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The Nexus Between Mortgage Financing Structures and Project Success in Kenya

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ABSTRACT: Mortgage financing has become an increasingly important mechanism for supporting housing delivery in Kenya, particularly under the Affordable Housing Programme. However, the extent to which mortgage financing influences the performance of mortgage-financed construction projects (MFCPs) remains unclear. This study investigates the relationship between mortgage financing characteristics and project performance, focusing on five financing dimensions—ease of access, adequacy, reliability, favourability, and simplicity—and five performance indicators—budget adherence, schedule adherence, quality, safety, and cash flow. A survey research design was adopted, targeting 1,063 MFCPs initiated during the 2021/2022 financial year. Data were collected from site agents and clerks of works using structured questionnaires and analyzed through descriptive statistics and Pearson correlation. The findings reveal that while developers perceive mortgage financing as reliable and generally adequate, its direct correlation with project performance is weak or modest. Adequacy and favourability of financing terms showed marginal significance, suggesting that sufficient loan amounts and competitive interest rates can ease cash flow pressures and indirectly improve project outcomes. Strong intercorrelations among financing aspects indicate that developers view mortgage products holistically, where improvements in one dimension often coincide with improvements in others. The study concludes that mortgage financing is a critical enabler of housing delivery but not the dominant determinant of project success. Effective performance requires combining financing improvements with robust project management, contractor capacity building, and risk mitigation strategies. Recommendations include enhancing the adequacy and favourability of mortgage products, simplifying loan terms, and integrating financing reforms with sectoral governance and capacity development.

KEYWORDS: Mortgage financing, project performance, construction projects, housing delivery, Kenya.

1.0 INTRODUCTION

Globally, mortgage financing plays a pivotal role in enabling access to housing and supporting construction sector growth. In developed economies, mortgage facilities have been shown to improve project performance by ensuring reliable cash flows, reducing financial uncertainty, and enhancing affordability for end-users (World Bank, 2023). However, construction projects remain complex undertakings influenced by multiple factors beyond financing, including contractor capacity, project management practices, and regulatory environments (Kerzner, 2017). Studies highlight that while mortgage financing can stabilize funding, its direct impact on project performance is often moderated by institutional efficiency and market conditions (Ling et al., 2009).

Across Africa, the housing deficit exceeds 51 million units, with mortgage financing increasingly promoted as a mechanism to bridge this gap (UN-Habitat, 2020). Yet, mortgage uptake remains low due to high interest rates, stringent collateral requirements, and limited affordability among middle- and low-income households (Centre for Affordable Housing Finance in Africa, 2023). Construction projects financed through mortgages often face delays, cost overruns, and quality challenges, raising questions about the extent to which financing structures influence project outcomes. Regional evidence suggests that while reliable funding is critical, project performance is equally dependent on governance, contractor competence, and risk management strategies (Mungai et al., 2025).

In Kenya, mortgage-financed construction projects (MFCPs) are central to the Affordable Housing Programme, which seeks to address a housing deficit of approximately 2 million units (Kenya National Bureau of Statistics, 2025). The Central Bank of Kenya (2023) reported 1,063 new mortgage facilities in the 2021/2022 financial year, underscoring the growing reliance on mortgage financing for project delivery. However, challenges persist: high borrowing costs, complex loan terms, and delays in disbursement often undermine project cash flows and timelines (Kawera & Datche, 2023). Empirical evidence indicates that while developers perceive mortgage financing as reliable and adequate, its direct correlation with project performance, measured in terms of budget adherence, schedule compliance, quality, safety, and cash flow, remains weak or modest. This raises critical questions about the actual effect of mortgage financing on construction project outcomes in Kenya.

Although mortgage financing is widely recognized as a key enabler of housing delivery, its direct impact on the performance of construction projects in Kenya remains unclear. Existing studies have largely focused on the availability and affordability of mortgage products, with limited attention to how financing characteristics, such as adequacy, reliability, favourability, and simplicity, translate into measurable improvements in project outcomes. This gap constrains policymakers, financiers, and developers from designing financing instruments that effectively support project success. While global and regional literature emphasizes the importance of financing reliability and adequacy, few empirical studies in Kenya have systematically examined the relationship between mortgage financing characteristics and project performance. The weak correlations

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observed in preliminary analyses suggest that financing alone may not be the dominant determinant of success, but its indirect effects and interactions with other project factors remain underexplored. This study seeks to:

1. Assess the current performance of MFCPs in Kenya.
2. Evaluate the characteristics of mortgage financing facilities adopted in the sector.
3. Analyze the relationship between mortgage financing aspects and the performance of MFCPs.

2.0 METHODOLOGY

2.1 Research Design

A research design establishes a framework for data gathering and analysis. This study adopts the survey research design described by Bryman (2012) and Creswell and Plano Clark (2017). Bryman (2012) describes a survey as one that studies multiple cases at a single point in time by measuring quantifiable data with the aim of identifying patterns of association. The advantage of data quantification is that it provides a consistent benchmark to the researcher and, at the same time, makes it possible to understand relationships between variables (Bryman, 2012).

2.2 Sampling Methods and Sample Size

The unit of analysis was the construction project, while the unit of observation was either the site agent or the clerk of works found on site. Inferences made were on all mortgage-financed construction projects, given that the sample size was selected probabilistically as outlined in the next section.

In this study, the population included all construction projects financed through mortgages throughout the country. This study focuses on the 1,063 mortgages initiated during the 2021/2022 financial year, as per the annual banking report by the Central Bank of Kenya (2023). The sample size was calculated based on the following formulae from Cochran (1977) and Baart et al. (2001).

$$n_0 = \frac{t^2 \times s^2}{e^2}$$

Where: -

- n_0 = required return sample size
- t = alpha level value (0.01 = 2.576 for sample size of 120 or more; the alpha level of .01 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error.) 2.576 is the z-score for a 99% confidence interval.
- s = estimated standard deviation in population for 7-point scale (1.167; estimate of variance deviation for 7-point scale calculated by using 7 [inclusive range of scale] divided by 6 [number of standard deviations that include almost all (approximately 98%) of the possible values in the range])
- e = acceptable level of error for the mean being estimated (0.21; number of points on primary scale $\times$ acceptable margin of error; points on primary scale = 7; acceptable margin of error = .03 [error researcher is willing to accept])

Therefore;

$$n_0 = \frac{2.576^2 \times 1.167^2}{0.21^2} = 205$$

However, since this sample size exceeds 5% of the population (1,063 $\times$ 5%=53), the following (Cochran, 1977) correction formula should be used to estimate the final sample size.

$$n_f = \frac{n_0}{1 + \frac{n_0}{\text{population}}} = \frac{205}{1 + \frac{205}{1063}} = 171 \text{ projects}$$

Where;

- n_f = final sample size
- n_0 = original sample size
- Population = target population

This study adopted simple random sampling as its choice of selecting the sample size from the population. According to Kothari (2004), this sampling method is also known as chance sampling or probability sampling because each item in the population has an equal chance of being included in the sample, and each of the possible samples, in the case of a finite universe, has the same probability of being chosen. An ideal sample is one that meets the requirements of efficiency, representativeness, dependability, and adaptability.

2.3 Data Collection

Upon approval of the research proposal by the university, the researcher sought permission from the National Commission for Science and Technology and Innovation (NACOSTI) to collect field data. According to Creswell (2003), structured interviews and questionnaires are the two most common research methods associated with survey research design. The latter was adopted in this study as the method of collecting data. The measured indicators were derived from previous literature and refined so that they were not only appropriate for the respondents but also generated enough data for hypothesis testing. The questionnaires were self-administered.

2.4 Data Analysis

The quantitative data were subjected to descriptive analysis using SPSS software. Descriptive statistics were used mostly to describe the distribution of variables. Measures of frequency (percent, count) and measures of central tendency (mean) were among the descriptive statistics that were performed. Pearson correlation was used to evaluate the relationship between mortgage financing and the performance of MFCPs.

2.5 Validity and Reliability

To ensure the questionnaire's validity, expert reviews were conducted to establish face and content validity. Five experts, including three from academia (thesis supervisors) and two from the industry, all with a combined experience of 112 years, gave suggestions on how to improve the

3.1.3 Type of Projects

The respondents were asked to indicate the type of project they were currently undergoing, and which was mortgage-financed. Results presented in Figure 3 showed that residential houses were the most commonly mortgage-financed, with a frequency of 68.3% (n=82). They were followed distantly by mixed-use development 13.3% (n=16) and commercial buildings 11.7% (n=14). Office buildings and industrial houses were the least mortgage-financed types of construction projects, each with a frequency of 3.3% (n=4).

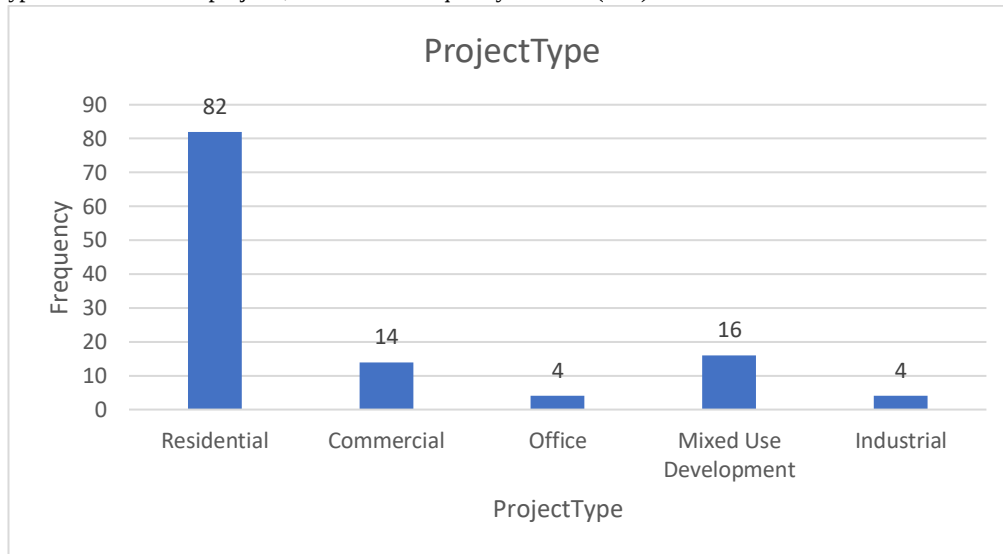


Figure 3: Type of Project

The results revealed that residential projects overwhelmingly dominate the mortgage-financed construction sector in Kenya, with commercial, office, mixed-use developments, and industrial projects making up a much smaller share. The overwhelming dominance of residential projects likely reflects Kenya's ongoing demand for housing, driven by population growth, urbanization, and government initiatives such as affordable housing programs. Mortgage products and incentives may be more accessible or attractive for residential developments compared to other sectors. The lower numbers for commercial, office, and industrial projects may be a number of things, (i) mortgage financing is less commonly used or less available for non-residential developments, (ii) these sectors might rely more on alternative financing structures (e.g., corporate loans, equity investment), and (iii) there may be greater perceived risk or longer payback periods for non-residential projects, making them less attractive for mortgage-backed funding. This is because such projects are more capital-intensive compared to residential projects.

The presence of 16 MUD projects (13.3%) suggests a growing trend towards integrated developments that combine living, working, and leisure spaces. This aligns with global urbanization trends and can enhance project viability by diversifying revenue streams and meeting multiple market needs. This is fundamental in ensuring that completed projects are capable of repaying the loan obligations.

3.1.4 Project Value

The respondents were asked to indicate the value of the construction project they were currently undertaking. Figure 4 presents interesting results where the extremes recorded the highest frequencies. The results assumed an inverted bell curve. The majority of the construction projects (n=62, 51.2%) undertaken had a value of "up to 20 million" Kenyan shillings, followed by those with a value of "above 120 million" Kenyan shillings (n=32, 26.4%). Projects worth KShs. 81 – 100 million had a frequency of 9.1% (n=11) while those worth KShs. 21 – 40 million had a frequency of 8.3% (n=10). Projects worth KShs. 41 – 60 million and KShs. 61 – 80 both came last with a frequency of 2.5% (n=3).

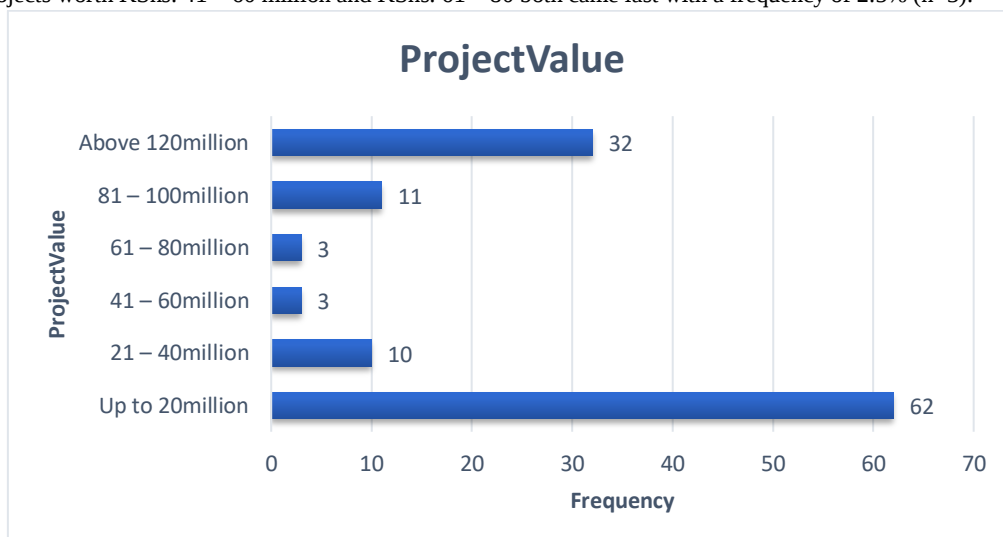


Figure 4: Project Value

The majority of projects (51%) fall into the “Up to 20 million” category. This suggests a strong concentration of small- to mid-scale developments, likely targeting affordable housing, which is a significant need in Kenya. This aligns with national priorities like the Affordable Housing Programme, which aims to increase access to affordable housing for low- and middle-income households (World Bank, 2020). The second-largest category (26%) includes high-end or large-scale developments. These could be commercial real estate, mixed-use developments, or luxury residential units aimed at upper-income markets or investors. This may reflect Kenya’s growing upper-middle-income earners. The data reveals a “missing middle” in project value (21–100 million), indicating a possible need for more tailored financing instruments for mid-sized developers.

3.1.5 Project Duration

The project duration was measured in weeks. This was done based on intervals of 12 weeks. Results in Figure 5 showed a fair distribution across all groups. Projects with a duration of “above 72 weeks” were the most frequent, with a frequency of 24.8% (n=30). Projects with a duration of “61-72 weeks” had the least representation with a frequency of 5.0% (n=6). Short-duration projects of “less than 12 weeks” had a frequency of 9.1% (n=11).

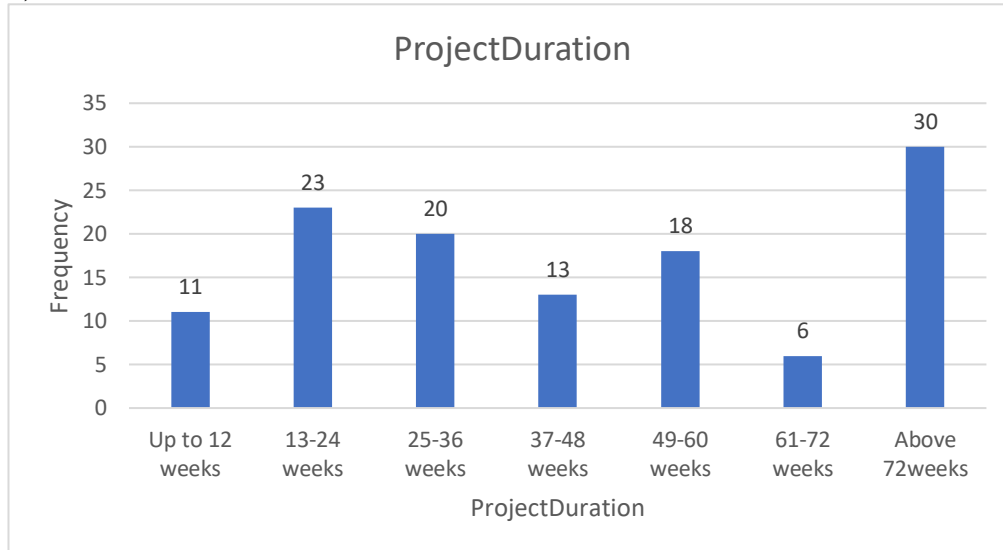


Figure 5: Project Duration

The highest number of projects (24.8%) reported durations of above 72 weeks, indicating that a significant portion of mortgage-financed developments in Kenya are long-term, complex projects, likely to be large-scale or multi-phase developments. This finding complements the earlier findings on project values, where a substantial number of projects also had high values, suggesting that large investments correlate with extended construction timelines.

The second most common durations are 13–24 weeks (19%) and 25–36 weeks (17%). These reflect short- to medium-term construction projects, likely aligned with small- to mid-sized residential projects, such as single-family homes, low-rise apartments, or smaller gated communities. Only 11 projects (9%) were completed in up to 12 weeks, suggesting that rapid builds are rare, possibly due to challenges such as bureaucratic delays (permits, approvals), shortage of skilled labour or materials, and limited use of prefabricated or modular technologies, among other reasons. Long project durations raise the risk profile for lenders and developers, especially in Kenya, where project delays are common (World Bank, 2021).

3.2 Current Performance of MFCEPs

Five aspects were used to evaluate the performance of MFCEPs. These were: budget adherence, schedule adherence, project quality, safety standards, and project cash flow. A seven-point Likert scale was used. The results have been presented in Table 1.

Table 1: Performance of MFCEPs

Variable	N	Min	Max	Mean	SD	CV
Budget Adherence	123	1	6	3.21	.861	27%
Schedule Adherence	123	1	5	3.15	.906	29%
Quality Expectations	123	2	7	4.89	.895	18%
Safety Incidents	123	1	7	4.86	1.719	35%
Cash Flow Problems	122	1	7	4.23	1.365	32%

Source: (Author, 2025)

Budget adherence in mortgage-financed construction projects (MFCEPs) in Kenya shows a mean score of 3.21, indicating slight overruns attributed to unforeseen costs and poor planning. Schedule adherence averages at 3.15, revealing that most projects are behind schedule, often due to manageable issues but occasionally due to systemic challenges. Project quality averages 4.89, indicating a focus on meeting standards, though some projects face significant quality deficiencies. Safety standards show a mean of 4.86, with most incidents being minor, but serious accidents signal a need for better safety management. Cash flow issues are prevalent, with a mean of 4.23 reflecting moderate challenges that disrupt

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payments and project timelines. High variability in responses across these metrics illustrates the inherent risks and inconsistencies within the construction sector in Kenya.

3.3 Nature of the Mortgage Facility

The study evaluated five aspects of mortgage financing measured using a 7-point Likert scale, ranging from “extremely low” to “extremely high”. The results are presented on Table 2. The best-ranked aspect of the mortgage financing facilities was “reliability of project funding” with an RII of 0.661 (66.1%). This was followed by “adequacy of project funding” with an RII of 0.633 (63.3%). The last ranking aspects of mortgage financing were “favourability of cost of finance” and “simplicity of the financing terms” with RII values of 0.591 (59.1%) and 0.580 (58.0%), respectively. The CV values ranged between 28%-39%, indicating relatively low to medium variability of the data.

Table 2: Characteristics of Adopted Mortgage Financing Facilities

	Features of Mortgage Facility	Min	Max	Mean	SD	CV	RII	Rank
a)	Ease of securing project funding	1	7	4.30	1.342	31%	0.614	3
b)	Adequacy of project funding	1	7	4.43	1.253	28%	0.633	2
c)	Reliability of project funding	1	7	4.63	1.312	28%	0.661	1
d)	Favourability of cost of finance	1	7	4.14	1.544	37%	0.591	4
e)	Simplicity of the financing terms	1	7	4.06	1.571	39%	0.580	5

Source: (Author, 2025)

Developers perceive the reliability of project funding as the strongest feature of the mortgage financing facilities. Reliable funding ensures that disbursements are made as scheduled, supporting smooth project execution (PMI, 2021). This is critical in construction projects where delays in funding can cause costly stoppages (Kalegera & Omoro, 2020). Adequacy reflects whether the loan amount sufficiently covers project costs. Developers generally agree that funding is adequate, but the score (RII=0.633, 63.3%) indicates room for improvement. Insufficient funding can lead to project scope reduction, delays, or quality compromises (Umulisa et al., 2015). Ease of access to financing was moderately rated, suggesting some challenges in loan application, approval, or documentation processes. Barriers such as stringent collateral requirements and lengthy procedures are common in Kenya’s mortgage market (CBK, 2023). Improving ease of access can expand financing uptake and project initiation rates (World Bank, 2020). The cost of finance, including interest rates and fees, was rated lower, reflecting concerns over affordability. High financing costs increase project expenses and can limit profitability (Kawera & Datche, 2023). This aligns with the previously observed relatively high interest rates in Kenya’s construction finance sector. The simplicity of loan terms was rated lowest. Complex terms can discourage developers and increase the risk of misunderstandings or disputes (PMI, 2021). Simplifying loan agreements and improving borrower education could enhance satisfaction and compliance.

3.4 Effect of Mortgage Financing on the Performance of MFCEPs

Table 3 presents a correlation analysis between the performance of MFCEPs and the five aspects of mortgage financing explored in this study, namely, ease, adequacy, reliability, favourability, and simplicity. None of the five financing aspects showed strong or statistically significant correlations with project performance at the conventional 0.05 level. The highest correlations are for adequacy ($r=0.176$, $p=0.053$) and favourability ($r=0.176$, $p=0.052$), which are marginally significant (just above the 0.05 threshold). Ease, reliability, and simplicity display weak positive but statistically non-significant associations with project performance. These findings suggest that while mortgage financing characteristics have some positive association with construction project performance, the direct impacts are modest or weak. The marginal significance of adequacy and favourability implies that when mortgage funds are considered sufficient for project needs (adequacy), and financing terms are perceived as favourable, there might be some beneficial effect on project outcomes. This aligns with the understanding that adequate and favourable financing eases cash flow pressures and resource availability, which can indirectly improve cost control, scheduling, and quality during construction (Ling et al., 2009). However, other influential factors, such as project management competency, contractor capability, resource availability, and risk management, are likely stronger drivers of performance than mortgage financing aspects alone.

Table 3: Correlation between Performance of MFCEPs and Mortgage Financing

		(PP)	(E)	(A)	(R)	(F)	(S)
Project Performance (PP)	Pearson Correlation	1	.083	.176	.101	.176	.122
	Sig. (2-tailed)		.365	.053	.270	.052	.180
	N	123	122	122	122	122	122
Ease (E)	Pearson Correlation	.083	1	.808**	.754**	.757**	.737**
	Sig. (2-tailed)	.365		.000	.000	.000	.000
	N	122	122	122	122	122	122
Adequacy (A)	Pearson Correlation	.176	.808**	1	.866**	.768**	.786**
	Sig. (2-tailed)	.053	.000		.000	.000	.000
	N	122	122	122	122	122	122
Reliability (R)	Pearson Correlation	.101	.754**	.866**	1	.735**	.776**
	Sig. (2-tailed)	.270	.000	.000		.000	.000

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	N	122	122	122	122	122	122
Favourability (F)	Pearson Correlation	.176	.757**	.768**	.735**	1	.831**
	Sig. (2-tailed)	.052	.000	.000	.000		.000
	N	122	122	122	122	122	122
Simplicity (S)	Pearson Correlation	.122	.737**	.786**	.776**	.831**	1
	Sig. (2-tailed)	.180	.000	.000	.000	.000	
	N	122	122	122	122	122	122

** . Correlation is significant at the 0.01 level (2-tailed).

Source: (Author, 2025)

Three possible reasons could be attributed to the weak direct correlations. First is the complex and multifaceted nature of construction project performance. Project success depends on numerous internal and external factors beyond financing characteristics, such as client engagement, contractor capacity, project management practices, and external regulatory and environmental conditions (Kerzner, 2017). Secondly, indirect effects and mediation could be at play. Mortgage financing may indirectly influence performance through other mediators (e.g., resource availability, timely payments), which would not be captured by simple bivariate correlations. Third, are measurement and sample size limitations. The near significance of adequacy and favourability hints that with larger samples or refined measurement scales, stronger statistical associations might emerge.

The findings also revealed strong intercorrelations among mortgage financing aspects. The very high positive correlations between ease, adequacy, reliability, favourability, and simplicity (ranging from 0.737 to 0.866, all highly significant) indicate that these dimensions represent a consistent underlying construct related to mortgage financing quality or client perception. For example, a mortgage that is perceived as easy to obtain is also likely considered simple, reliable, and favourable. This suggests the potential for combining these dimensions into a composite index of mortgage financing quality in future analyses, which may have a stronger relationship with project performance.

It is clear from the findings that mortgage financing quality matters, but is not the dominant determinant of construction project success. Efforts to improve the adequacy and favourability of mortgage products, such as ensuring sufficient loan amounts and competitive interest rates and repayment terms, could enhance project performance to some extent. Given the strong interrelation of mortgage financing aspects, enhancing overall client satisfaction with mortgage products (ease, simplicity, reliability) might indirectly support better project implementation by reducing financial stress and delays. Stakeholders should combine financing improvements with robust project management, contractor development, and risk mitigation strategies for more substantive impacts on project outcomes.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

This study set out to examine the effect of mortgage financing on the performance of mortgage-financed construction projects (MFCPs) in Kenya. The findings reveal that while mortgage financing is perceived by developers as reliable and generally adequate, its direct correlation with project performance indicators, budget adherence, schedule compliance, quality, safety, and cash flow is weak or modest. The marginal significance of adequacy and favourability suggests that sufficient loan amounts and competitive financing terms can ease cash flow pressures and indirectly improve project outcomes. However, other factors such as project management competence, contractor capacity, and resource availability appear to exert stronger influence on performance than financing characteristics alone.

The study also found strong intercorrelations among mortgage financing aspects—ease, adequacy, reliability, favourability, and simplicity—indicating that these dimensions form a consistent underlying construct of financing quality. This suggests that developers perceive mortgage products holistically, where improvements in one aspect (e.g., ease of access) often coincide with improvements in others (e.g., reliability and simplicity). Overall, the evidence underscores that while mortgage financing is a critical enabler of housing delivery, it is not the sole determinant of project success. Effective performance requires combining financing improvements with robust project management, contractor development, and risk mitigation strategies.

4.2 Recommendations

4.2.1 For Developers

- Strengthen project management practices to complement mortgage financing, ensuring efficient use of funds and minimizing delays.
- Invest in contractor training and capacity building to reduce inefficiencies and improve quality outcomes.

4.2.2 For Financiers

- Enhance the adequacy of mortgage facilities by aligning loan amounts more closely with project requirements.
- Improve favourability of financing terms through competitive interest rates, flexible repayment schedules, and reduced collateral demands.
- Simplify loan agreements to reduce complexity and improve borrower understanding and compliance.

4.2.3 For Policymakers and Regulators

- Develop policies that incentivize affordable mortgage products, particularly for mid-sized developers who face financing gaps.
- Strengthen oversight mechanisms to ensure timely disbursement of funds and reduce bureaucratic bottlenecks.
- Promote integrated frameworks that combine financing with technical support for project management and contractor development.

4.2.4 Cross-Sectoral Recommendation

- Stakeholders should adopt a holistic approach where mortgage financing improvements are paired with governance, risk management, and capacity-building interventions. This integrated strategy will better position MFPCs to deliver affordable, high-quality housing aligned with Kenya's national development goals.

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