can provide a valuable understanding of housing dynamics in Nairobi County. It also implies that the research results are more likely to accurately reflect the sentiments, challenges, and preferences of the population. However, it's important to acknowledge that non-response bias may still exist, as the 18.4% of household heads who did not participate could have different perspectives or experiences. Nonetheless, with a response rate of 81.6%, this study is well-positioned to yield meaningful insights into the complex interplay between housing models, regulations, and housing access in Nairobi County.

Demographic Information

The study sought information on key demographic characteristics of respondent. The aspects sought were gender, age, marital status, and the highest level of education attained. This section presents into the demographic characteristics of the respondents, offering valuable insights into the composition of the research sample. By examining factors such as gender, age, marital status, and education level, this section provides a comprehensive understanding of the profile of individuals participating in the study. These demographic details serve as a crucial backdrop...
for the subsequent analysis of how housing models and regulations impact housing access in Nairobi County.

**Figure 1: Gender of the Respondents**

Figure 1 reveals that the majority of the participants were male, with 180 (57.3%) constituting the total sample, while females accounted for 130 (41.4%). A very small proportion, about 4 (1.3%), identified as "Other." These findings indicate a gender imbalance among the respondents, with a notable male majority. It is noteworthy that gender composition can play a crucial role in assessing various aspects of housing models and regulations in Nairobi County, as different genders may have distinct perspectives and experiences when it comes to accessing housing.

**Figure 2: Age Brackets of the Respondents**

Figure 2 reveals a diverse representation across various age groups. The largest proportion of respondents fell within the age bracket of 26-35 years old, with 120 (38.2%) constituting the total sample. This age group was closely followed by those in the 36-45 years old bracket, which accounted for 85 (27%) of the respondents. These findings highlight the presence of a broad age range within the study's population, indicating that perspectives on housing models
and regulations are being gathered from a cross-section of the population with varying life experiences and housing needs.

Figure 3: Respondents’ Marital Status

The marital status of the respondents was explored to gain insights into the relationship status of individuals participating in the study. Results revealed a diverse representation of marital statuses among the participants. The largest group consisted of respondents who identified as "Married (monogamous)," with 170 (54.1%) constituting the total sample. This was followed by individuals who were "Single," comprising 50 (15.9%) of the respondents. Notably, there were also participants in "Married (polygamous)" relationships (30, 9.6%), "Cohabiting" (25, 8.0%), "Separated" (15, 4.8%), "Divorced" (12, 3.8%), and "Widowed" (12, 3.8%). These findings underscore the varied marital statuses within the study's population, highlighting the importance of considering how different relationship statuses might influence housing preferences, choices, and experiences with housing models and regulations.

Figure 4: Highest Level of Education Respondents Have Attained
In examining the highest level of education attained by the study's respondents, a significant portion of the participants had completed their secondary education, with 68 (21.7%) having reached the level of A-level education and an additional 67 (21.3%) having attained a university degree. This indicates a substantial presence of individuals with higher educational qualifications within the sample. Moreover, Tertiary College education was also notable, accounting for 78 (24.8%) of the respondents. In contrast, the initial five education levels, including those with only primary education or none at all, collectively accounted for less than 15% of the sample, with None (2, 0.6%), Primary up to std 4 (6, 1.9%), Primary std 5 - 8 (7, 2.2%), Secondary form 1 - 2 (28, 8.9%), and Secondary form 3 - 4 (54, 17.2%) indicating a relatively lower representation in this category.

**Housing Models Adopted in Access Housing**

This section addresses the objective of this paper which was to evaluate adoption of different housing models to access housing by households in Nairobi County. By exploring the prevalence of different housing finance models and the motivations behind these choices, this section sheds light on the dynamic housing landscape in Ruai Sub-County. It also highlights the factors that influence residents' decisions when it comes to securing their homes, providing valuable information for policymakers, housing developers, and financial institutions seeking to address housing challenges and better serve the needs of the local population.

**Length of Time Lived In the Area Covering Nairobi County**

![Figure 5: Duration the Respondent Has Lived in the Area that is Now Covering Nairobi County](image)

Figure 5 illustrates the duration of residency of the respondents within the area now encompassing Nairobi County. Results reveal a diverse range of residency periods among the participants, shedding light on the demographic composition of those living in the region. The majority of respondents fall into the category of having resided in the area for "4 - 6 years," accounting for 24.2% of the total sample. This suggests a significant portion of the population has established roots in the county within the past several years. Following closely behind, individuals who have lived in the area for "1 - 3 years" make up 22.0% of the respondents,
indicating a substantial influx of relatively new residents. Additionally, an equal percentage of respondents, 22.0%, have been residing in the area for "10 years and above," showcasing a stable, longer-term population base.

This distribution of residency durations underscores the complexity of Nairobi County's housing landscape, with a mix of both long-term and newer residents contributing to the housing models and regulatory dynamics within the county. The duration of residency within Nairobi County is a crucial factor in understanding the housing preferences and experiences of its residents. Those who have lived in the area for a shorter period may have different housing needs and expectations compared to long-term residents. It also highlights the importance of considering the dynamics of urban growth and migration, as evidenced by the substantial number of respondents who have recently relocated to the area.

### Duration of Time Lived in Ruai Area

In Figure 6, the study gives a more detailed perspective on the specific duration of residency among the respondents within the Ruai area of Nairobi County. The results provide a view of the demographic composition of individuals living in Ruai where the respondents were drawn from and offers valuable insights into the evolving dynamics of this specific housing locality.

![Figure 6: Length of Time Respondent Has Lived in Ruai Area of Nairobi County](image)

The largest group of respondents, accounting for 32.2% of the total, falls into the category of having lived in Ruai for "4 - 6 years." This finding suggests a substantial and relatively recent influx of residents to Ruai. Such a trend might be attributed to various factors, including urbanization, economic opportunities, or the perceived affordability of housing in this area. The presence of a significant population residing in Ruai for this duration underscores the dynamic nature of housing and urban development in this locality.

Closely following are respondents who have resided in Ruai for "1 - 3 years," constituting 27.7% of the total sample. This indicates a substantial number of newcomers to the area. Their presence highlights Ruai's appeal to individuals seeking housing solutions within Nairobi County, possibly due to its proximity to urban amenities and the opportunities it presents. Furthermore, a noteworthy portion of respondents, representing 24.8%, have been living in
Ruai for "7 – 9 years." This group represents a more established segment of the population. Their sustained residency in the area implies a sense of attachment and stability, which may influence housing choices and preferences in unique ways.

The diversity in residency durations within Ruai area is reflective of broader urbanization and housing trends in Nairobi County. As an area experiencing growth and transformation, Ruai attracts residents with various backgrounds, preferences, and housing needs.

**Length of Time the Respondent Has Live House Currently Occupying**

Figure 7 presents insightful data on the duration that respondents have lived in their current houses within Nairobi County. This information offers valuable glimpses into housing stability and the potential influence of residents' tenure on housing models and regulatory experiences.

![Bar Chart: Respondent's Duration in Current House](chart.png)

**Figure 7: Respondent's Duration in Current House**

Results show that a considerable portion of the respondents, representing 35.0% of the total, have lived in their current houses for "4 - 6 years." This group constitutes the largest percentage, implying that many residents have enjoyed a relatively stable housing situation for several years. This might indicate that a significant segment of the population has established long-term roots within their current homes, possibly leading to a sense of attachment and investment in the local housing market.

Closely following are those who have lived in their current houses for "1 - 3 years," accounting for 30.2% of the respondents. This category reflects a substantial number of individuals who have relatively recently occupied their current residences. Their shorter tenure may indicate that they are still in the process of settling into their housing situations, potentially with different needs and experiences compared to longer-term residents. It's also noteworthy that 15.9% of respondents have been residing in their current houses for "7 – 9 years." This category represents individuals with a significant history of living in the same housing units, indicating stability and a potentially deeper connection to their current homes.
Furthermore, the results highlight a smaller group, approximately 9.6%, who have lived in their current houses for "Less than 1 year." This group likely includes newcomers who have recently moved into their current residences and are still adapting to their housing situations. These variations in housing tenure can significantly impact housing preferences, the adoption of different housing models, and interactions with housing regulations. Long-term residents might have different housing needs and considerations compared to newcomers, and understanding these dynamics is essential for crafting housing policies that cater to the needs of all residents.

**Type of Occupation of House Respondent in Currently Living**

Results presented in Figure 8 reveal the type of occupation for the houses in which the respondents are currently residing within Nairobi County. This information provides crucial insights into the housing tenure dynamics in the region and has implications for housing models, regulations, and policy considerations.

![Figure 8: Type of Occupation of This House, Which Respondent is Currently Living](image)

The majority of respondents, representing 66.9% of the total, reported that they are "Owner occupiers." This finding suggests a significant portion of residents in Nairobi County own the houses they currently live in. Owning one's home often signifies housing stability, a sense of permanence, and a higher level of control over the housing environment. This group of owner-occupiers is likely to have distinct housing preferences and experiences compared to renters.

Approximately 31.2% of respondents indicated that they "Rented" their current residences. This category reflects a sizable portion of the population who do not own the houses they occupy. Renting can offer flexibility and the ability to adapt to changing housing needs but might also entail different challenges, such as dealing with landlords and rental agreements. A small percentage, 1.9%, reported "I don't know" regarding the type of occupation. This response may stem from uncertainty or lack of clarity about their housing situation, possibly due to complex living arrangements or informal housing arrangements.
These findings highlight a mix of housing tenures within Nairobi County, with a significant proportion of owner-occupiers and renters. These differences in housing tenure can influence housing preferences, choices, and interactions with housing regulations. Policymakers and housing authorities must consider this diversity when developing strategies and regulations to address the diverse housing needs and experiences of the population in Nairobi County.

**Respondent’s Plan of Buying or Constructing a House in Nairobi County**

Figure 9 sheds light on the intentions of respondents who are currently renting their houses in Nairobi County. Specifically, it explores whether they are in the process of buying or constructing a house within the county. This information is valuable in understanding the housing aspirations and plans of renters and their potential impact on the local housing market.

Among respondents who reported renting their current houses, a significant majority, 59.2%, indicated that they are in the process of "Yes," which likely involves buying or constructing a house within Nairobi County. This finding suggests a noteworthy segment of renters have aspirations to transition into homeownership or property ownership. This aspiration may be driven by factors such as long-term housing security, investment opportunities, or a desire for greater control over their living spaces.

Conversely, 36.7% of respondents who rent their current houses reported "No" to being in the process of buying or constructing a house in Nairobi County. This group represents individuals who, at the time of the survey, did not have immediate plans to transition to homeownership or property ownership. It's important to note that this category does not necessarily indicate a lack of interest in homeownership but rather reflects the current status of respondents' housing situations.

A small percentage, 4.1%, responded with "I don't know." This response could suggest uncertainty or a lack of clarity regarding their housing plans. It's possible that some renters may...
have varying degrees of information or commitment to their future housing endeavors. Therefore, the findings reveal a substantial interest among renters in Nairobi County to transition into homeownership or property ownership. This aspiration has the potential to impact the local housing market and may influence housing models and regulations in the future. Understanding the housing intentions of renters is vital for policymakers, developers, and housing authorities as they craft strategies and regulations to address the evolving housing needs and aspirations of the population in Nairobi County.

**Model to be Adopted in Buying or Constructing House**

Figure 10 below highlights the housing models adopted by respondents who are either in the process of buying or constructing a house in Nairobi County or are planning to do so. This information provides valuable insights into the strategies individuals are employing to fulfill their homeownership aspirations and how these choices may impact the housing landscape.

![Figure 10: Housing Model Adopted by Respondents Who are in the Process or Planning to Buy or Construct a House in Nairobi County](image)

Among respondents with plans to buy or construct a house, the most frequently chosen housing model is the "Mortgage Model," selected by 48.3% of participants. This finding suggests that nearly half of the respondents who are actively pursuing homeownership are opting for mortgage financing. Mortgages are a common means of acquiring a house, allowing individuals to spread the cost over an extended period. The popularity of this model highlights the significance of financial institutions and their role in facilitating homeownership in Nairobi County.

The "Incremental Model" is the second most favored choice, with 34.5% of respondents indicating their adoption of this approach. The incremental model typically involves individuals saving money over time or securing personal loans to gradually build or purchase a house. This finding suggests that a significant portion of respondents prefer a more self-driven and gradual approach to homeownership, possibly to avoid the long-term financial commitments associated with mortgages.
A smaller but notable portion, 13.8%, are adopting the "Cooperative Model." This model involves financing through cooperative societies, where members pool resources to collectively invest in housing projects. The presence of this category suggests that cooperative societies play a role in housing access for some respondents. Additionally, 3.4% of respondents specified "Other" housing models, indicating a degree of diversity in strategies. These "Other" models could encompass various creative approaches to homeownership not covered by the predefined categories.

These results highlight a range of housing models adopted by respondents in their pursuit of homeownership in Nairobi County. The choice of housing model can significantly influence the housing journey, from the financial commitment involved to the timeline for acquiring a home. Policymakers, housing developers, and financial institutions can benefit from understanding these preferences to tailor their offerings and support mechanisms accordingly. This understanding is crucial for ensuring that housing access remains inclusive and adaptable to the diverse needs and aspirations of the population in Nairobi County.

**Reason for the Preferred Model**

Figure 11 amalgamates the reasons respondents have provided for choosing their respective housing models when in the process of buying or constructing a house in Nairobi County. This comprehensive view offers profound insights into the motivations and considerations that underpin housing decisions, enriching our understanding of the factors that drive these choices.
Within the Mortgage Model, a significant portion of respondents, 35.7%, cited "Lower interest rates" as a primary reason for their choice. Lower interest rates can make mortgages more affordable over the long term, making them an attractive option for those seeking cost-effective homeownership. Additionally, 21.4% of respondents noted that the "Longer repayment period" associated with mortgages was a key factor. This extended timeframe can reduce the monthly financial burden, making homeownership more accessible. Furthermore, 17.9% mentioned "Easier access to financing," indicating that the accessibility of mortgages played a pivotal role in their selection. Lastly, 25.0% of respondents provided "Other" reasons, which could encompass a variety of factors such as trust in financial institutions, flexibility in mortgage terms, or specific benefits offered by lenders.

For those who chose the Incremental Model, a significant number, 45.0%, pointed to the "Ability to save over time" as the driving factor. This suggests a preference for a self-driven approach to homeownership, where individuals can gradually accumulate the necessary funds. Another 35.0% mentioned "Avoiding high-interest loans" as a motivation. This choice can reflect a desire to minimize the financial burden associated with loans and interest payments. Additionally, 10.0% noted "Personal preference," indicating that some respondents may have a strong inclination towards this gradual approach to homeownership. Finally, 10.0% mentioned "Other" reasons, which may include unique personal circumstances or specific advantages associated with the Incremental Model.

Among respondents who opted for the Cooperative Model, 62.5% emphasized the appeal of "Pooling resources with others." This collective approach allows individuals to harness their resources collaboratively, potentially making it easier to embark on housing projects. Moreover, 25.0% cited "Trust in cooperative societies" as a key reason, underscoring the significance of trust and confidence in the cooperative model. Additionally, 12.5% highlighted "Access to collective expertise," indicating that the knowledge and support offered by cooperative societies played a role in their choice.

For those who specified "Other Models," the reasons were divided equally between "Customized financing options" and "Unique opportunity." This indicates that a few respondents explored unconventional or tailored approaches to homeownership, possibly driven by specific financial arrangements or opportunities that suited their individual circumstances.

Thus, the findings present a diverse range of motivations behind respondents' choices of housing models for acquiring homes in Nairobi County. These motivations encompass financial considerations, personal preferences, trust in institutions, and unique circumstances. Policymakers, housing developers, and financial institutions should take heed of these insights when designing housing products, as tailoring options to accommodate these diverse motivations can help make homeownership more accessible and responsive to the varied needs and aspirations of Nairobi County's residents. Understanding these motivations is essential for crafting effective housing policies and strategies that align with the evolving housing landscape in the region.

**Person in Household Who Sourced the Money for Buying/Constructing House Currently Living in**

Figure 12 provides insights into the sources of financing for purchasing or constructing houses among respondents residing in Ruai Sub-County. This information helps us understand the financial dynamics that enable individuals to acquire housing in this specific locality.
Among the respondents, 37.6% reported that they sourced the money for buying or constructing their houses independently, which is indicated as "Self" in the data. This suggests a substantial portion of homeowners in Ruai Sub-County are self-reliant when it comes to housing investment. This self-funding approach could result from a combination of factors, such as personal savings, investments, or income generated from various sources. Another notable group, representing 18.2% of respondents, indicated that their "Spouse" was the source of financing for their housing. This finding underscores the importance of dual-income households in supporting housing investments, as spouses often contribute jointly to achieve homeownership goals.

A significant proportion, 19.1%, mentioned that both they and their spouse contributed to the financing of their houses. This collaborative approach to financing, labeled as "Self and Spouse," indicates that many households in Ruai Sub-County undertake joint efforts to secure their homes. This alignment of financial resources can be advantageous in achieving homeownership more swiftly or with greater ease. Additionally, a noteworthy 25.2% of respondents fell into the category of "Other". This category encompasses a wide range of sources and financial arrangements, which respondents specified as support from extended family members, loans from relatives or friends, and other unconventional means of financing. The diversity within this category highlights the creative and varied financial strategies employed by respondents to secure their homes.

**Model for Access Housing the Respondent Is Aware Of**

Figure 13 presents data on the various models for accessing housing finance that respondents in Ruai Sub-County are aware of. This information provides insights into the knowledge and familiarity of residents with different housing finance options, which can influence their housing decisions and choices.
The most widely recognized housing finance model among respondents is the "Mortgage Model," with 41.4% of participants indicating their awareness of it. This finding suggests that a significant portion of respondents in Ruai Sub-County are familiar with the concept of mortgages as a means of financing housing. The popularity of mortgages may be attributed to their prevalence in the housing market and their visibility through financial institutions.

The "Incremental Model" is also well-known, with 28.0% of respondents acknowledging their awareness of it. The popularity of this model implies that a substantial portion of the population is acquainted with the idea of gradually saving or securing personal loans to fund housing projects. This awareness may reflect the appeal of a self-driven approach to homeownership.

The "Cooperative Model" is recognized by 23.7% of respondents. This suggests that a notable portion of the population is aware of the cooperative societies' role in housing finance. Cooperative models often involve collective resource pooling for housing projects, and their visibility indicates their significance in the local housing landscape.

Additionally, 6.8% of respondents mentioned "Other" models. These respondents might be aware of alternative or unconventional financing options not covered by the predefined categories. The presence of this category highlights the diverse range of housing finance models that individuals may be familiar with.

**Housing Model Adopted by Respondents in Acquiring or Building the House They are Currently Occupying**

Figure 14 provides valuable insights into the housing finance models adopted by respondents for acquiring or building the houses they currently occupy in Ruai Sub-County. This information sheds light on the preferred financial strategies employed by residents when it comes to homeownership.
Among respondents, the "Incremental Model" emerges as the most widely adopted housing finance model, with 34.4% of participants indicating their use of this approach. This finding suggests that a significant portion of the population in Ruai Sub-County favors a gradual savings and personal loans-based approach to homeownership. This aligns with the earlier finding that a substantial number of respondents were aware of this model (Figure 13) and reflects the appeal of a self-driven path to owning a home.

The "Cooperative Model" is also popular, adopted by 33.4% of respondents. This model involves financing through cooperative societies, typically characterized by collective resource pooling for housing projects. The prominence of this model underscores the role of cooperative societies in facilitating housing access in Ruai Sub-County. It also signifies the willingness of residents to collaborate and leverage collective resources to achieve homeownership.

The "Mortgage Model" is chosen by 20.4% of respondents, indicating that a sizable portion of the population relies on mortgage financing to acquire or build their homes. Mortgages are a common method of spreading the cost of homeownership over an extended period, making them attractive for those seeking housing stability and long-term investment opportunities. Additionally, 11.8% of respondents specified "Other" housing finance models, suggesting a degree of diversity in their approaches. These "Other" models could encompass various creative or unconventional means of financing not covered by the predefined categories. This diversity reflects the adaptability of residents in exploring different avenues to secure their homes.

Understanding the motivations behind respondents' choices of housing finance models is crucial for gaining insights into the factors that influence their homeownership decisions. Respondents who adopted specific housing finance models in acquiring or building their current homes in Ruai Sub-County were asked to explain the reasons for their choices. For those who chose the "Mortgage Model," several common themes emerged. Many cited the

Figure 14: Housing Model Adopted by Respondents in Acquiring or Building the House They are Currently Occupying
appeal of "Lower interest rates" as a primary factor. Mortgages often offer competitive interest rates compared to other forms of borrowing, making them an attractive choice for those seeking cost-effective homeownership. Others mentioned the "Longer repayment period" as a motivation, which allows for smaller monthly payments and greater financial flexibility. Additionally, "Easier access to financing" was another prevalent reason, as mortgages are readily available through financial institutions, making homeownership more accessible.

Among respondents who adopted the "Incremental Model," a key theme was the "Ability to save over time." This approach allows individuals to gradually accumulate the necessary funds, making homeownership achievable without incurring substantial debt. Avoiding "High-interest loans" was another prominent reason, reflecting a desire to minimize interest payments and the financial burden associated with loans. Some respondents mentioned "Personal preference" as a motivating factor, indicating a strong inclination towards this gradual approach.

For those who selected the "Cooperative Model," the most common reason was "Pooling resources with others." Cooperative models involve collective resource pooling, which can make it easier to embark on housing projects by spreading the financial burden among members. "Trust in cooperative societies" was another prevalent theme, suggesting that respondents had confidence in the cooperative approach to housing finance. Some also mentioned "Access to collective expertise" as a motivation, highlighting the value of the knowledge and support offered by cooperative societies.

Respondents who specified "Other" models often had unique and personalized reasons for their choices. These reasons could range from specific financial arrangements to unique opportunities that suited their individual circumstances. The "Other" category reflects the diversity of financial strategies employed by residents to secure their homes.

CONCLUSION AND RECOMMENDATIONS

Conclusions
In conclusion, the evaluation of housing models adopted by households in Nairobi County, specifically in Ruai Sub-County, reveals a dynamic and multifaceted housing landscape shaped by diverse factors. The duration of residency within the broader Nairobi County and the specific Ruai area showcases a mix of long-term and newer residents, reflecting the complex interplay of urban growth and migration. The duration of time respondents have lived in their current houses further underscores housing stability, with a significant percentage having established roots for several years. This longevity in residency influences housing preferences, with variations in tenure impacting housing choices, needs, and interactions with regulations. Moreover, the preferred housing models and the reasons behind these choices shed light on the diverse strategies employed by residents in accessing housing.

The prominence of the Incremental Model and Cooperative Model, alongside the widespread awareness of the Mortgage Model, reflects the adaptability of residents in navigating financial avenues for homeownership. Policymakers, developers, and financial institutions can leverage these insights to tailor strategies and regulations that align with the evolving needs and aspirations of the population in Nairobi County, fostering inclusive and sustainable housing solutions.
Recommendations

Based on the findings of the evaluation of housing models in Nairobi County, several recommendations can be made to address the challenges and enhance accessibility to housing. Firstly, there is a need for policymakers to focus on strengthening regulatory frameworks to create an enabling environment for various housing models. This includes streamlining land governance challenges, revising land regulations to facilitate affordable housing, and addressing disparities in access to housing between individuals with low and high incomes. Additionally, efforts should be directed towards enhancing financial policies and promoting long-term loan opportunities to alleviate the financial challenges hindering the growth of the mortgage portfolio. By addressing these regulatory and financial constraints, policymakers can create a more conducive atmosphere for the adoption of housing models, leading to increased accessibility for low- and middle-income households.

Furthermore, the study emphasizes the importance of promoting a diverse range of housing models, including incremental and cooperative approaches, to cater to the varied needs and preferences of the population. Encouraging collaborative efforts through housing cooperatives and providing support for incremental housing projects can empower residents to actively participate in shaping their living conditions. Financial institutions should also consider offering tailored products that align with the motivations and preferences identified in the study, such as lower interest rates for mortgage models and flexibility in loan terms for incremental approaches. Lastly, public awareness campaigns can play a crucial role in informing residents about the available housing models, ensuring that they are well-informed and can make choices that align with their long-term housing goals. By implementing these recommendations, Nairobi County can move towards a more inclusive and sustainable housing landscape.
REFERENCES


