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ABSTRACT

This study examined the effect of housing costs on the financial health of housing development institutions in the Nairobi Metropolitan Area, Kenya. The study was founded on the theories of housing adjustment, urban economics, positive theory of housing, and Marxist theory of housing. The 53 home development organizations in the Nairobi Metropolitan Area that were registered with the Kenya Property Developers Association made up the study's target population. The study purposively selected 16 institutions. The study employed descriptive statistics for data analysis and utilized the Statistical Package for Social Sciences (SPSS) version 26 as the statistical analysis software. The study found that the financial health of housing development organizations in the Nairobi Metropolitan Area was positively and significantly impacted by building costs (β1=0.018; p-value = 0.000). The financial health of housing development organizations in the Nairobi Metropolitan Area was positively and significantly impacted by operational costs (β1=0.692; p-value = 0.000). According to the study, financing costs had a favorable and significant impact on the financial stability of housing development organizations in the Nairobi Metropolitan Area (β1=0.747; p-value = 0.000). The study concludes that housing development institutions prioritize detailed project planning and efficient resource allocation. It also finds that controlling operating costs is essential for the long-term financial health of these institutions. Housing development institutions should prioritize detailed project planning and efficient resource allocation. It is recommended that housing institutions should control operating costs for long-term financial health. This study recommends that housing development institutions should strive to secure favorable loan terms and explore alternative financing options.

Key Words: *Construction Cost, Operating Cost, Financing Cost, Construction, Financial Health*

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INTRODUCTION

Housing development entities perform an essential function in enhancing access to safe, affordable and decent housing. They provide a critical service by developing, managing, and maintaining housing units for individuals and families. This is important especially for low-income households who may struggle to find affordable housing on the open market. Housing development institutions can also have a significant influence on the local economy by stimulating economic activity and creating jobs. For example, the construction and maintenance of housing units can provide employment opportunities for local workers. To meet people's requirements for shelter, housing is provided on a global scale utilizing a variety of methods. Governments take an active role in providing housing for their citizens prior to the deregulation of many economies. Typically, social housing and affordable housing are directly built by the government. However, as urbanization rises, direct government housing supply becomes insufficient and unsustainable (Kalu, Mohammed, Adeyemi & Ahmed, 2021). Whenever the residence is leased or possessed, affordability of housing continues to rank among the most crucial factors in housing. Government policy on housing subsidies and subsidies, housing assistance, and mortgage laws have all been developed in response to the need for affordable housing (Anacker, 2019). According to published data, 2.6% of all families worldwide are affected by housing affordability, with owner-occupied property having an affordability rate of 1.2 percent and private residences having a 7.9 percent accessibility rate (Matheson, 2018).

The primary objective of housing development institutions is to enhance the living conditions of individuals or groups by addressing and improving their substandard housing situations, ultimately leading to an improved life quality (Jiwane, 2021). The occupancy and completion rates for housing projects in the US led to dissatisfaction in the 1970s. Housing firms, policymakers, and scholars have since shown significant interest in investigating ways to assess the financial health of housing institutions. They have also sought to apply their findings to the development of new housing projects (Olagbaye, 2023). Furthermore, there has been a growing effort to establish more systematic methods for documenting issues associated with housing institutions.

Housing costs are all the expenses incurred by an eligible household for housing, ensuring they do not surpass a designated percentage of their gross income (Sohaimi ,2022). This percentage is adjusted to accommodate the household's size, tailored to the specific housing unit they occupy. The UN Habitat (2019), ICESCR of 1966, and UDHR all recognize housing accessibility as a basic human right. According to Kutama (2017), the ability of a person to acquire a dwelling unit without placing restrictions on requests for other financial resources infers affordability of housing. Sohaimi, Abdullah and Shuid (2017) state that a household's capacity to afford the leasing or buying a home, backed with their earning or outside measures, determines whether housing is affordable. Affordable housing is that which is priced at a level that low-income people can afford while yet having adequate or quality housing that can meet the needs of the household without the need for outside assistance. Erdmann, Furth and Hamilton (2019), made the same opinion which claim that fair housing budget considers a household's capacity to save a sizable sum of money throughout the working time in order to buy a home and other housing expenses.

Financial health pertains to a business's adeptness in leveraging its resources efficiently, starting from their fundamental level, to yield profits. Kenton and Scott (2020) elaborate it as a comprehensive measure of an organization's economic well-being, attributed to the effective utilization of its assets to generate revenue. This metric serves as a tool facilitating analysts and investors in comparing the performance of similar firms, thereby aiding in judicious financial decision-making. It encompasses the competence of a business in managing its assets, liabilities, and the financial interests of its stakeholders. Given its criticality in ensuring long-term viability and potential for value enhancement, the majority of business entities prioritize the vigilance of their financial health (Nyawira, 2021).

Based on available information, there are several housing development institutions operating in Nairobi Metropolitan Area, including government agencies, non-profit organizations, microfinance institutions, and private companies. These institutions are involved in various activities related to housing, such as financing, development, and management of housing projects. There were 53 housing development institutions operating in Nairobi Metropolitan Area as per the Kenya Property Developers Association (KPDA) register of 2022.

These institutions are regulated by several government agencies and departments, including the Nairobi County Government, the National Construction Authority, and the Real Estate Regulatory Authority. These agencies work together to make sure that housing development institutions adhere to the regulations and degree to promote the development of safe, affordable, and sustainable housing solutions.

Housing companies in Kenya encounter several financial health challenges. These encompass restricted access to funding sources, elevated interest rates, exorbitant land costs, protracted government approval processes, inadequate infrastructure, and limited demand, among other obstacles (Kinuthia & Muchelule, 2021). These hurdles collectively hinder the viability and success of the housing sector in Kenya. The net profits achieved from the real estate Kenya decreased to 7.4% for the years 2018 and 2017, according to the Housing development institutions report by Cytonn Investments. A drop in financial health is indicated by a dip in returns. Due to the high cost of housing, unsatisfactory financial health has been realized (Wambua & Wekesa, 2022).

Problem Statement

2021 study by the African Development Bank Group on Housing Finance in Kenya found that the housing sector in Kenya is attributed to low levels of capitalization, high-prime rates, and insufficient long-term funding (Korir, 2021). This can make it difficult for housing development institutions to access the financing they need to develop new projects or maintain existing ones. Institutions that provide housing are essential to economic development of Kenya as well as progress. Housing agencies made an indirect and direct contribution to the GDP of almost 7% in 2018, according to the Kenya Economic Report. Despite this contribution, bad operational costs, higher financial costs, inefficient financing decisions and a lack of efficient cost control have hindered their chances of developing and sustaining appropriate returns. As a result, housing development institutions are having unsustainable financial results (Wambua & Wekesa, 2022).

The Kenyan housing sub sector has experienced remarkable growth, evident in its increasing contribution of the country's GDP, increasing to 12.6% in 2012 and 13.8% in 2016. Several factors drive the growth, including improved infrastructure, stable GDP growth calibrating to 5.4% over the past five years, rapid urbanization at 4.4% per annum (versus a universal median of 2.5%), and inhabitants progress at 2.6% per annum. Additionally, the sector offers high total returns averaging 25.0%, outperforming traditional asset classes at 12.4%. However, despite this growth between 2000 and 2016, recent years have seen a decline in the cost performance of housing institutions. This decline can be attributed to increased competition, particularly from commercial banks, and an unfavorable business environment marked by high operating costs. In 2020, the number of mortgages in the market dropped to 26,971, a 3.7% decrease compared to 2019, highlighting the challenges faced by housing institutions.

Little research has been done on housing costs and financial health of housing development institutions. These studies have demonstrated contextual, methodological, and conceptual gaps. Nyabakora and Mng'ang'a (2022) assessed the effect of financing choices on business performance in Tanzania. Fadare and Adegbie (2020) examined how management effected financial results of mentioned consumer products companies in Nigeria cost. Studies carried out in other countries with different socioeconomic backgrounds, thereby providing a contextual gap. Odhiambo (2015) assessed how construction financing affected Kenya's cost performance of the listed retail banks using panel regression analysis. Muriithi (2017) investigated the effect of managing expenses on defined-benefit plans, that include administrative charges and investment that significantly increase the cost of retirement security. These studies demonstrated methodological gaps. Agani (2022) investigated how financing alternatives affected Kenyan new car dealers' financial performance, demonstrating a conceptual gap as this study will examine financing cost. As a result, the gaps identified led to the necessity of this research that investigated how housing costs effect the financial health of Nairobi housing development institutions in the Metropolitan Area.

Objectives of the Study

The study examined the effect of housing costs on financial health of housing development institutions in Nairobi Metropolitan Area, Kenya. The study was guided by the following specific objectives;

- To establish effect of construction costs on the financial health of housing development institutions in Nairobi Metropolitan Area
- To analyze effect of operating costs on the financial health of housing development institutions in Nairobi Metropolitan Area.
- To investigate the effect of financing costs on the financial health of housing development institutions in Nairobi Metropolitan Area.

The research hypotheses were;

- H_{01} : Construction costs have no substantial effect on financial health of housing development institutions in Nairobi Metropolitan Area.
- H_{02} : Operating costs have no substantial effect on financial health of housing development institutions in Nairobi Metropolitan Area.
- H_{03} : Financing costs have no substantial effect on financial health of housing development institutions in Nairobi Metropolitan Area.

LITERATUREREVIEW

Theoretical review

The Marxist theory of housing

This theory is rooted in Marxism, as articulated by Friedrich Engels and Karl Marx (Rolnik, 2013), represents one of the earliest theories concerning housing. This theory posits that human actions and institutions are fundamentally influenced by economic determinants. Consequently, it emphasizes the necessity of a class struggle within society to drive historical change, ultimately leading to the transformation of capitalism into communism. Marxism recognizes the presence of distinct social classes within a capitalist economy (Rolnik ,2013). According to this Marxist perspective, advancements in technology hold the potential to eventually eliminate the petite bourgeoisie, reducing them to the proletariat class. Within society, there are also landlords who wield power and wealth, as well as the peasantry and farmers who occupy the lowest rungs of income. Regarding housing, the Marxist theory underscores its significance, as it is closely tied to human survival (Rolnik 2013). Moreover, the theory highlights housing's role in facilitating reproduction, thereby increasing the manpower within the economy and aiding the social status functioning.

Positive Theory of Housing

This theory of housing emphasizes the socioeconomic and environmental aspects of residents. According to this theory, housing is viewed as an integral part of the economy, capital, energy and utilizing resources thereby directly contributing to economic stability and environmental enhancement. Furthermore, the theory places significant importance on individuals' economic well-being and links their ability to own a house with their current financial capacity (Tibaijuka ,2013). People allocate a substantial portion of their income to enhancing the physical condition of their homes. Consequently, Positive housing theory advocates for shareholders in the housing market, where financially capable members invest heavily in constructing and upgrading homes, both for their fundamental needs and economic purposes (Tibaijuka ,2013). However, during economic downturns in households, spending priorities shift toward essentials like food, shelter, clothing, and healthcare, relegating housing needs to a secondary position.

Growth of the Firm Theory

It described by Joseph and Wilson (2018), determines the efficient and profitable expansion of institutions. According to this theory, the key to successful growth lies in the effective utilization of resources, identification of business opportunities and operational diversification. The theory challenges the notion that mere resource availability is sufficient for value creation; instead, it posits that value is intricately linked to the prudent management of resources. The quantity of resources alone does not guarantee financial health and firm growth. The competence of managers plays a pivotal role in how assets are employed and opportunities for revenue development are identified within firms (Joseph & Wilson, 2018). Economic value creation, according to the theory, hinges on the combination of natural resources and how they are managed. Notably, larger companies, benefiting from economies of scale and possess the capacity to amalgamate more resources (Johannisson, 2017).

Optimal growth patterns are a central aspiration for businesses seeking to bolster financial health and ensure sustainability. The growth of the firm theory is relevant as it emphasizes how housing development institutions can strategically manage construction costs, operating costs, and financing costs to achieve growth. Managers are tasked with implementing measures that minimize costs, thereby fortifying the financial health of housing development institutions (Joseph & Wilson ,2018). The theory provides aids explain how financing costs affect the financial health of housing development institutions. The emphasis on competent management aligns with the imperative for housing managers to navigate and optimize various costs, ultimately contributing to the goal of achieving financial health in the housing sector.

Agency Theory

Meckling and Jensen's seminal work in 1976 introduced the agency theory, which fundamentally explores the intricate relationship between shareholders, known as principals and managers and executives, referred to as agents, within a company. At the heart of their theory is the recognition that modern organizations face problems of agency, stemming from the separation of ownership and management. This division creates a scenario where the shareholders' interests and those of the firm's executives may not perfectly align, leading to potential conflicts. In the agency perspective presented by Jensen and Meckling (1986), the costs arising from these conflicts are borne by the principals. The principal-agent relationship is established when the principal grants the agent the authority to formulate and execute policies on behalf of the organization. However, the theory suggests that losses can occur when management responds in a manner that does not align with the intended interests of the organization's owners. Jensen and Meckling (1986) insights highlight the need for mechanisms to mitigate these agency problems, emphasizing the importance of aligning incentives, monitoring, and control mechanisms to ensure the optimal functioning of the principal-agent relationship within a corporate structure (Jensen & Meckling ,1986). The agency cost is determined by adding the fees for monitoring, residual damages, and bonding. The cost incurred by the principal in limiting the unfavorable activities of the agent is referred to as monitoring charges. The cost incurred by the agent to persuade the principal of their commitment is referred to as the bonding cost. The difference between ownership input and agent output is known as the residual loss. Because managers' and stockholders' interests are not entirely aligned, residual loss will still occur despite monitoring and bonding costs being incurred.

Empirical Review

According to Huang, Shin and Wang (2020), it is important to prioritize cost-effective housing construction without compromising quality, emphasizing the need for monitoring of construction expenses. Manoj (2017) investigated a typical cost structure of housing construction projects, assessed the relative importance of cost elements and proposed comprehensive policy guidelines for cost-effective housing development by housing institutions, considering construction costs and other factors. The research examined 80 housing projects from different housing institutions, chosen through a census method. A prepared and piloted survey were used to gather information. The principal officers of selected housing development entities, responsible for relevant departments, were approached for data collection, including relevant cost details to the extent disclosed. The findings emphasized that construction costs performed a crucial function in influencing the financial health of housing institutions. The effective control of construction costs related to construction operations and the financing of funds from outside sources emerged as important considerations for housing institutions' performance.

Wijaya, Nugraha and Rahardjo (2020) assessed the effect of construction costs on the financial health of housing institutions. The research employed a survey methodology using questionnaires. A total of 69 respondents participated, with 29 representing housing development institutions and 40 representing contractors. The study showed that housing development organizations effectiveness was greatly influenced by the expenses related to building materials, workforce, and site services. The study recommended that housing development institutions closely monitor these costs to enhance performance.

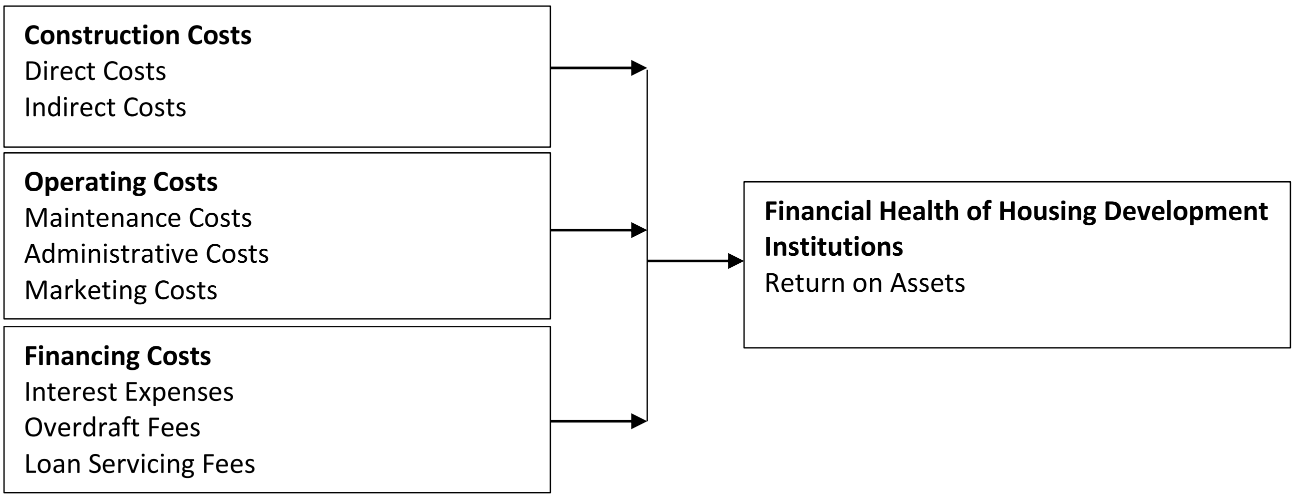
Housing not only serves as a physical shelter but also exerts an important effect on the lives of its occupants (Chrisnanto & Riyanto, 2020). The operational efficiency of housing firms, therefore, plays a crucial role in improving their performance, fostering equitable economic growth and mitigating poverty. This is accomplished through strengthening communities, empowering middle-class and lower-class individuals, helping households accumulate assets, and improving living conditions (Prabitha & Krishnan, 2018). In contrast, public housing institutions, traditionally dominant in the housing construction sector, are witnessing a decline in performance. This decline is attributed partly to diminishing government support and partly to their historical operational inefficiencies (Alape, Pinzon, Medina, Cabrera & Isabel, 2023). Widarwati and Sartika (2019) highlight a major development in the market, which is the entrance of both international and domestic commercial banks, along with a limited number of new specialized institutions. This entry into the market indicates a substantial potential for growth and expansion. This entry not only signifies an evolving housing ecosystem, but also opens up avenues for enhanced services, increased competition, and potentially broader financial inclusion.

Virparia and Panchal (2023) conducted a study on the financial operations of housing corporations in India spanning from 2018 to 2022. Solvency, liquidity, valuation, and profitability ratios were used to analyse the operational viability of housing corporations listed on the stock exchange. Findings revealed a direct and significant influence of operational costs on the return on investment of housing corporations. The study suggested that housing development institutions should maintain adequate liquidity and implement sound financial management practices to enhance their performance.

Purwanto (2020) studied how loans, ownership concentration, and housing institutions' performance are connected. The study gathered data from 35 housing companies that were included in the Indonesia Stock Exchange between 2007 and 2012. Financing expenses were considered when assessing the associated loans; the proportions of related lending to total lending and related loan to total loan were calculated to measure related lending and loan. The company's performance was evaluated using return on assets ratio and the asset turnover ratio. The ownership concentration was determined by the proper cash flow. Panel data along with regression analysis were utilized during the analytical procedure. The research findings indicated that although connected loans boosted sales, they did not affect profits. On the other hand, connected loans showed a beneficial effect on earnings. Moreover, ownership concentration was recognized as a factor that influences how related loans affect the performance of housing institutions. This suggests that the concentration of ownership plays a role in shaping how related loans affect the overall financial health of housing institutions, indicating a nuanced interplay between financial structure, ownership dynamics, and performance outcomes in this context.

Mitra and Naik (2021) investigated the influence of debt on a firm's profitability, comprising two distinct phases. The study's first phase sought to determine whether debt financing and the company's financial health were correlated. Understanding how agency expenses affect debt financing became the main goal of Phase II. A total of twenty-three housing facilities were chosen for the study between 2011 and 2018. The firm's leverage ratio was used to measure debt financing, while return on equity was used to estimate profitability. Agency costs were determined by calculating the general expense and asset utilization ratio to sales ratio. The research employed panel regression analysis to examine how agency costs and debt financing influence the profitability of companies. A powerful negative correlation existed between return on equity and debt financing. The research suggested that housing development organizations should consider different financing methods to reduce costs and enhance their financial well-being.

Conceptual Framework



Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework

METHODOLOGY

This study employed a descriptive design. The study focused on the 53 housing development institutions registered with KPDA in the Nairobi Metropolitan Area. The registered housing institutions were the focus of analysis in the research. The study purposively sampled 30% (Mugenda & Mugenda, 2003) of the target population, which resulted in 16 housing development institutions. The sampled institutions had complete sets of financial data for the 8-year period. Questionnaires were used to gather secondary data from housing development establishments in the Nairobi Metropolitan Area. The sheet captured secondary data concerning construction costs, operating expenses, financing expenses, and financial health, with these metrics being represented by financial ratios. Data analysis was done using descriptive statistics. SPSS version 26 was utilized for data analysis. To evaluate the precision of forecasts made by regression models and explore the relationships among variables that affect the financial health of housing institutions, panel data regression was adopted. It used the panel fixed effects model to clarify the association between the variables. Financial health (FH) was assessed by combining construction costs (CC), operational costs (OC) and financing costs (FC). Therefore, the empirical model appeared as:

$FH_{it} = \beta_0 + \beta_1 CC_{1it} + \beta_2 OC_{2it} + \beta_3 FC_{3it} + \varepsilon_{it}$...... 1

Where:

FH = Financial Health for firm

CC_1 = Constructing Cost for firm

OC_2 = Operating Cost for firm

FC_3 = Financing cost for firm

Data from housing development institutions' reports were converted into ratios to enable empirical and quantitative measurement. Financial health was assessed using return on assets (ROA), quantified as net income divided by total assets. Construction costs, operating costs, and financing costs were measured as ratios of operating income.

RESULTS AND DISCUSSIONS

Descriptive Statistics

This part discusses different variables. These were given as ratios. The research factors included construction costs, operational costs, financing costs and financial health. The information can be found in Table 1.

Table 1: Descriptive summary

Variables	N	Min	Max	Mean	Std. Dev
Construction costs	16	0.1174	0.6816	0.1592	0.1792
Operating costs	16	0.5427	0.8042	0.3478	0.3267
Financing costs	16	0.0215	0.8672	0.2939	0.2991
Financial health	16	0.0115	0.7925	0.5519	0.3198

Source: Researcher (2024)

Table 1 shows that the lowest construction expenses in the dataset were 0.1174, the highest were 0.6816, with an average of 0.1592 and a standard deviation of 0.1792. The panel data showed operating costs ranging from 0.5427 to 0.8042, with a standard deviation of 0.3267 and an average of 0.3677. The minimum funding cost was 0.0215, the maximum was 0.8672, the average was 0.2939, and the difference from the average was 0.2991. The financial health financial health ranged from 0.0115 to 0.7925, with a standard deviation of 0.3198 and a mean of 0.5519. The table reveals that there is considerable variation in each measure. For example, while the average construction costs are relatively low (0.1592), the range and standard deviation indicate significant variability. Similarly, operating costs and financing costs exhibit higher variability, as reflected in their standard deviations. Financial health shows a moderate range and variability, hence a more consistent level of financial health compared to the other measures.

Correlation Analysis

It is a method of statistics that evaluates how closely two variables are related in terms of both direction and strength. The correlation coefficient can range from +1 to -1 depending on the strength of the association. Correlation was conducted using Pearson correlation analysis.

Construction costs on the financial health of housing development institutions

The research analyzed how construction expenses affect the financial health of housing development organizations in the Nairobi Metropolitan Area.

Table 2: Correlations between construction costs and financial health

			Financial health	Construction costs
Spearman's rho	Financial health	R	1	0.773
		Sig. (2-tailed)		0.001
		N	16	16
	Construction costs	R	0.773	1
		Sig. (2-tailed)	0.001	
		N	16	16

Source: Researcher (2024)

The importance of correlation is based on p-values. In this scenario, $p < 0.05$ is considered to be significant, whereas anything above 0.05 is deemed as insignificant. Results from Table 2 show a significant positive correlation (r=0.773, p=0.001) between construction costs and the financial health of housing development organizations. Certainly, as a result of a significant lack of housing and rapid urban growth, there remains a significant, unfulfilled need for inexpensive housing among low- and middle-income families in Africa (Kinuthia & Muchelule, 2021). Predictions suggest that this need is anticipated to increase significantly in the coming decades, posing a large potential and challenge for the construction industry (Gambo, 2022). The possible chance is to transform the sector to meet this need, leading to job creation, industrial growth, and a reduction in poverty (Njoroge & Opuodho, 2022). The issue is that many smaller constructions housing development organizations do not have the financial and managerial resources needed for large-scale housing projects. As a result, Olagbaye (2023) claims that there is a disparity in the housing market between demand and supply. Indeed, the Marxist theory of housing views housing as a commodity subject to capitalist exploitation, where profit motives drive housing costs, often leading to affordability crises. For housing development institutions, rising housing costs can strain financial health by increasing operational expenses and limiting access to affordable financing (Kosgei ,2018). This, in turn, affects their ability to sustain projects, leading to financial instability and reduced capacity to address housing needs effectively.

Operating costs on the financial health of housing development institutions

The study examined the influence operating costs on the financial health of housing development institutions in Nairobi Metropolitan Area. Table 3 shows a correlation of operating costs on the financial health of housing development institutions.

Table 3: Correlations between operating costs and financial health

			Financial health	Operating costs
Spearman's rho	Financial Health	R	1	0.697
		Sig. (2-tailed)		0.000
		N	16	16
	Operating Costs	R	0.697	1
		Sig. (2-tailed)	0.000	
		N	16	16

Source: Researcher (2024)

The research indicated a strong and favorable connection between operational expenses and financial health of housing development organizations in Nairobi Metropolitan Area (r=0.697, p=0.000). Housing not only provides a physical shelter but also plays a crucial role in the lives of its residents (Chrisnanto & Riyanto, 2020). Housing firms' operational efficiency is crucial for enhancing their performance, promoting fair economic growth, and reducing poverty. This is achieved by building up communities, giving power to middle-class and lower-class people, assisting households in acquiring assets, and enhancing living conditions (Prabitha & Krishnan, 2018). Public housing institutions, typically leading in the housing development industry, are experiencing a drop in their effectiveness. This drop is partly due to reduced government backing and partly due to their past operational inefficiencies (Alape et al., 2023). Widarwati and Sartika (2019) emphasize a significant advancement in the market with the arrival of domestic and international commercial banks, as well as a few new specialized institutions. This market entry shows great potential for growth and expansion. This post signals a changing housing environment and also offers opportunities for improved services, higher competition, and possibly more extensive financial involvement. The positive theory of housing emphasizes the role of market forces and rational decision-making in housing markets. High operating costs impact the financial health of housing development institutions by reducing profitability and increasing financial risk (Tibaijuka ,2013). According to the positive theory, these institutions must adjust their strategies, such as optimizing resource allocation or increasing efficiency, to maintain financial stability and competitiveness in response to market conditions.

Financing costs on the financial health of housing development institutions

The research analyzed how financing expenses effect the financial health of housing development institutions in Nairobi Metropolitan Area. In Table 4, there is a correlation observed between funding expenses and overall financial well-being.

Table 4: Correlations between financing costs and financial health

			Financial health	Financing costs
Spearman's rho	Financial health	R	1	0.707
		Sig. (2-tailed)		0.002
		N	16	16
	Financing costs	R	0.707	1
		Sig. (2-tailed)	0.002	
		N	16	16

Source: Researcher (2024)

The study noted a significant correlation between funding costs together with the financial health of housing development organisations in Nairobi Metropolitan Area (r=0.707; p-value= 0.002). The results back up the growing concern on inadequate housing and poor housing quality in several developing nations, leading stakeholders to create different housing strategies to tackle the problem. Nonetheless, housing development organizations face a major obstacle in obtaining funding to reduce the housing shortage (Kinuthia & Muchelule, 2021). Lawal (2019) stated that the cost of financing has become a key issue, presenting a major obstacle to building houses and affect the effectiveness of housing institutions. This highlights how financial limitations hinder addressing housing shortages, stressing the importance of effective financial tactics in the housing industry. Additionally, according to Kosgei (2018), housing costs are a matter of concern in economic and social spheres. Cost of construction has steadily increased over the past decade, and recent data suggests that this upward trend is likely to persist in the foreseeable future.

Housing development institutions encounter significant difficulties when deciding on financing due to the fact that housing investments are seen as requiring a large amount of capital (Manoj, 2017). Ayorinde and Oladayo (2021) suggest that in many emerging economies, the housing sector must grow alongside population expansion. In spite of this requirement, there is a consistent shortfall in the annual supply of housing units meeting the current demand. Housing institutions face challenges in obtaining the required financial resources due to the perceived high capital intensity of housing investments. The problem is made worse by the increasing populations in developing countries, leading to a higher need for housing (Manoj, 2018). The deficiency in the yearly allocation of housing units highlights a continuous difference between the need and availability, underscoring the necessity for housing development organizations to investigate creative ways to fund and bridge this gap.

Regression Analysis

An analysis using multiple regression was done to examine how the independent variables affect the dependent variable. Table 5 shows a synopsis of the linear regression model.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.693[a]	0.632	0.5082	0.2890361	2.196

a. predictors: (constant), construction costs, operating costs and financing costs
b. dependent variable: financial health

Source: Researcher (2024)

Table 5 included a number of statistical measures, including the R value, which indicates how the independent variable affects the dependent variable, the R2, which indicates how explanatory variables affect the dependent variable after adjustments, and the Adjusted R Square, which provides information on the accuracy of the regression findings. The findings indicate that the correlation coefficient R, which is 0.693, shows how well an independent variable can predict a dependent variable. This demonstrates a notable connection between the variables. Based on the R-Square or coefficient of determination, the three independent variables of the model account for 63.2% of the financial health of housing development institutions in the Nairobi Metropolitan Area. Considering the inefficiencies in the model, the Adjusted R-Squared indicates that 50.82 percent of the financial health of housing development institutions in the Nairobi Metropolitan Area could be attributed to the independent variables. The study discovered a notable and beneficial correlation between housing costs and the financial health of housing development groups in the Nairobi Metropolitan Area. ANOVA assessed the general model significance. Table 6 displays evidence showing the significance of the model in describing banks performance (p-value < 0.05).

Table 6: Analysis of Variance

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.595	2	0.217	16.892	.000[b]
Residual	11.682	14	0.304		
Total	10.692	16			

A. Dependent variable: financial health
A. Predictors: (constant), construction costs, operating costs and financing costs

Source: Researcher (2024)

ANOVAs results showed a strong correlation between the independent and dependent variables at 0.000 significance level. The computed F-value exceeded the critical F-value (16.892> 3.739). The model employed in the study is thus reliable. Therefore, the results are adequate for decisive conclusions and trustworthy recommendations.

Table 7: Coefficients

Coefficients[a]	Unstandardized Coeff. B	Std. Error	Standardized Coeff. Beta	t	Sig.
(Constant)	0.559	0.203		0.718	
Construction Costs	-0.018	0.296	0.167	-0.627	0.000
Operating Costs	-0.692	0.428	0.104	-0.372	0.003
Financing Costs	-0.747	0.910	0.188	-0.297	0.000
A. Dependent Variable: Financial Health					

Source: Researcher (2024)

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$

Factoring in the values we have;

$\mathbf{Y = 0.559 - 0.018}\ X_1\ \mathbf{- 0.692}\ X_2\ \mathbf{- 0.747}\ X_3$

Discussion of findings

The constant term of 0.559 in Table 7 represents that when all independent variables are at zero, the financial health value would be 0.559.

Effect of construction costs on the financial health of housing development institutions

The research showed that construction costs have a significant and negative influence on the financial stability of housing development institutions in Nairobi Metropolitan Area (β1=-0.018; p-value = 0.000). Maintaining all other variables constant, a decrease of one unit in construction expenses would lead to a 0.018 increase in financial health. Huang, Shin and Wang (2020) emphasized the significance of giving priority to economical housing development while maintaining quality, highlighting the importance of monitoring construction costs. Additionally, Manoj (2017) evaluated expenses involved in housing construction projects, assessed the significance of different cost components and made recommendations for cost-efficient housing development by housing organizations, considering construction expenses and other related factors. Findings highlighted that the financial health of housing institutions was significantly affected by construction expenses. Controlling construction costs and obtaining external funds are crucial for housing institutions' success (Kosgei ,2018).

The findings are consistent with the study by Wijaya et al. (2020) which examined how construction costs effect the financial stability of housing organizations. They found that the success of housing development institutions is greatly affected by expenses related to construction materials, labor, and site utilities. The research suggested that organizations in charge of housing development should carefully track these expenses in order to improve their effectiveness. Furthermore, Kumar (2022) analyzed the financial performance of housing development institutions by studying their costs, revenues, and margins, noting that each of these factors had a notable effect on their financial outcomes. Similarly, Makhulu (2020) analyzed the factors effecting the profitability of constructing affordable housing in Nairobi. They found that costs for materials, labor, and land acquisition played a crucial role in determining the overall expenses of low-cost housing development. The high expenses associated with construction materials and labor diminish the profitability of affordable housing projects, ultimately effecting the financial health of housing organizations.

Effect of operating costs on the financial health of housing development institutions

The research showed that there is a negative and substantial effect of operating expenses on the financial health of housing development organizations in the Nairobi Metropolitan Area ($\beta 1=-0.692$; p-value = 0.000). Keeping all other factors constant, a decrease of one unit in operating expenses would lead to a 0.692 increase in fiscal stability. The results align with Virparia and Panchal's (2023) research on financial activities of housing firms in India, showing a clear and substantial influence of operational expenses on housing corporations' investment yields. The research indicated that housing development organizations should uphold sufficient liquidity and practice strong financial management techniques to improve their effectiveness. Similarly, Selvaraj and Vimal (2021) found that the financial health of housing companies is greatly influenced by operational expenses. Similarly, Ahuja (2020) explored the financial activities and success of housing development organizations and emphasized that operational efficiency performs a significant function in determining the financial sustainability of these institutions. Additionally, Kimanzi et al. (2019) assessed the association between the operational effectiveness and financial health of housing development organizations in Nairobi. Findings showed a strong connection between financial wellness and operational efficiency. Suggestions were made for housing development institutions to create plans aimed at expanding their range of activities, thereby reducing operational costs and improving managerial effectiveness.

Effect of financing costs on the financial health of housing development institutions

According to the research, the financial health of housing development institutions in the Nairobi Metropolitan Area is negative and significantly influenced with financing expenses ($\beta 1=-0.747$; p-value = 0.000). Holding all other variables constant, a decrease of one unit in financial costs would result in a 0.747 increase in financial health. higher financing expenses are closely associated with a deterioration in the financial health of these institutions. However, it's essential to understand the broader context of how financing and its associated costs impact financial health. Financing expenses typically refer to the costs incurred when institutions borrow funds, including interest payments and other associated costs. At first glance, these expenses might appear detrimental to financial health because they reduce net income by increasing operational costs. However, the ability to borrow funds itself performs a significant function in sustaining and potentially boosting the financial health of housing development institutions. When institutions can secure financing, they gain access to the necessary capital to undertake and complete housing projects, which would otherwise be impossible with limited internal funds. The findings are consistent with the research undertaken by Njoroge et al. (2021), which focused on the influence of financing costs on the growth of housing development firms in Kenya. The study indicated that the influence of funding costs on the growth rates of housing development firms in Kenya is substantial and beneficial.

CONCLUSION AND RECOMMENDATIONS

The study concludes that construction costs significantly affect financial health of housing development institutions. High construction costs can lead to budget overruns, delayed projects, and increased debt, all of which can strain an institution's financial resources. When construction costs exceed initial estimates, institutions may need to secure additional funding, often at higher interest rates, further exacerbating financial stress. Effective management of construction costs through careful planning, efficient resource allocation, and cost-saving measures is crucial for maintaining financial stability and ensuring project completion within budget.

The research findings indicate that the financial health of housing development institutions is greatly affected by operational expenses. Operating costs consist of costs associated with maintenance, utilities, administration, and other continuous operational activities. Excessive expenses can decrease profitability, posing challenges for organizations to maintain their activities in the long run. For example, expensive upkeep expenses may cause resources to be redirected from important areas like growth or resident support. In order to maintain financial stability, housing development institutions need to employ tactics like utilizing energy-efficient technologies, improving administrative efficiency, and performing regular maintenance to avoid expensive repairs.

The research findings suggest that financial health of housing development institutions is greatly affected by financing expenses. Elevated interest rates may decrease the available funds for development and operational activities, constraining the institution's capacity to grow and enhance its services. In order to reduce the effects of financing expenses, housing development organizations should look for advantageous loan conditions, consider other funding choices, and uphold a solid credit history. Effectively managing financing expenses can boost institutions' financial strength and promote sustainable expansion.

Housing development organizations need to focus on thorough project planning and effective allocation of resources. Doing comprehensive cost estimates and feasibility studies before starting projects is necessary in order to prevent exceeding the budget. Furthermore, these establishments ought to implement cost-cutting strategies like purchasing materials in bulk, negotiating advantageous contracts with suppliers, and utilizing innovative construction methods that lower waste and labor expenses. Consistent monitoring and evaluation of construction costs can also assist in recognizing and resolving possible problems early, guaranteeing that projects are finished on budget and on schedule.

Housing institutions should manage operational expenses for their financial health in the long run. Incorporating energy-saving technologies could greatly lower utility costs. Automating administrative processes and utilizing digital tools can improve efficiency and lower labor expenses. Moreover, performing routine maintenance and inspections can help avoid expensive repairs and prolong the longevity of buildings. By prioritizing preventive maintenance and effective operations, organizations can free up more funds for development and tenant services, enhancing both sustainability and service quality.

This study suggests that housing development organizations should work towards obtaining favorable loan conditions and consider other funding choices. This involves discussing lower interest rates, looking for extended repayment periods, and examining government grants or subsidies. Institutions must also uphold a solid credit profile through making payments on time and effectively managing debt levels. Furthermore, broadening funding sources, including public-private partnerships or bond issuance, can decrease dependence on conventional loans and distribute financial risk. Housing development organizations must improve their financial stability by making sure they have enough funds for both development and operational expenses while also reducing the financial burden of loan costs.

Suggestion for Further Research

This research investigated how housing expenses effect the economic well-being of housing development organizations in Nairobi Metropolitan Area. Future studies have the potential to broaden the research scope by incorporating housing institutions beyond the Nairobi Metropolitan Area, offering a more comprehensive view. Enhancing the generalizability of the results can be achieved by comparing data from various regions and including a larger sample size. Moreover, involving both private and public housing development organizations could provide further insights into possible disparities in financial health factors within these industries.

Subsequent research may choose to use a longitudinal study format to evaluate the lasting effects of construction, operating, and financing expenses on financial well-being. This method may include monitoring the identical organizations well into the future after 2023 to witness patterns and developments over an extended duration. Additionally, by incorporating qualitative approaches like interviews or case studies, a more thorough comprehension of the hurdles and tactics utilized by housing development organizations in cost management and financial stability could be obtained. The qualitative data may enhance the quantitative results and provide a holistic perspective on the factors effecting financial well-being.

According to the coefficient of determination, 63.2% of the financial health of housing development institutions in the Nairobi Metropolitan Area is attributed to construction costs, operating costs, and financing costs. Additional research could explore how external factors, such as economic conditions, government policies, and market dynamics, which make up the remaining 36.8%, effect the financial health of housing development institutions. Analyzing the way in which external factors influence construction, operating, and financing expenses could enhance comprehension of the financial obstacles experienced by these organizations. Furthermore, exploring the effect of creative funding methods like green bonds could reveal different approaches to improve financial well-being.

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