

FINANCING OPTIONS AND GROWTH OF REAL ESTATE IN SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

The challenges confronting real estate enterprises in Kenya, especially within Nairobi City County, are substantial, particularly regarding financing decisions given the capital-intensive nature of their projects. The evident gap between annual housing demand and actual supply underscores the critical need for effective financing mechanisms to bolster the expansion and development of the real estate industry. The research concentrated on investigating the impact of various financing options available through Savings and Credit Cooperative Societies in Nairobi City County is particularly relevant, given Savings and Credit Cooperatives' role in offering financial services to their members. Evaluating the effects of mortgage financing, lease financing, savings financing, and equity financing on real estate growth can offer valuable insights into the feasibility of different funding avenues for these enterprises. Considering the moderating influence of real estate firm size on the relationship between financing options and growth rates enriched the analysis, acknowledging that a firm's size and scale can significantly shape its financing strategies and growth trajectory. Drawing on theoretical frameworks such as the lien theory of mortgage financing, resource dependency theory, transaction costs theory, and housing cycle theory provided a robust foundation for understanding the dynamics of financing and growth in the real estate sector. Adopting a descriptive research design, along with panel data analysis spanning a five-year period, facilitated a comprehensive examination of trends and patterns among real estate firms operating within Savings and Credit Cooperative Societies in Nairobi City County.

By employing a census approach to collect data from the entire population of 72 real estate companies, the study ensured a representative sample, enhancing the reliability and validity of the findings. The study found a significant and positive effect between mortgage financing, lease financing, savings financing, and equity financing and growth of real estate in SACCOs. The result indicated a moderating effect on the relationship between financing options and growth of real estate firms in SACCOs. The study concluded that the real estate sector in Nairobi City County requires effective financing and strategic decision-making, relying on mortgage, lease, savings, and equity financing to optimize resource allocation and drive growth, with SACCO size significantly moderating the impact of these financing options on firm performance. Based on the study findings, policy recommendations include reducing mortgage costs through subsidies and regulatory reforms, increasing lease financing options via innovative structures and Public-Private Partnerships, boosting savings financing through mobilization programs, facilitating equity financing with improved market mechanisms, and optimizing SACCO performance through targeted training. The study enriches understanding by demonstrating the significant impact of various financing options on real estate firm growth, advancing theoretical frameworks, addressing methodological gaps, and providing practical policy recommendations to support sector expansion.

Keywords: Equity Financing, Financing options, Lease Financing, Mortgage Financing, Real Estate Firms, Real Estate Growth and Saving Financing.

INTRODUCTION

The sector focused on properties and buildings used for residential, commercial, or industrial purposes has consistently lured new investors, primarily fuelled by the perceived surge in demand for housing units. This pattern is often linked to the growing population, characterized by the movement of people from rural areas to cities (Nguyen, Nguyen, & Dang, 2017). The demand for housing units is expected to continue its upward trajectory alongside population growth. Notably, China witnessed a significant real estate boom, with an approximate construction of 100 billion square feet of residential houses over a decade until 2014 (Abuamsha, 2022). This highlights the vast scale regarding the industry focused on properties and buildings and its significant influence on a country's GDP growth.

On a global scale, the real estate sector has been a significant catalyst for economic growth, attracting investors and contributing to employment and GDP in numerous countries beyond China and Brazil. For instance, in the European Union, real estate accounted for 2.0% of employment in 2016 (Yasar, 2021). In the United States, the availability of capital and financing options has been pivotal for property development. Foreign direct investments (FDI) factors have been instrumental in driving the growth and development of the real estate industry, especially in Asian countries (Jones & Stead, 2020). China's real estate growth, driven by increasing house prices, exemplifies how industrial factors can influence the sector's expansion (Ngoc, Tien, Chau & Le Khuyen, 2021). In Brazil, the flourishing of real estate is closely tied to the availability of funds. Capital development and financing options pose significant challenges for real estate firms globally, as projects are long-term and returns may take years to materialize. The real estate sectors in African countries, such as Nigeria, have experienced notable expansion with support from the financial system, including initiatives like mortgage companies and pension funds (Alohan & Ogedengbe, 2021). Several African countries, including Kenya, Tanzania, Uganda, and Rwanda, still face substantial housing deficits, suggesting that the pinnacle of real estate advancement remains elusive in these areas.

In Kenya, the real estate sector faces considerable obstacles in obtaining financing, mainly owing to sluggish economic expansion, volatility, and strict rules implemented by financial organizations (Mushi, 2020). The structure of interest rates exacerbates the situation, making it difficult to secure funds for real estate development. The dominance of commercial real estate investment by private investors and institutional entities like Housing Finance adds to the challenges encountered by private real estate investors (Kieti, 2020). Despite these hurdles, there is a growing demand for various types of real estate in Kenya, driven by a young and employed population. This increasing demand highlights the potential for real estate development in the country, notwithstanding the existing financing constraints and market complexities. Effectively addressing these challenges is crucial for unlocking the full potential of the real estate sector and meeting Kenya's population's housing needs. The availability of financing for real estate development in SACCOs in Nairobi City County (NCC), Kenya remains a significant challenge for developers. The challenge mainly stems from weak economic performance, lack of stability, and the stringent regulatory environment imposed by most financial institutions (Mungai & Mwangi, 2020). Complicating matters, interest

rate structures have adverse effects on securing funds for real estate development (Katiti, Omanwa, Mwaniki, & James, 2022). Given the inherently long-term nature of real estate financing, high interest rates are commonly applied to funds allocated for such projects.

The landscape surrounding Kenya's real estate investments is undergoing a significant transformation, with private investors and institutional entities like Housing Finance emerging as key players (Okuta, Kivaa, Kieti&Okaka, 2023). This dominance poses challenges for private real estate investors, as individual properties are not traded as frequently as shares and bonds in the securities market. Unlike in developed countries where stocks and bonds are heavily involved in real estate financing, Kenya relies primarily on mortgage financing. This scenario underscores the unique dynamics of real estate investment in Kenya, where traditional financing mechanisms like mortgage loans serve as the primary avenue for accessing capital. The limited liquidity and trading activity in the real estate market pose challenges for individual investors seeking to enter or exit investments swiftly. As a result, private investors often encounter hurdles in navigating the complexities of the real estate sector, particularly in terms of liquidity management and portfolio diversification.

The dominance of institutional entities like Housing Finance further consolidates the influence of established players in the market, potentially limiting opportunities for smaller investors to participate in commercial real estate ventures. Addressing these challenges requires innovative approaches to financing, regulatory reforms to enhance market transparency and efficiency, and initiatives to promote broader participation in the real estate sector by both institutional and individual investors. By fostering a more inclusive and dynamic real estate market ecosystem, Kenya can unlock its full potential for sustainable economic growth and development. Despite these challenges, there is a growing demand for various types of real estate in Kenya, propelled by a young and employed population (Njoroge, Koori &Warui, 2021). The management of real estate firms plays a critical role in choosing appropriate financing options that do not compromise current and future cash flows. The study recognizes that the growth of individual firms within the sector influences the overall development of the real estate market. Real estate, being influenced by both internal and external factors, requires strategic financial management to navigate challenges and promote sustainable growth.

Financing Options

There are several methods for raising finance to support investment projects. Generally classified, these methods can be divided into internal and external sources. Internal sources entail acquiring funds from within the organization, whereas external sources entail securing capital from outside entities (Yasar, 2021). Each financing source comes with its own set of costs and benefits. Internal sources, such as reinvesting profits or issuing additional share capital to existing members, imply that shareholders will expect returns in the form of dividends in the future (Okuta, Kivaa, Kieti, &Okaka, 2023). In contrast, external sources, like borrowings, incur interest costs, which can become burdensome for firms during periods of rising interest rates. The interest on loans is tax-deductible, making external borrowings a viable option, provided firms can prudently manage associated bankruptcy costs.

Financing options play a pivotal role in enabling individuals and businesses to access the necessary capital for various endeavours, ranging from purchasing real estate to funding business expansions. These options encompass a diverse array of financial mechanisms tailored to meet different needs and circumstances, each possessing its unique array of benefits and factors to take into account (Mushi, 2020). Gaining insights into these options and their associated metrics is essential for making informed financial decisions and achieving strategic objectives effectively (Kalu, Ishaq, Adeyemi&Abdullahi, 2021). Among the primary financing avenues are mortgage financing, lease financing, savings, and equity financing, each offering unique benefits and challenges. Mortgage financing involves securing a loan by offering real estate as collateral, commonly used for property purchases. This option enables individuals and businesses to access significant capital while spreading repayments over an extended period (Owuor, Githii&Mirie, 2018). To measure the effectiveness of mortgage financing within a conceptual framework, variables such as interest rates, loan terms, and the loan-to-value ratio are crucial (Mungai&Mwangi, 2020). These metrics help gauge the affordability and risk associated with the mortgage, providing insights into its viability and impact on financial stability.

Lease financing provides an alternative means of acquiring assets without outright ownership, offering flexibility and preserving capital. Entities can lease various assets, including equipment and property, paying periodic lease payments instead of purchasing outright (Nguyen, Ongena, Qi &Sila, 2022). Key variables in assessing lease financing effectiveness include lease terms, residual value, and lease rates. These metrics aid in evaluating the cost-effectiveness of leasing compared to purchasing, as well as understanding the implications on cash flow and long-term financial commitments. Savings represent a fundamental component of financing, involving the accumulation of funds over time to meet future needs or investments. Monitoring variables such as savings rates, investment returns, and liquidity levels is essential within a conceptual framework (Muyambiri&Magali, 2020). These factors help gauge the growth and stability of savings, as well as their capacity to support financial goals and withstand unforeseen expenses.

Equity financing entails securing funds by offering shares of ownership in a venture or enterprise to investors. In contrast to debt financing, where borrowed funds must be repaid with interest, equity financing does not necessitate repayment. Instead, investors acquire ownership rights or a portion of future profits in return for their investment. While equity financing offers substantial funding without accruing debt, it also entails diluting ownership and sharing business control with investors. Several variables play a crucial role in evaluating equity financing arrangements. Valuation metrics, such as the company's current valuation and projected future value, are essential for determining the attractiveness of equity financing. A thorough understanding of valuation metrics allows stakeholders to assess the potential return on investment for equity investors and the overall value proposition of the financing arrangement.

Real Estate in SACCO Size

Kalu et al. (2021) conceptualized the real estate in SACCOs size as the scale or magnitude of the firms involved in real estate development, measured as logarithm of total assets. It encompasses various aspects such as the total assets, membership base, loan portfolio, and operational reach of the real estate in SACCOs. The size of these firms is a critical factor as it influences the

organization's ability to provide financing options and support the growth of real estate projects within its membership. The moderating influence of real estate magnitude within SACCOs on the connection between financing alternatives and real estate development is justified by its potential to impact the effectiveness and availability of financing. Larger real estate in SACCOs typically possess greater financial resources, operational capacity, and bargaining power compared to smaller ones (Alohan&Ogedengbe, 2021). As a result, the size of the real estate in SACCO can moderate the correlation between financing choices and the expansion of real estate by impacting the availability of funds, the range of financing products offered, and the terms and conditions attached to these products.

Calculating the logarithm of the total assets helps normalize the data and addresses potential skewness in the distribution of real estate in SACCOs sizes (Jones & Stead, 2020). Using total assets as a measure captures the overall financial strength and capacity of the real estate in SACCOs, which is crucial in determining its ability to support real estate growth (Nashipae&Bichanga, 2023). By incorporating SACCO size as a moderating variable, the study can assess how variations in SACCO size impact the connection between financing alternatives and the development of real estate endeavours, providing valuable insights for policymakers, practitioners, and researchers in the field of real estate finance and cooperative management.

Real Estate Growth in Kenya

The projected population growth for Kenya is anticipated to reach 60 million by the year 2030, with over half of this population expected to reside in urban areas. This demographic trend underscores a continual rise in the demand for housing. Kenya is currently experiencing rapid urbanization, as noted by Macharia in 2019. The latest report from the Government of Kenya highlights the inadequacy of dwelling units to cater to both urban and rural populations. The distribution of housing types reveals that 57.4% of the population resides in bungalows, 7.6% in flats, 1.3% in Maisonettes, 10.3% in Swahili houses, 16.5% in traditional houses (manyattas), and 1.7% in other housing types (KNBS, 2023).

At a national scale, Kenya is contending with a significant shortage of housing units, estimated roughly around 1.9 million units. In 2022, this deficit was expected to grow to more than 2.2 million units. It is anticipated that over 60% of Kenya's projected population by 2030, approximately 60 million people were living in urban regions. This demographic shift is expected to considerably amplify the demand for housing, emphasizing the pressing need to address the housing deficit and implement sustainable housing solutions to cater to Kenya's expanding urban population (Cytton, 2019). In Q2:2023, Kenya's real estate industry demonstrated a growth improvement of 0.8%, reaching 5.8%, compared to 5.0% in Q2:2022. On a quarter-on-quarter basis, there was a positive shift of 0.6%. Noteworthy is the sector's ascent as the third-largest contributor to GDP during the reviewed period. This notable performance was propelled by diverse expansion initiatives undertaken by both local and international investors. Development activities, especially in the residential, data centres, and industrial submarkets, contributed significantly, alongside an uptick in property rates. In Q2:2023, the construction sector marked its slowest growth rate in the past five years, registering a mere 2.6%. This subdued performance can be attributed to a reduction in construction activities fuelled by sustained inflationary pressures. Since 2019, there has been a

consistent upward trend in the overall cost of construction. The sector's decline is influenced by a notable shift in the government's focus from infrastructure developments to other social projects. An examination of cement consumption over the past year indicates a general stagnation, with a q/q decline of 1.5%.

SACCOs in Nairobi City County Kenya

The SACCO Societies Regulatory Authority (SASRA, 2024) indicates the existence of 46 SACCOs in Kenya. These SACCOs play a significant role in the local economy by providing financial services to their members, which include savings mobilization, credit facilities, and other financial products (Amuyunzu et al., 2023). SACCOs in NCC are actively involved in financing various aspects of the sector, including land acquisition, property development, and home ownership.

The financing options offered by SACCOs in NCC align with the needs of real estate developers and homebuyers, contributing to the growth of the sector. These options include mortgage financing, lease financing, savings mobilization, and equity financing. There has been a focus on mortgage financing, as a vital factor in the expansion of real estate in NCC, facilitating individuals and businesses to obtain capital for property acquisition and development (Mungai&Mwangi, 2020). The role of SACCOs in offering affordable housing financing strategies has been acknowledged as crucial in addressing Kenya's housing deficit.

The rationale for examining SACCOs in NCC is grounded in similar studies conducted in other sectors in Kenya, which have shown the effectiveness of financing strategies in fostering economic growth and development. For instance, research on the impact of mortgage financing on real estate growth in NCC underscores the positive influence of SACCOs' involvement in providing affordable housing finance (Mungai&Mwangi, 2020). Studies on factors influencing real estate growth in Kenya underscore the significance of finance accessibility as a fundamental determinant of sectoral expansion (Kimani&Momba, 2017). Through its focus on SACCOs in NCC, this study aims to build on existing research and contribute to a deeper comprehension of the correlation between financing choices and the expansion of real estate in urban areas of Kenya.

Statement of the Problem

Real estate development has become the most promising and booming investment with guaranteed returns and capital appreciation of almost 20–23%, being a sum total of rental yield, capital gains and appreciation over construction. This has caught the eye of local and international investors in venturing in developing apartments and other real estate products. The biggest hitch of real estate developers during construction and finishing real estate units is financing. The cost of registration, land acquisition and transfers, approvals, construction materials and quality furnishings are high due to inflation. In Nairobi City County, the real estate sector has seen a significant uptick in registered developers, increasing by 6.3% from 2009 to 2019. This growth rate surpasses that of neighbouring countries like Uganda (5.6%) and Tanzania (6.0%). Despite the notable surge in developer numbers, the real estate industry's growth rate remains moderate at 6.0% per year. This falls short of the government's objective of achieving a 10% annual growth rate, essential for delivering 500,000 housing units by 2022, as outlined by the Housing and Housing Kenya (HHK) initiative in 2019. Nationally, Kenya faces a housing deficit of around 1.9 million units, a figure

projected to exceed 2.2 million units by 2022. It is predicted that over 60% of Kenya's projected population by the year 2030, around 60 million individuals are expected to live in urban areas, according to insights from Cytton (2019). Recognizing the vital role of real estate activities as fundamental drivers of economic development, the sector's contribution to the economy cannot be overstated. As highlighted by Huang and Ma (2015), real estate significantly influences the direction of economic growth, emphasizing the importance of addressing challenges and maximizing opportunities within this sector for sustainable development.

Empirical studies, such as that conducted by Mushi (2020), highlight conceptual gaps regarding the dynamics between fluctuations in housing prices and the accessibility of mortgage financing. Mushi (2020) suggests there exists a sustained correlation between the expansion of mortgage credit and the growth of housing prices over time, but the implications of these dynamics for the growth of real estate firms and the broader economy remain inadequately addressed. Studies like that of Njoroge, Koori, and Warui (2021) focus on a limited number of financing options, neglecting significant sources such as lease financing within SACCOs, leaving conceptual gaps in understanding the comprehensive impact of financing options on real estate growth. Existing literature reveals methodological gaps, as noted by Bezemer, Samarina, and Zhang (2020), indicating the necessity for more extensive qualitative and quantitative analyses to explore contextual factors influencing the impact of mortgage lending on business credit across various economic contexts. The study by Kalu et al. (2021) concentrates on PPP housing provision but fails to directly address the moderating impact of SACCO size on the correlation between financing choices and the expansion of real estate, thus leaving methodological gaps in understanding the dynamics within SACCOs.

Empirical research, such as that conducted by Mungai and Mwangi (2020), highlights gaps in understanding the broader spectrum of factors affecting real estate advancement within Kenyan SACCOs. The research discovered that mortgage funding accounted for only a fraction of real estate growth, suggesting the existence of other significant contributing factors. Studies like that of Hassan, Aliyu, Saiti, and Halim (2020) do not specifically examine the impact of equity financing on the expansion of real estate enterprises within SACCOs, leaving contextual gaps in understanding the comprehensive impact of financing options on real estate growth. Despite these studies, there remains a research gap concerning the effects of financing options on the growth rate of real estate in Savings and Credit Cooperatives (SACCOs) in NCC. This study seeks to fill this void by specifically examining the impact of mortgage financing, lease financing, savings financing, and the influence of equity financing on the expansion of the real estate industry within SACCOs in Nairobi City County. The goal is to provide insights into the role of different financing options in influencing the growth dynamics of the real estate industry within the SACCO framework, contributing to a more comprehensive understanding of the sector's development.

Research Objectives

The main aim of this study is to ascertain the financing options and growth of real estate in Sacco's in Nairobi City County, Kenya.

- (i) To determine the effect of mortgage financing option on real estate in SACCOs growth in Nairobi City County.

- (ii) To establish the effect of lease financing option on real estate in SACCOs growth in Nairobi City County.
- (iii) To examine the effect of savings financing option on real estate in SACCOs growth in Nairobi City County.
- (iv) To establish the effect of equity financing option on real estate in SACCOs growth in Nairobi City County.
- (v) To establish the moderating effect of SACCO size on the relationship between financing options and growth of real estates in SACCOs in Nairobi City County.

Research Hypotheses

- H₀₁:** There is no significant effect of mortgage financing option on real estate in SACCOs growth in Nairobi City County.
- H₀₂:** There is no significant effect of lease financing option on real estate in SACCOs growth in Nairobi City County.
- H₀₃:** There is no significant effect of savings financing option on real estate in SACCOs growth in Nairobi City County.
- H₀₄:** There is no significant effect between equity financing option on real estate in SACCOs growth on Nairobi City County.
- H₀₅:** There is no significant moderating effect of SACCO size on the relationship between financing options and growth rate of real estates on SACCOs in Nairobi City County.

Scope of the Study

The study concentrated on 72 real estate firms located in Nairobi City County, affiliated with the Kenya Property Developers Association (KPDA). The research covered the period from January 1, 2019, to December 31, 2023, encompassing five years. This duration provides a substantial timeframe to observe trends, patterns, and changes within the real estate market. Including data from January 2019 to December 2023 enables the research to capture recent developments and fluctuations in the real estate sector, facilitating a more accurate assessment of market dynamics and performance over time. A five-year period offers an adequate number of data points to conduct meaningful analyses and draw insightful conclusions regarding the conduct and effectiveness of the chosen real estate companies.

The choice of Nairobi City County (NCC) is justified as ensures a concentrated examination of a specific geographic area known for its significant economic activity and real estate investment. Nairobi serves as Kenya's capital and largest city, making it a vital hub for commercial, residential, and industrial developments. By narrowing the geographical scope to NCC, the research can delve deep into the dynamics of a specific real estate market, considering factors such as urbanization trends, infrastructure development, population growth, and regulatory frameworks unique to this region. The selection of 72 real estate firms affiliated with the Kenya Property Developers Association (KPDA) facilitates convenient access to relevant data and insights. KPDA serves as a central platform for real estate developers, providing access to industry reports, market intelligence, and networking opportunities. Leveraging the association's affiliation streamlines data collection efforts and ensures access to reliable information necessary for conducting a thorough analysis of the selected firms and the broader real estate market.

LITERATURE REVIEW

Theoretical Literature Review

The Housing Cycle Theory, proposed by Needleman in 1965, presents a framework for understanding the cyclical nature of housing development, highlighting its dependence on macroeconomic factors, particularly housing prices and vacancies. This essay aims to explore the content, assumptions, limitations, criticisms, and relevance of the Housing Cycle Theory, linking it to studies analysing the rates of expansion in the real estate industry. The theory indicates housing development exhibits a cyclical pattern influenced by fluctuations in macroeconomic conditions. Central to this theory are housing prices and vacancies, which serve as key indicators of demand and supply dynamics in the housing market (Huang, Luo&Peng, 2021). Vacancies represent the overall demand for houses, while prices signify the exchange value of housing units. Needleman posits that housing development is contingent upon the interplay between these variables, wherein high demand, coupled with favourable economic conditions, results in heightened investments in housing from real estates. Assumptions underlying the Housing Cycle Theory include the influence of macroeconomic conditions on housing development, the pivotal role of housing prices and vacancies in determining development pace, and the responsiveness of real estate developers to demand fluctuations. The theory assumes that economic growth and disposable income drive housing demand, while recognizing the cyclical nature of the housing market with fluctuations in prices and demand over time.

The theory has its limitations. It assumes a linear relationship between housing prices, vacancies, and housing development, which may oversimplify the complex dynamics of real-world scenarios (Hotchkiss, Smith & Strömberg, 2021). Non-economic factors such as government policies, cultural preferences, and environmental factors are overlooked, potentially impacting housing development patterns. Critics also argue that the theory may oversimplify the behaviour of real estate developers and buyers, failing to account for diverse motivations and decision-making processes. The theory does not adequately address external shocks or unforeseen events that can disrupt the housing market cycle. Critics also highlight shortcomings regarding speculative behaviour and investor sentiment in driving housing market dynamics, as well as the limited scope of using vacancies as a measure of housing demand, which may not fully capture housing preferences and demographic trends (Jones & Stead, 2020). The theory may not adequately address spatial and regional variations in housing markets, which can have unique dynamics. Despite these criticisms and limitations, the Housing Cycle Theory remains relevant in understanding the financing options and rates of expansion in the real estate industry. By taking into account macroeconomic factors such as housing prices, vacancies, economic growth, disposable income, and interest rates, the theory offers insights into the cyclical patterns and fluctuations within the real estate sector. It provides a valuable framework for analysing lease financing option and real estate development.

The Lien Theory of Mortgage, with its roots traced back to the scholarly work of Lloyd (1923) and further expounded upon by Harris (2017), presents a framework for comprehending the intricate processes involved in mortgage transactions. This theory delineates the distinct roles within mortgage transactions, specifically highlighting the division between the holder of legal title and

the holder of the lien. According to this conceptualization, the lien grants the borrower the right to possess the property while legal ownership remains vested in the lender until the debt is completely discharged, as emphasized by Amuyunzu et al.(2023).Central to the Lien Theory of Mortgage are certain assumptions, including the recognition of two key actors: the borrower who possesses the property and the lender who holds the legal title. It assumes that the lien functions to safeguard the interests of the lender until the loan obligation is fully met (Owuor, Githii, &Mirie, 2018). This theory is not without its limitations. Critics may argue that its primary focus on the legal aspects of mortgage transactions neglects other influential economic and social factors. The theory may not fully account for variations in mortgage practices across different jurisdictions.

Despite criticisms, the Lien Theory of Mortgage holds significance in understanding the legal dynamics of mortgage transactions and their implications. By incorporating this theory into the study, researchers aim to elucidate the legal processes and sequential mechanisms inherent in mortgage arrangements. The theory provides insights into correlation between mortgage funding and the advancement of real estate. It suggests that mortgage financing, by enabling buyers to acquire property through liens, significantly contributes to enhancing the attractiveness of real estate properties offered by developers, thus contributing to their growth.

The Transaction Cost theory, originally suggested by Williamson in 1975 and further elaborated by scholars such as Ngoc, Tien, Chau, and Le Khuyen (2021), provides a structured approach to analysing cost efficiencies within firms, especially concerning their interactions and strategic partnerships. This theory delves into the mechanisms through which firms utilize joint ventures and private equity to bolster organizational performance, with a keen focus on the transaction costs that emerge from internal business operations. Central to Transaction Cost Theory are its assumptions regarding firms' endeavours to minimize transaction costs by optimizing decision-making processes and forging strategic alliances. It posits that joint ventures and private equity arrangements can lead to efficiency gains through cost-sharing and improved market positioning (Nashipae&Bichanga, 2023). Transaction Cost Theory is not immune to criticism. Some argue that it oversimplifies the complexities of firm interactions and strategic decision-making, failing to fully account for factors like cultural nuances, regulatory constraints, and technological advancements that shape transaction costs and strategic partnerships. Critics also contend that the theory overlooks the significance of trust, social capital, and relational dynamics in influencing firm behaviour and strategic alliances, while others question its singular focus on cost minimization at the expense of broader organizational objectives.

Transaction Cost Theory provides anchors the examination of financing options and growth within the real estate sector, particularly within SACCOs in NCC. By elucidating how firms optimize decision-making processes and form alliances to mitigate transaction costs and improve performance, the theory supports the investigation of various financing options (such as mortgage financing, lease financing, savings financing, and equity financing) and their impact on real estate growth (Jaffe &Esarey, 2017). TC aids in exploring the influence of SACCO size on moderating the connection between financing alternatives and the growth of real estate, highlighting how firms may strategically choose financing mechanisms to minimize transaction costs and enhance performance, ultimately influencing the growth trajectory of real estate in SACCOs.

The Resource Dependency Theory (RDT), initially formulated by Salancik and Pfeffer in 1978 and further developed by scholars such as Pfeffer (2005), provides a comprehensive framework for understanding how organizational structures and strategies are shaped by the availability of resources. This essay delves into the core tenets of Resource Dependency Theory, its assumptions, limitations, criticisms, and its relevance to a study examining real estate developers' financing strategies. RDT posits that organizations are not autonomous decision-makers but are instead influenced by various environmental factors, internal power dynamics, and external control mechanisms (Pfeffer, 2005). Central to the theory is the notion that organizations are interdependent with their environment, and their actions are driven by the imperative to acquire and maintain resources. Decision-making within organizations is assumed to be rational and grounded in substantial information processing, where firms strategically respond to uncertainties presented in their operating environments.

RDT has faced criticism for oversimplifying the complexities of organizational behaviour by predominantly focusing on resource dependencies. Critics argue that this narrow focus may overlook other influential factors such as emotions, politics, and social dynamics within organizations. The theory's assumption of rational decision-making has been challenged, as it may not fully account for cognitive biases and limitations in information processing. Nguyen, Ongena, Qi, and Sila (2022) note that despite its limitations, RDT proves valuable in understanding the strategic management of resources within organizations, particularly within the framework of real estate advancement. RDT is linked to an investigation of diverse sources of financing used by real estate developers in this assessment. It highlights the significance of resources in sustaining productivity and fostering growth within firms, particularly in negotiations with private equity (PE) funds. Kalu et al (2021) emphasize that by leveraging various resources, including physical, financial, and human resources, real estate developers strategically negotiate financing terms, ultimately influencing their growth trajectory.

Empirical Reviews

An empirical review of literature encompasses the evaluation of previous studies that are similar to the one being proposed about acquiring the knowledge of their conceptualization, methodologies, contextualization, findings, and conclusions. This allows researchers to determine the gaps to be filled with this study (Kothari, 2012).

Mortgage Financing and Growth of Real Estate

Okuta, Kivaa, Kieti, and Okaka's (2023) study presents a thorough examination of housing price forecasting in Kenya, utilizing both simple and complex regression models. By integrating time series data spanning multiple decades and various macroeconomic factors, the researchers offer valuable insights into the housing market's sensitivity to shifts in economic metrics. The study's findings emphasize the significance of considering economic performance in feasibility assessments and property valuations within the Kenyan housing market. The study is the contrasting simple and intricate regression models, using intricate models, especially the vector autoregressive (VAR) model, demonstrating superior performance in forecasting housing prices. This highlights the potential advantages of utilizing advanced modelling techniques to capture the intricate

relationships between macroeconomic factors and housing market dynamics. The study's focus on the commercial housing market leaves gaps in understanding the dynamics between mortgage funding and the expansion of real estate enterprises, especially within Savings and Credit Cooperative Organizations (SACCOs) in Kenya.

Chen, Michaux, and Roussanov (2020) conducted a study with the goal of investigating the relationship between mortgage refinancing and macroeconomic uncertainty, particularly focusing on the phenomenon of households using their homes as sources of cash (commonly known as ATMs). By employing a structural model of liquidity management and conducting micro-level data analysis, the study examined how households adjust their leverage, liquid assets, and mortgage refinancing decisions in response to countercyclical idiosyncratic labour income uncertainty. The findings indicate a strongly countercyclical component associated with mortgage refinancing activity, suggesting that households seek liquidity during periods of economic uncertainty. While this study offers insights into the mechanisms driving mortgage refinancing behaviour in response to macroeconomic uncertainty, it leaves gaps in understanding the broader implications of this behaviour for the real estate sector and the economy overall.

Lease Financing and Growth of Real Estate

Katiti, Omanwa, Mwaniki, and James (2022) conducted research to explore how capital, as a production factor, influences the expansion of commercial real estate in Machakos County, Kenya. This study addresses the limitations encountered by Kenya's real estate sector, such as slow growth rates and insufficient housing provisions compared to population growth. Using a cross-sectional survey methodology, the research focused on 374 registered property developers who are members of the Kenya Property Developers Association, operating within Machakos County. Structured questionnaires were utilized to gather quantitative data, while open-ended interviews were conducted to collect qualitative data. The results indicated a strong and positive correlation between capital as a factor of production and the expansion of commercial real estate in Machakos County. The research inferred that the primary sources of investment for the majority of commercial real estate projects in the county are personal savings and equity loans obtained from banks. It recommended the mobilization of substantial amounts of private capital to address the unmet housing demand. The study does not specifically examine lease financing or the role of SACCOs in real estate development, both of which are significant aspects of financing real estate growth in Kenya.

Njoroge, Koori, and Warui's (2021) research provides valuable insights into how different financing choices influence the rates of growth in the real estate sector. development companies in Kenya. By analysing a sample of twenty-three organizations associated with the Kenya Property Developers Association (KPDA), the study addresses the financing challenges encountered by real estate developers, particularly due to the capital-intensive nature of their projects. Employing a descriptive research design and a regression model for panel data analysis covering the period from 2014 to 2018, the research uncovers the diverse effects of different financing alternatives on the growth rates of real estate development firms in Kenya. The research outcomes suggested that disparate financing modalities exert distinct influences on the growth trajectories of real estate development firms in Kenya.

Savings Financing Option and Growth of Real Estate

Amuyunzu et al.'s study (2023) aimed to evaluate the efficacy of financing approaches in facilitating affordable housing in Kenya. Using a mixed-methods approach, the researchers combined interviews and quantitative analysis to evaluate various financing strategies, housing affordability metrics, and socio-economic indicators. The study concluded that a combination of financing option had a role in addressing the complexity of the affordable housing challenge. While contributing to the broader discussion on financing strategies in real estate, the study emphasizes the need for a diversified approach. In relevance to the current study, the study offers insights into the importance of financing strategies but deviate from the specific focus on savings financing, prompting a more detailed exploration of the dynamics within this specific financial mechanism.

Omagwa (2021) studied the policy guidelines and milestones of the Affordable Housing Programme in Kenya. Employing a qualitative analysis, the research focused on examining policy documents to understand the regulatory environment shaping affordable housing initiatives. The study identified key policy guidelines and milestones, emphasizing the importance of coherent policy frameworks in addressing housing affordability challenges, while offering valuable insights into the regulatory landscape. The study falls short of providing a detailed exploration of the financial dynamics, including the role of savings. The study highlighted the significance of policy frameworks but deviates by not specifically addressing the financial mechanisms, necessitating a more focused exploration of savings financing in the context of real estate growth.

Equity Financing Option and Growth of Real Estate

Tanui (2021) examined the financial performance of construction and manufacturing companies listed in Kenya, focusing on the interplay between corporate governance, asset structure, capital structure, and financial performance. Using agency and stewardship theories within a post-positivist research framework, the study employed an explanatory research design and conducted panel regression analysis with secondary data from 12 listed firms. The results indicated that both long-term and short-term assets positively and significantly impact financial performance. The study found that capital structure and corporate governance act as moderators in the relationship between asset structure and financial performance. Specifically, capital structure negatively moderates the relationship between noncurrent assets and financial performance but positively moderates the relationship between current assets and financial performance. Corporate governance positively moderates the impact of both noncurrent and current assets on financial performance. The study does not directly explore how equity financing affects the expansion of real estate firms within SACCOs in Kenya. To address this gap, the current research examined the impact of equity financing on the growth of real estate enterprises within SACCOs in Kenya.

Ngoc, Tien, Chau, and Le Khuyen (2021) investigated the impact of capital structure on the performance of 25 real estate companies listed on the Ho Chi Minh City Stock Exchange (HOSE) from 2011 to 2018. Using regression analysis, the study explored the association between capital structure and business performance, with a particular focus on the influence of tangible assets. The findings indicated an inverse relationship between capital structure and business performance, while tangible assets positively impacted performance across all regression models. The study did not find

sufficient evidence to link control variables such as liquidity, firm size, economic growth, asset growth, and inflation rate with business performance. This study does not delve into the effect of equity financing on the growth of real estate firms within SACCOs in Kenya. To address this gap, the proposed study investigated how equity financing affects the growth of real estate firms within SACCOs in Kenya. Descriptive and inferential statistics were employed to analyse the relationship between equity financing and real estate firm growth within SACCOs, thereby contributing to the existing literature and providing practical insights for policymakers and real estate developers.

Tanui (2021) examined the financial performance of construction and manufacturing companies listed in Kenya, focusing on the interplay between corporate governance, asset structure, capital structure, and financial performance. Using agency and stewardship theories within a post-positivist research framework, the study employed an explanatory research design and conducted panel regression analysis with secondary data from 12 listed firms. The results indicated that both long-term and short-term assets positively and significantly impact financial performance. The study found that capital structure and corporate governance act as moderators in the relationship between asset structure and financial performance. Specifically, capital structure negatively moderates the relationship between noncurrent assets and financial performance but positively moderates the relationship between current assets and financial performance. Corporate governance positively moderates the impact of both noncurrent and current assets on financial performance. The study does not directly explore how equity financing affects the expansion of real estate firms within SACCOs in Kenya. To address this gap, the current research examined the impact of equity financing on the growth of real estate enterprises within SACCOs in Kenya.

Financing Options, SACCO Size, and Growth of Real Estate

Nashipae and Bichanga (2023) assessed the impact of financial accessibility on the growth of real estate investments in Kenya, particularly in Kajiado Township. The research aimed to address the obstacles hindering real estate expansion in Kajiado and understand why it lags behind more prosperous areas like Nairobi or Nakuru. Utilizing a mixed-methods approach, the study gathered primary data through surveys and interviews with property owners, financiers, and institutional managers, supplemented by secondary data from mortgage finance institutions and land agencies. The findings highlighted the crucial role of financial access in enabling property investment for individuals and businesses. However, the study did not specifically investigate the impact of SACCO size on the relationship between financing options and real estate expansion within SACCOs in Nairobi City County. To fill this research gap, the current study focused on examining how the scale of SACCOs affects this relationship within Nairobi City, providing insights tailored to the local real estate and financing landscape.

Kalu et al. (2021) explored the influence of mortgage financing and housing affordability on the effectiveness of Public-Private Partnership (PPP) projects in delivering housing. Using a quantitative approach, they collected data through a survey administered to residents of randomly selected PPP housing estates. The study found that 64.7% of the variations in PPP housing performance could be attributed to housing affordability and mortgage financing accessibility. Regression analysis revealed that housing affordability positively impacted the effectiveness of PPP housing delivery, whereas access to mortgage financing had a negative correlation with

performance. This suggests that equity financing was primarily used to acquire PPP housing units due to their affordability for residents.

RESEARCH METHODOLOGY

Research Design

The approach serves as a meticulous and succinct strategy for gathering and analysing data, aiming to provide statistically valid responses to the questions posed by a particular study. It serves as a clearly outlined framework that outlines the methodology for data collection and processing to draw meaningful conclusions (Schindler & Cooper, 2014). This investigation employs a descriptive research approach. A descriptive research methodology aims to characterize the existing connections, or lack thereof, between a particular group of factors or variables under study. Given the study's objective, which is to provide a comprehensive description of the relationships between variables, the most suitable design is the descriptive research approach.

Empirical Models

- This functional relationship is formulated for direct model:

$$GR_{it} = \beta_0 + \beta_1 MF_{it} + \beta_2 LF_{it} + \beta_3 SF_{it} + \beta_4 EF_{it} + \varepsilon_{it} \text{----- (i)}$$

- Testing Moderating Effect of SACCO Size

To assess the potential moderating influence, this study used the approach outlined by Baron and Kenny (1986). This two-step process involved examining how the size of the SACCOs moderates the relationship between available financing options and the growth experienced in the real estate sector. In the initial first step, the moderating variable of SACCO size (SS) were included as an independent predictor variable within the regression model, as depicted in equation ii:

$$GR_{it} = \beta_0 + \beta_1 MF_{it} + \beta_2 LF_{it} + \beta_3 SF_{it} + \beta_4 EF_{it} + \beta_5 SS_{it} + \varepsilon_{it} \text{..... (ii)}$$

$$GR_{it} = \beta_0 + \beta_1 MF_{it} + \beta_2 LF_{it} + \beta_3 SF_{it} + \beta_4 EF_{it} + \beta_1 MF_{it} * SS_{it} + \beta_2 LF_{it} * SS_{it} + \beta_3 SF_{it} * SS_{it} + \beta_4 SF_{it} * SS_{it} + \varepsilon_{it} \text{..... (iii)}$$

Where: GR =Growth rate; ROI, MF = Mortgage financing, LF = Lease financing

SF= Savings Financing, EF = Equity Financing, SS = SACCO Size,

i = individual real estate firm, t = time, B₀ = the constant , B₁, B₂, B₃, B₄ = the coefficients

ε = the error term and SS = SACCO Size

Operationalization and Measurement of Variables

Sekaran (2010) defined operationalization as the categorical procedure of specifying the character of a factor to make it possible to allocate a measurable indicator. It is the process of assigning an operational term to a variable based on the contextual circumstances under which the study is being undertaken

Variable	Operationalization	Indicator	Measurement
SACCO growth (Dependent)	The expansion and development of properties within the SACCOs' portfolio	Return on Investment (ROI)	$ROI = \text{net income} \div \text{cost of investment} \times 100$
Mortgage Financing (Independent variable)	A loan secured by real estate property	-Interest rates - Amount available -Credit rating	-Annual interest rate
Lease financing (independent variable)	Use of leased assets, such as equipment, vehicles, or real estate, in exchange for periodic payments over a predetermined period	-Amount available -Repayment arrangement -Interest rates charged	-Amount available for leasing The prevailing rates as determined by the lender
Savings financing (independent variable)	The use of personal or corporate savings as a source of funds for various purposes, such as investments, purchases, or emergencies	-Amount available -Return on Savings - Saving period	-Sum of money saved -Interest earned on savings -Duration taken to save
Equity Financing (independent variable)	-Obtaining funding for a business venture or undertaking by offering and selling partial ownership stakes in the form of stocks, shares, or partnership interests	-Amount available -Duration shares are held -Return on equity (ROE)	$-ROE = (\text{Earnings Before Tax} \div \text{Sales}) \times (\text{Sales} \div \text{Assets}) \times (\text{Assets} \div \text{Equity}) \times (1 - \text{Tax Rate})$
SACCO Size (moderating variable)	-The scale or magnitude of a Savings and Credit Cooperative Organization (SACCO)	Logarithm of total assets	$(\text{Log Size}_{it} = \log(A_{i,t}))$

Table 3.2: Operationalization and Measurement

Source: Researcher (2024)

Target Population

The study targeted all real companies that are in SACCOs. As of December 2023, there were 72 real estate firms in SACCOS in NCC registered across various member categories (KPDA, 2024). Choosing Nairobi City County for the study on real estate firms within SACCOs in Kenya is justified due to its economic significance, concentration of SACCOs, diverse real estate market, availability of data, policy implications, and urban dynamics.

A census of all the 72 real estate firms in SACCOs within NCC was applied. The approach is justified as the target population is less than one hundred, as suggested by Kothari (2004).

The research used quantitative secondary data sourced from various outlets. More precisely, the data were extracted from the yearly reports of the Kenya Property Developers Authority (KPDA) and the online platforms of real estate companies functioning within SACCOs in NCC. The dataset encompassed the timeframe from 2019 to 2023.

RESULTS AND DISCUSSIONS

Descriptive Statistics

Descriptive statistics refers to a quantitative technique that provides an overview and characterizes the essential aspects of a dataset. The table 4.1 indicates the results of descriptive statistics

Table 4.1: Descriptive Statistics

	Mortgage Financing option	Lease Financing option	Savings financing option	Equity financing option	SACCO Size (Log of Total assets)	ROI
Mean	KES 257.2 bn	KES 162.3 bn	KES 201.7 bn	KES 96.4 bn	18.67	6.23
Median	KES 198.2 bn	KES 144.9 bn	KES 165.3 bn	KES 77.6 bn	19.218	4.02
Maximum	KES 302.7 bn	KES 186.4 bn	KES 263.2 bn	KES 114.4 bn	28.072	7.51
Minimum	KES 162.5 bn	KES 99.8 bn	KES 117.2 bn	KES 45.1 bn	6.236	-1.42
Std. dev.	1.642 bn	7.148 bn	3.562 bn.	4.684 bn	0.923	0.754
Skewness	4.256	3.847	4.084	1.102	2.321	2.873
Kurtosis	12.109	8.142	11.831	3.106	5.997	6.127
Obs	72	72	72	72	72	72

Source: Study data (2024)

Table 4.2 presents the overall mean Return on Investment (ROI) for the period 2019-2023 was 6.23%, accompanied by a substantial standard deviation of 0.754%. This suggests that there was significant variability in ROI over time, with most real estate firms in SACCOs experiencing positive returns on their investments, while others incurred negative returns. The range of ROI values was considerable, with a minimum of -1.42% and a maximum of 7.51%. The mortgage financing option exhibited a mean value of KES 257.2 bn, with a standard deviation of KES 1.642 bn, indicating a high level of mortgage financing of option of real estate firms in SACCOs during the period 2019-2023. The large standard deviation suggests that there was significant variation in mortgage financing, with some years experiencing high levels of mortgage financing, and others experiencing lower levels. In comparison to other variables, lease financing displayed the largest dispersion of KES 7.148 bn from the mean of KES 162.3 bn. The mean value of savings financing option was KES 201.7 bn, with a range of KES 117.2 bn to KES 263.2 bn maximum. Equity financing option had a mean value of KES 96.4 bn, with a range of KES 45.1 bn (minimum) to KES 114.4 bn maximum. The descriptive statistics for the SACCO size measured as log of total assets revealed an overall mean value of 18.67 for the period from 2019 to 2023 and with a considerable range of values, from a minimum of 6.236 to a maximum of 28.072. The standard deviation of 0.923 suggests a moderate level of dispersion around the mean.

Correlation Analysis

The assessment utilized Spearman’s rank correlation matrix to determine the strength of the relationships between the study variables. The results are shown in Table 4.2 below.

Table 4.2: Regression Analysis

	ROI	Mortgage	Lease	Savings	Equity	SACCO Size
ROI	1.0000					
mortgage	0.7209 0.0273	1.0000				
Lease	0.4872 0.0401	0.4473 0.0010	1.0000			
Savings	0.8236 0.0319	0.2208 0.0209	0.0214 0.7412	1.0000		
Equity	0.4260 0.0462	0.2017 0.1921	0.3901 0.0020	0.4415 0.0246	1.0000	
SACCO Size	0.6904 0.0428	0.5524 0.2172	0.0398 0.0371	0.8812 0.0010	0.5829 0.0415	1.0000

Source: Research Data (2019-23)

Table 4.2 results indicated that real estate firm growth, measured by return on investment (ROI), was significantly positively influenced by mortgage financing ($r = 0.7209$, $P = 0.0273$). This finding aligns with The Lien Theory of Mortgage (Lloyd (1923); and Harris (2017) re-affirming that through mortgage financing, by allowing buyers to purchase property through liens, plays a crucial role in increasing the appeal of real estate properties provided by developers, thereby supporting their growth. Mushi (2020) discovered a long-term relationship between the expansion of mortgage credit and the growth of housing prices. This finding suggests that changes in the availability of mortgage credit significantly influence housing prices over time, highlighting an important link between financial conditions and real estate market dynamics. However, Mungai and Mwangi's (2020) found that since mortgage financing accounts for only 7.1% of real estate growth in Kenya emphasizes the importance of considering other significant factors that contribute to real estate development.

The results also revealed that lease financing significantly and positively affects the growth of real estates in SACCOs (ROI) ($r = 0.4872$, $P = 0.0401$), as analysed using Spearman’s rank correlation. The findings conform to the Housing Cycle Theory (1965) that considers macroeconomic factors like housing prices, vacancies, economic growth, disposable income, and interest rates. The theory sheds light on the cyclical patterns and fluctuations within the real estate sector. It serves as a valuable framework for analysing lease financing options and real estate development. On the contrary, Njoroge, Koori, and Warui (2021) found that different financing options have diverse impacts on the growth rates of real estate development companies in Kenya. Mortgage financing

and retained earnings both have a positive but minimal effect on growth rates. Private equity, on the other hand, has a significant positive impact on growth rates, whereas joint ventures have a positive but insignificant influence.

Savings financing had a positive but insignificant effect on ROI ($r = 0.8236$, $P = 0.0319$). These findings are pertinent to those by Katiti, Omanwa, Mwaniki, and James (2022), indicating that most commercial real estate projects in the county are funded through personal savings and equity loans from banks. It is recommended to mobilize significant amounts of private capital to meet the unmet housing demand. Similarly, Huang, Luo, and Peng (2021) established a complex relationship, concluding that corporate financial asset holdings can be seen as a form of precautionary savings. The equity financing option showed a positive and significant effect on growth of real estate firms in SACCOs ($r = 0.4260$, $P = 0.0462$). The findings contradict those by Ngoc, Tien, Chau, and Le Khuyen (2021) that revealed a negative relationship between capital structure and business performance, whereas tangible assets had a positive impact on performance in all regression models. The moderating variable of SACCOs size had a significant positive effect on the relationship between financing options and growth of real estate firms in SACCOs ($r = 0.6904$, $P = 0.0428$). The findings re-affirm Transaction Cost Theory by Williamson in 1975, which emphasizes how firms can strategically select financing methods to reduce transaction costs and improve performance, thereby impacting the growth trajectory of real estate within SACCOs.

Regression Analysis

The evaluation sought to explore the relationship between financing options and the growth of real estate in Sacco's in Nairobi City County, Kenya with SACCOs Size serving as a moderating factor.

Test of Direct Effects

The initial four objectives were to determine the direct effect of mortgage financing, lease financing, savings financings, and equity financing options on the growth of real estate firms in SACCOs.

Table 4.3: Regression Results for the Independent Variables

Model	Unstandardized Coefficients		Standardized Coefficients		R ²	T	Sig.
	Beta	Std. Error	Beta	Beta			
Constant	2.962	.118				3.005	.002
Mortgage financing	1.802	.109		1.671		6.993	.023
Lease financing	0.497	.134	.392		8.812	.004	
Savings financing	2.402	.109		2.311		5.882	.001
Equity financing	0.403	.142	.386	.7225	9.102	.015	

Source: Research data (2024)

The findings presented in Table 4.3 summarize the regression analysis, highlighting the influence of financing options drivers on growth (ROI). The results show that all independent variables have a positive impact on the dependent variable (growth). Specifically, mortgage financing has an unstandardized coefficient of $\beta=1.802$ with a significance level of $p<0.023$; lease financing has a coefficient of $\beta=0.497$ with a significance level of $p<0.004$; savings financing has an unstandardized coefficient of $\beta=2.402$ with a significance level of $p<0.001$; and equity financing has unstandardized coefficient of $\beta=0.403$ with a significance level of $p<0.015$.

The model's R-squared (R^2) value, which represents the multiple determination coefficient, is 0.7225. This indicates that approximately 72.25% of the variance in growth (ROI) is explained by the collective variations of the independent variables. This suggests a strong fit of the data to the multiple regression model, better than the fit achieved by any individual independent variable.

The results confirm that all independent variables in the study have a significant positive relationship with the dependent variable, implying that mortgage financing, lease financing, savings financing and equity financing have significant effect on real estates in SACCOs growth in Nairobi City County, as they have p-values below 0.05. This means that an increase in any of the independent variables will lead to an improvement in growth (ROI). The summary Table 4.3 also shows that the constant parameter's value is 2.962, indicating that growth would be 2.962 if all explanatory (independent) variables were held constant. This suggests that growth would increase by 29.62% if all other factors remain constant.

Based on the regression results in Table 4.9, the direct effect regression model depicting the relationship between the independent variables and the dependent variable can be expressed as follows:

$$GR_{it} = 2.962 + 1.802MF_{it} + 0.497LF_{it} + 2.402SF_{it} + 0.403EF_{it} + \epsilon_{it} \text{ ----- (i)}$$

Where: GR = Growth rate; ROI, MF = Mortgage financing, LF = Lease financing

SF= Savings Financing, EF = Equity Financing, i = individual real estate firm

t = time, B_0 = the constant, B_1, B_2, B_3, B_4 = the coefficients and ϵ = the error term

The values 1.802, 0.497, 2.402, and 0.403 represent the unstandardized coefficients of the independent variables. The study standardized all variables within the regression. This standardization was done to place all variables on a consistent scale, enabling a comparison of the magnitude of the coefficients of the independent variables to determine which had the greatest influence on growth (ROI).

Test of Moderating Effects

The fifth objective of the analysis was to establish the moderating effect of firm size on the relationship between financing options and growth of real estates in SACCOs. The study hypothesized that firm lacks a significant moderating effect on this relationship. The study utilized Baron and Kenny's (1986) approach for testing this moderation. Initially, firm size was considered an independent variable and analysed using equation (ii), with Table 4.4 indicating the results.

Table 4.4: Regression Results for the Moderating Effects

Equation	Obs	Parns	RMSE	R-sq	F	P
ROI	72	8	4.02457		0.4225	3.9351447 0.0341
ROI	Coef.	Std. Error	t	p> t	95% Conf.	Interval
Moderating	.094128	2.27513		1.66	0.602	.0248712 4.123371
Mortgage fin.	3.74234	5.07214		3.04	0.440	.9912453 9.459122
Lease fin.	.08824	2.77421		2.58	0.302	2.251341 .8814457s
Savings fin.	4.30245	4.32418		1.78	0.771	4.882462 .5128814
Equity fin.	.062514	3.84265		3.14	0.587	1.213451 8.544702
Cons	2.89241	2.77124		2.77	0.385	.6612410 3.991204

Source: Research data (2024)

Table 4.4 shows that SACCOs size was initially assessed as an independent variable. Equation (ii) was derived from the coefficients listed in the table. The R^2 value was 0.4225, indicating that about 42.25% of the variance in growth could be explained by SACCO size, along mortgage financing,

lease financing, savings financings, and equity financing options. The p-value for SACCO size was 0.602, exceeding the 0.05 threshold. This suggests that there is no significant overall moderating effect, as proposed by Baron and Kenny (1986). Due to the insignificance of the p-value, the interaction component of the model was analysed, with the findings presented in table 4.5 based on equation (iii).

Table 4.5: Regression Results for the Moderating Effects

Equation	Obs	Parns	RMSE	R-sq	F	P
Moderating	54	5	7.12452	0.5776	3.9351447	0.00122
Moderating	Coef.	Std. Error	t	p> t	95% Conf.	Interval
Mortgage fin.	2.66241	3.55149	2.84	0.374	.5582452	10.25411
Lease fin.	.05147	4.11487	2.79	0.299	.441247	3
Savings fin.	3.02141	4.99854	1.87	0.370	.8824572	7.712473
Equity fin.	1.57148	3.52417	2.44	0.608	.9427832	7.245715
Cons	3.02142	3.88214	1.77	0.225	.6624573	3.347816

Source: Research data (2024)

The findings show that there is interaction according to R²; Table 4.4 is 42.25% and table 4.5 is 57.76% indicating that SACCO Size has a moderating effect on the relationship between financing options and the growth of Real estate. As per Table 4.5, based on the second step of model (iii), where SACCO size serves as a moderator, the results show a significant moderating effect with a p-value of 0.001, which is below the 0.05 threshold (p ≤ 0.05) as per Baron and Kenny's (1986) criteria. This supports the alternative hypothesis, confirming that firm size significantly moderates the relationship between financing options and growth (ROI). The null hypothesis (H_{0v}): There is no significant moderating effect on the relationship between financing options and growth rate of real estates on SACCOs in Nairobi City County, is rejected at the 5% level of significance. The findings confirm the results by Kalu et al. (2021) revealed that 64.7% of the variations in the performance of Public-Private Partnership (PPP) housing schemes could be attributed to housing affordability and the availability of mortgage financing.

Hypothesis Testing

The hypotheses were assessed through correlation analysis, as shown in Table 4.3, 4.4, and Table 4.5. The tests for the proposed hypotheses were performed, and the results were summarized in Table 4.6.

Table 4.6: Hypothesis Tests Results

	Hypotheses	Results	Decision
H ₀₁	There is no significant effect of mortgage financing option in real estate on SACCOs growth in Nairobi City County.	p = 0.023 <0.05	Rejected H ₀₁
H ₀₂	There is no significant effect of lease financing option affects real estate on SACCOs growth in Nairobi City County.	p = 0.004 <0.05	Rejected H ₀₂
H ₀₃	There is no significant effect of savings financing option in real estate on SACCOs growth in Nairobi City County.	p = 0.001 <0.05	Rejected H ₀₃
H ₀₄	There is no significant effect between equity financing option on real estate in SACCOs growth on Nairobi City County	p = 0.015 <0.05	Rejected H ₀₄
H ₀₅	There is no significant moderating effect on the relationship between financing options and growth rate of real estates on SACCOs in Nairobi City County.	Table 4.10: R ² = 42.25% Table 4.11: R ² =57.76%	Rejected H ₀₅

Source: Research data (2024)

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The real estate sector requires robust financing options and strategic decision-making to effectively drive growth and meet increasing housing demands. It relies on a comprehensive understanding of financing mechanisms and the influence of firm size to optimize resource allocation and enhance financial performance. These financing decisions encompass critical areas such as mortgage financing, lease financing, savings financing, and equity financing, all of which play a pivotal role in shaping the sector's growth trajectory. On the first objective the study concluded that effective mortgage financing involves utilizing liens to enhance the attractiveness of real estate properties and ensuring optimal utilization of available resources. Based on the second object, it was concluded that lease financing is essential for providing flexible funding solutions, thereby improving operational efficiency and profitability. In line with the third objective, the analysis concluded that savings financing, while contributing to a lesser extent, offers a foundation for stable financial planning. As per the fourth objective, equity financing provides necessary capital for expansion and growth, ensuring the competitiveness and sustainability of real estate firms and the fifth objective, as SACCO size significantly moderates the relationship between financing options and real estate growth. Larger SACCOs provide a more conducive environment for real estate firms to thrive by offering greater resources, better risk management, increased access to financing, strategic influence, and comprehensive support infrastructure.

The study findings ascertain that mortgage financing, lease financing, savings financing, and equity finance significantly influence the growth of real estate firms within SACCOs in Nairobi City County. These financing indicators exhibited a positive and statistically significant correlation with the Return on Investment (ROI) of real estate firms. On the regression analysis, savings financing demonstrated the greatest and significant positive effect on ROI, followed by mortgage, lease, and equity financing. SACCO size played a significant moderating role, highlighting the importance of firm size in optimizing financing strategies. Regarding the first hypothesis (H_{01} : There is no significant effect of mortgage financing option on real estate in SACCOs growth in Nairobi City County), the study established a significant association between mortgage financing and real estate firm growth, consistent with existing theories and studies. The study inferred that strategic mortgage financing plays a pivotal role in determining the financial performance of real estate firms within the Nairobi City County context. Concerning the second, third, and fourth hypotheses (H_{02} : There is no significant effect of lease financing option on real estate in SACCOs growth in Nairobi City County; H_{03} : There is no significant effect of savings financing option on real estate in SACCOs growth in Nairobi City County; and H_{04} : There is no significant effect between equity financing option on real estate in SACCOs growth on Nairobi City County), the investigation revealed a significant association between lease financing, savings financing, equity financing, and real estate firm growth.

Other studies have established that the size of SACCOs moderates the link between financing options and real estate growth. The fifth hypothesis (H_{05} : There is no significant moderating effect

of SACCO size on the relationship between financing options and growth rate of real estates on SACCOs in Nairobi City County) was tested, and the results showed a significant moderating effect of SACCO size on the relationship between financing options and real estate growth. The findings confirm what had been established by previous studies. Therefore, the study concludes that the examined financing indicators play a significant role in enhancing the link between financing decisions and the growth of real estate firms in Nairobi City County.

Recommendations

Based on the findings from the study on the real estate sector in Nairobi City County, several strategic policy recommendations are proposed to address the existing challenges and leverage opportunities for sustainable growth. The study recommends enhancing access to mortgage financing is crucial. This can be achieved by implementing government subsidies and tax incentives specifically aimed at reducing the costs associated with mortgage financing. The goal is to reduce mortgage-related costs by 20% over the next three years. Streamlining regulatory processes to reduce bureaucratic delays in mortgage approvals will also make the system more efficient and cost-effective. Achieving these regulatory reforms and subsidy implementations within the next two years will make mortgage financing more accessible to both developers and potential homeowners. Promoting lease financing should involve developing innovative lease financing structures and fostering public-private partnerships (PPPs) to provide flexible funding solutions. The aim is to increase the availability of lease financing options by 30% within the next three years. Encouraging collaboration between government entities and private developers to create and promote new lease financing models can enhance operational efficiency and profitability for developers, addressing the need for alternative financing options. Establishing new lease financing programs and PPP agreements within the next 18 months is essential.

Strengthening savings financing mechanisms can be achieved by implementing savings mobilization programs and reviewing interest rates on savings to make them more attractive. The objective is to increase savings rates by 25% among potential homeowners and developers over the next three years. Launching targeted campaigns and programs through Savings and Credit Cooperative Societies (SACCOs) and financial institutions to promote savings will provide a stable foundation for financial planning and support real estate development. These programs and interest rate adjustments should be rolled out within the next 12 months. Facilitating equity financing is another significant recommendation. This involves developing a robust equity market and encouraging the establishment of venture capital and private equity funds focused on real estate development. The target is to increase the number of equity financing deals by 40% over the next five years. Improving market transparency, regulatory frameworks, and investor protection mechanisms will attract more investors. Implementing these regulatory improvements and attracting new equity funds within the next 24 months is necessary for providing the necessary capital for expansion and growth, ensuring the competitiveness and sustainability of real estate firms. Optimizing SACCO size and performance is also crucial. Enhancing the capacity of SACCOs through training programs focused on financial management, strategic planning, and governance can increase the total assets for SACCOs by 15% over the next three years. Conducting regular training sessions and workshops for SACCO management and members will ensure well-managed

SACCOs that can better support real estate financing and contribute to sector growth. These initial training programs should be launched and completed within the next 12 months.

Contribution to Knowledge

The findings from this study provide substantial contributions to the understanding of financing mechanisms and their impact on the growth of the real estate sector in Nairobi City County. This research addresses critical theoretical, practical, and policy dimensions, thereby enriching the existing body of knowledge in several significant ways. The study underscores the importance of various financing options, mortgage, lease, savings, and equity financing, in driving the growth of real estate firms within Savings and Credit Cooperative Societies (SACCOs) in Nairobi City County. By highlighting the positive and statistically significant correlation between these financing mechanisms and the Return on Investment (ROI) for real estate firms, the study provides empirical evidence supporting the strategic role of diverse financing avenues. Mortgage financing, utilizing liens to enhance property attractiveness, and lease financing, offering flexible funding solutions, are particularly crucial for operational efficiency and profitability. Savings financing, while less impactful, provides a stable foundation for financial planning, and equity financing is essential for capital expansion and sustainability.

The research advances theoretical frameworks such as lien theory of mortgage financing, resource dependency theory, transaction costs theory, and housing cycle theory. By integrating these frameworks, the study offers a comprehensive understanding of the dynamics influencing financing and growth in the real estate sector. The use of a descriptive research design and panel data analysis over five years enables a robust examination of trends and patterns among real estate firms within SACCOs, ensuring a reliable and valid representation of the sector. Methodologically, the study addresses gaps in existing literature by employing both qualitative and quantitative analyses to explore contextual factors affecting mortgage lending and its impact on business credit. It also evaluates the moderating effect of SACCO size on the relationship between financing options and real estate growth, an area previously underexplored. This analysis reveals that SACCO size significantly influences how financing options affect real estate growth, providing valuable insights into the strategic decisions needed to optimize financing strategies based on firm size.

The practical implications of the study are profound. By demonstrating that increased financing from various sources leads to improved financial performance for real estate firms in SACCOs, the research informs developers and policymakers about the most effective financing strategies. The findings highlight the importance of enhancing access to mortgage financing, promoting lease financing, strengthening savings financing mechanisms, and facilitating equity financing to support the sector's expansion. Policy-wise, the study's recommendations align with the government's housing development goals, emphasizing the need for regulatory reforms and innovative financing models to bridge the housing deficit gap. By achieving targeted reductions in mortgage-related costs, simplifying procedures, and fostering public-private partnerships, the study's recommendations provide a roadmap for sustainable development in the real estate sector.

Suggestion for Further Research

Based on the insights gained from this study, there are some key areas warrant further exploration to enhance understanding of financing mechanisms and their impact on the growth of the real estate sector in Nairobi City County. There is a need to explore a broader range of financing options beyond the traditional methods of mortgage, lease, savings, and equity financing. Investigating innovative financing mechanisms such as crowd-funding, real estate investment trusts (REITs), and green financing could offer new strategies for overcoming the high costs and barriers associated with real estate development. By examining the feasibility and impact of these alternative financing avenues, future research could provide valuable insights into how these mechanisms can support real estate growth and address the challenges faced by developers.

Examining the regulatory environment's impact on real estate financing and development is crucial. Future studies should focus on how various regulatory policies, land acquisition processes, and approval procedures influence the accessibility and cost of financing for real estate projects. Comparative analyses between Nairobi City County and other regions with different regulatory frameworks could offer valuable lessons and best practices for improving the financing environment in Nairobi. Further, conducting longitudinal studies to track the impact of different financing options on real estate firm growth over extended periods could provide a insight of the long-term effects and sustainability of various financing strategies. Such research would help reveal trends and patterns that short-term analyses might miss, offering a more comprehensive view of how financing mechanisms influence real estate development over time.

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