

The Relationship between Budgeting Practices and Financial Performance of Housing Construction Firms in Nairobi City County, Kenya

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Abstract: Budgeting is key to enterprises' success, especially in monitoring and evaluating performance. Nonetheless, little is known about the influence of budgeting practices on the performance of construction firms in Kenya. This study, therefore, investigates the effects of budgetary control, planning, coordination, communication, and evaluation on construction firms' performance. The study is guided by the goal-setting, agency, and budget control theories, which emphasise the importance of budgeting practices in achieving financial performance. A cross-sectional design is employed, and data is collected through questionnaires administered to a random sample of 196 firms. Multiple regression findings reveal a positive and significant association between budget control, coordination, evaluation, and financial performance, explaining 37.3% of the variance. Therefore, it is recommended that housing construction firms in Nairobi County prioritise budget control, coordination, and evaluation practices to enhance their financial performance.

Keywords: Budgeting, financial performance, construction firms, budgetary control, budget coordination, budget evaluation, goal setting

1. INTRODUCTION

The worldwide construction industry has been experiencing significant growth in recent years. According to Turner and Townsend (2018), the sector has been increasing by approximately USD 0.3 trillion annually, leading to a growth of about 45 percent in global construction output between 2010 and 2020, from USD 7.4 trillion to USD 10.7 trillion. Furthermore, projections indicate that the sector's global output is expected to reach USD 13.3 trillion and USD 15.2 trillion in 2025 and 2030, respectively (Turner and Townsend, 2018). Despite this promising growth, the construction industry's performance, particularly in the building business, has been subpar (Abdi, 2022; GlobalData, 2022).

In the Sub-Saharan African (SSA) region, the construction sector has also experienced significant growth, with an annual growth rate of 6.6 percent between 2018 and 2020 (GlobalData, 2022). In Kenya, the construction industry has been expanding faster than other sectors, with a growth rate of 5.8 percent and 11.8 percent in 2016 and 2020, respectively. During this period, the sector's contribution to the country's GDP increased from 5.1 percent to 7.0 percent, driven by investments in public and private infrastructure projects, such as affordable housing development under the Big Four Agenda and private building constructions (Kenya National Bureau of Statistics, 2021).

The construction sector boosts the economy by creating jobs, stimulating growth in the agricultural sector, and expanding the export market hence crucial to Kenya's Economy. The sector provides the structures and infrastructure other sectors rely on and is also a sizable industry (Mutai et al., 2017). Cognizant of this fact, through the Big Four Agenda launched in 2017, the Government of Kenya aimed to increase the sector's share of GDP to 15 percent by 2022. However, despite the growth in the construction sector, the sector's average contribution to GDP was about 5.9 percent between 2016 and 2020, which is still below the target of 15 percent. This indicates that construction firms are operating at sub-optimal performance levels. GlobalData (2022) reports that inadequate adoption of budgeting practices leads construction firms to struggle with financial performance.

Numerous research has been undertaken to determine how budgeting practices affect financial performance. For instance, Mazikana (2019), Mutai et al. (2017), Koitaba et al. (2016), and Pimpong and Laryea (2016) consistently supported the argument that budgeting is significant and influences a firm's performance positively. Other studies, such as Abongo, 2018; Mbogo, Macharia, and Olando(2021), focused on the financial performance of SMEs, while others focused on public universities (Otieno, 2019). While the significance of budgeting practices in improving financial performance has been acknowledged, limited research specifically focuses on the housing construction sector in a different context from the targeted areas. Therefore, this study aims to examine the effect of budgeting practices on the financial performance of housing construction firms in Nairobi County, Kenya. By understanding the relationship between budgeting practices and financial performance, this research seeks to provide insights that can enhance the efficiency and effectiveness of budgeting in the construction industry, ultimately contributing to the achievement of Kenya's development goals.

2. THEORETICAL FRAMEWORK

The theoretical framework of this study integrates three theories to understand the relationship between budgeting procedures and firms' performance. The goal-setting theory, proposed by Locke and Latham (2015), highlights the significance of setting specific goals, communicating them to employees, and evaluating their achievement. In budgeting, this theory suggests that budget plans serve as the means to set goals, which are then communicated to employees through budget communication. Budgetary controls and coordination are employed to ensure compliance with the set goals, and budget evaluation is conducted to assess goal attainment. This theory, therefore, is used to support the hypothesised link between budgetary planning, control, communication, coordination, evaluation, and firm performance, emphasising the importance of aligning targets and results.

Then the study also uses insights from the agency theory formulated by Jensen and Meckling (1976). It posits that agents are expected to act in the best interests of principals, but conflicts of interest may arise, leading to agency problems and declining firm performance. According to Hofmann (2003), budget coordination plays a crucial role in mitigating agency problems by aligning agents' efforts with the firm's objectives. Budget coordination ensures that agents' actions are directed toward performance improvement, while budget communication enhances transparency. By integrating the agency theory with budgetary coordination and communication, this study recognises the importance of managing conflicts of interest to enhance firm performance. The other theory is the budgetary control theory, as developed by Hirst (1987), with emphasis on the link between budgetary controls and firm performance. It states that an effective budgetary control system ensures the efficient allocation and utilisation of resources in line with the firm's objectives. Budgetary controls, such as expenditure ceilings, help align performance with objectives and detect disparities. By applying this theory to housing construction firms, the study recognises the potential of budgets to control resource expenditure and improve performance.

Overall, the integrated theoretical framework incorporates goal-setting, agency, enterprise growth, and budgetary control theories. This framework recognises the importance of goal alignment, conflict management, effective resource utilisation, and control systems in enhancing firm performance through budgeting practices. By investigating various budgeting techniques, the study aims to provide a comprehensive understanding of their impact on the financial performance of housing construction firms.

3. CONCEPTUAL FRAMEWORK

Figure 1 shows the different practices hypothesised to influence firm performance in this study. First budgetary control is necessary for managing financial resources and organisation decision-making (Mazikana, 2019). Empirical studies have shown that budgetary control positively impacts firm performance in various industries. For instance, Koech (2015) found that budgetary control improved financial and budgetary abilities, leading to better financial decision-making in Kenyan construction firms. Similarly, Mbuthia and Omagwa (2019) observed a positive relationship between budgetary control practices and the financial performance of Kenyan commercial banks. However, these studies have mainly focused on overall performance rather than specifically examining financial performance, creating a knowledge gap.

Budget coordination is another critical aspect of effective budgeting practices in the conceptual framework. Abongo (2018) demonstrated that improved budget coordination positively influenced the performance of small and medium-sized enterprises (SMEs) in Kenya. The study focused on general performance measures rather than financial performance, leaving room for further investigation into the specific relationship between budget coordination and financial performance in the Kenyan context concerning construction firms. Then, Olanrewaju, Tan, and Kwan (2017) emphasised the positive impact of budget communication on the performance of construction firms in Malaysia. Poor budget communication hindered the firms' productivity and, subsequently, their overall performance. Moreover, Budgetary planning is a crucial component of effective budgeting practices, as it guides firms in cash management and investment decisions. Foster (2017) found a positive correlation between budget planning and financial performance in small-scale construction firms in the United States.

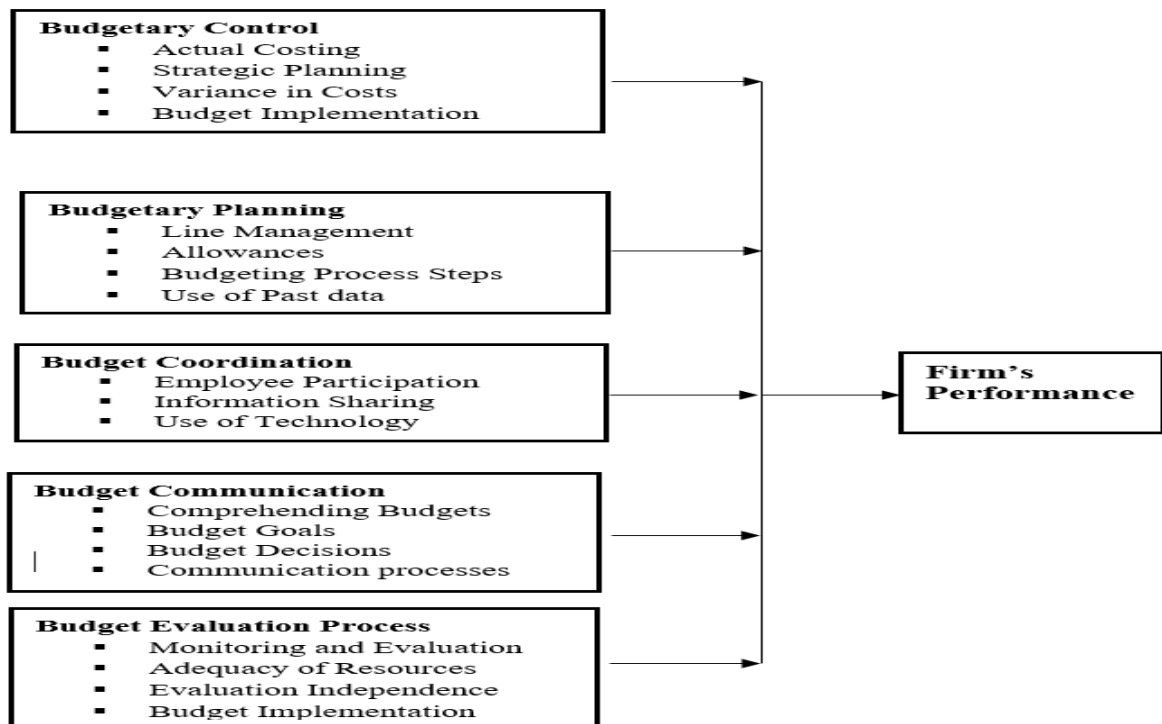


Figure1. *The relationship between budgeting practices and firms' performance*

However, the study neglected to include medium and large-scale firms. The current study explores the relationship between budget planning and financial performance across small, medium, and large-scale housing construction firms to address this gap.

Finally, Budget evaluation is another aspect of budgeting practices that can significantly impact firm performance. Agbenyo, Danquah, and Shuangshaung (2018) discovered a strong positive correlation between budget evaluation and financial performance in construction firms in China. However, few studies have examined the relationship between budget evaluation and construction firm performance in Kenya.

4. MATERIALS AND METHODS

4.1. Research Design and Sampling Procedure

The study followed a cross-sectional research design targeting finance department employees of housing construction firms in Nairobi County classified under NCA-1. The NCA-1 is a classification of construction firms used by Kenya's National Construction Authority (NCA) to group housing/building construction firms with unlimited contract value. The study used a survey money link shared with a representative sample of housing construction firms in Nairobi County drawn from an NCA list. A random sampling technique was utilised to avoid potential bias in selecting specific firms for the study. The target sample size of 196 respondents was determined based on a

methodology outlined by Kothari (2017) and previously used in a similar study conducted by Pimpong and Laryea (2016) for Ghana. However, the survey reached 166 respondents representing an 84.69% response rate. The sample was sufficient to undertake the planned analyses in line with Kothari (2017).

4.2. Empirical Method

The study used a 7-point Likert scale to measure the independent and dependent variables, financial performance, assessed through different statements. Principal Component Analysis (PCA) created a single index variable used in the multiple linear regression model. As described by Woolridge (2015), the model utilised in this study's empirical model is as follows:

$$Y = f(X_i) \quad (1)$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U \quad (2)$$

Whereby Y denotes the financial performance of housing construction firms; $X_1, X_2, X_3, X_4,$ and X_5 denote the explanatory variables, namely: budgetary planning, budgetary control, budget coordination, budget communication and budget evaluation, respectively; β 's represent the parameters to be estimated; i denotes the individual housing construction firm; lastly U represents the error term. Budget control was defined by the extent to which planned and actual outcomes align and the review of variances. The extent of information exchange and staff involvement was used to assess budget coordination. The effectiveness of budget communication is measured by whether specified principles and objectives are articulated during the budgeting process. Budgeting practices were evaluated on a likert scale of 7 points, where 1 represents no extent, and 7 represents an extremely great degree.

5. RESULTS AND DISCUSSION

5.1. Respondents Characteristics

The study results indicate that 57% were male and 43% were female. Construction jobs in Kenya are overwhelmingly male-dominated due to the nature of the industry, technical, labour and time requirements which disfavour females. The findings are consistent with Hernandez-Nicolas et al. (2022) findings of lower female participation in the construction industry despite companies they led achieving better firm performance and lower debt levels. According to the findings, 56% of respondents had undergraduate degrees, 22% had diploma qualifications, and 5% had a master's degree. The results indicate that the financial departments of Kenyan house construction companies have a highly educated and skilled workforce that can perform their duties. A person's literacy level may be a reliable indicator of their capacity to comprehend budgetary procedures and company performance trends. On average, the respondents have worked in a finance department for around 12 years and are about 42 years old. Since most respondents had worked in financial activities substantially, they were qualified to answer questions about budgetary procedures and firm performance.

5.2. Descriptive Statistics for the Budget Practices and Financial Performance

5.2.1. Budgetary Planning

The data presented in Table 1 indicates that many respondents agree that budget plans are built on historical data statements, which have a mean value of 5.47. Results indicate that creating budgets by the separate managers in each department for a merger to make the total budget with a mean of 3.12 is the least likely practice to be undertaken as part of budget planning. Still, the statement 'Budgets are created by the separate managers for their departments, which are then merged to make the total budget.' has the highest PCA score of 0.98. Thus, budget creation by separate managers is a critical element of budget planning. Kramer and Hartmann (2014) observe that this separation of the function improves managers' attitudes. As a result, budget slacks are reduced, raising firm performance.

Table1. Budgetary Planning

Statement	Mean	SD	PCA
Department managers create budgets for their respective departments, consolidated to form the overall budget	3.12	1.96	0.982
The top-level executives convey communication of the developed budget proposals to the staff member responsible for creating the budget	4.65	1.98	0.590
Previous data forms the baseline for preparing budget plans	5.47	1.72	0.632
The allowances and variations from the various requirements that must be made are specified in the budget plan.	4.64	1.99	0.581
The budget plan delineates the necessary actions to be taken throughout the budgeting procedure	5.01	1.93	0.467

5.2.2. Budgetary Control

Table 2 displays that most participants, with a mean score of 5.66, agree that financial control is beneficial for regulating operations and devising strategic plans. According to Jermias (2023), budget controls help with risk management, mitigation, monitoring firm activities, and strategic planning and through the process stability of cashflows is guaranteed. From the PCA, the statement "Budgetary control in the firm entails comparing the actual cost to the budget and implementing corrective actions as needed" is the most important element of budget control. Nonetheless, the results indicate that the respondents with a score of 3.6 were relatively neutral in rating the practice.

Table2. Budgetary Control

Statement	Mean	SD	PCA
Budgetary control enables managers to match actual outcomes with the plan	5.57	1.81	0.723
Budgetary control aids in the connection between the firm's operational control and strategic planning	5.66	1.68	0.794
Budgetary control in the firm entails comparing the actual cost to the budget and implementing corrective actions as needed	3.63	2.33	0.946
Budgetary control begins at the lowest levels and works its way up.	4.76	2.13	0.527
Budgetary control better explains budget fluctuation, allowing for eliminating some components while focusing on others	5.29	1.70	0.578

5.2.3. Budget Coordination

The findings in Table 3 below demonstrate that the respondents support the statements used to assess control activities. This implies that most housing construction firms ensure employees participate in budgeting by properly sharing information.

Table3. Budget Coordination

Statement	Mean	SD	PCA
The firm guarantees that employee engagement in the budgeting process improves budgeting success	5.10	1.99	0.749
At all levels of management, the company places a high value on sharing and exchanging information	4.94	1.77	0.749

5.2.4. Budget Communication

Table 4 results indicate that most participants approved the statements evaluating budget communication. Specifically, most of them agreed with the statement, 'Managers have a strong grasp of their duties in maintaining a successful budgeting process'. Further, the PCA analysis results show that the statement 'Justifications for the firm's budget decisions are provided' strongly contributes to the assessment of variable budget communication.

Table4. Budget Communication

Statement	Mean	SD	PCA
Managers have a strong grasp of their duties in maintaining a successful budgeting process	4.59	1.82	0.735
To improve comprehension, management uses the budget to explain the firm's aims and ambitions	4.60	1.93	0.719
Justifications for the firm's budget decisions are provided.	4.50	1.70	0.819
Whenever it comes to budgeting, the firm improves communication	4.40	1.80	0.743
The firm informs all key stakeholders of the consequence of budget choices	4.30	1.82	0.733

5.2.5. Budgetary Evaluation Process

The results of Table 5 indicate that the participants generally agree with most of the statements presented. However, there was a notable exception with the statement about evaluating the wise and productive use of resources, where the agreement level was lower than in other statements. The mean was 4.34, indicating indecision among the respondents. This suggests that there may be some concern among participants regarding the management and utilisation of resources.

Table5. Budgetary Evaluation Process

Statement	Mean	SD	PCA
Managers take part in the budgetary process's appraisal and monitoring	5.04	1.67	0.810
The firm evaluates budget execution and its consequences	5.39	1.57	0.838
The evaluation is carried out by an independent organisation that possesses adequate resources and expertise to undertake the evaluation without any biases	5.24	1.55	0.842
The evaluation of whether the resources have been utilised in a prudent and efficient manner	4.34	1.81	0.239

5.2.6. Firm Financial Performance

Most respondents stated that their respective companies' revenue growth in the previous three years ranged from 20% to 40%. Figure 2 shows very few perform below 10%, about 3%. The reported growth aligns with those national values reported by the Kenya Revenue Authority of about 23% (KRA, 2022).

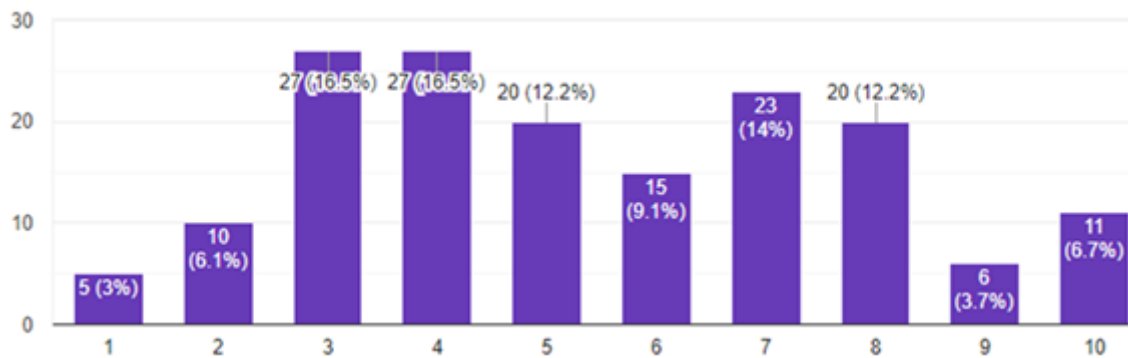


Figure2. Perceptions about the growth in revenue of housing construction firms

Most respondents reported that their firms' sales revenue had increased by 20-39%. A significant percentage of 14.7% indicates that their profits have declined by less than 20%, perhaps the COVID-19 pandemic contributing. The results align with those reported in Figure 4. In providing an overall opinion of what they think about the overall financial, 26.8% of the respondents feel that it was neither bad nor good in the last three years. The results are divergent from Ongondo et al. (2019) conclusion that most construction firms show poor performance and more than 35% face cost overruns.

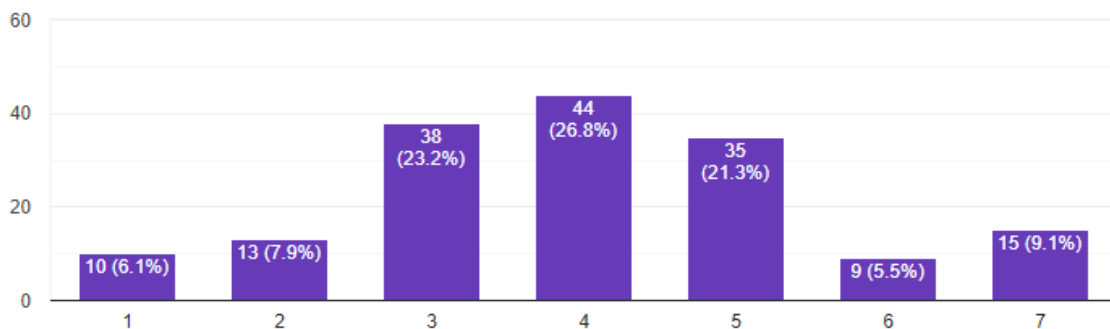


Figure3. Perceptions of financial performance in the construction firm over the last three years

Nonetheless, the respondents' opinions may be supported by the economic survey report 2021 indicating that the growth in the industry almost doubled from 2019 5.6% to about 11.8% in 2020 (Kenya National Bureau of Statistics, 2021). Additionally, the slower growth and decline to 6.6% Kenya National Bureau of Statistics (2022) registered in 2021 may support the below-average ratings.

5.3. Correlation Analysis

Table 6 results indicate budget control and financial performance are significantly related ($r=0.514$, $p<0.001$). Similarly, Koech (2015) study discovered a significant association between the two factors. Further, a positive correlation was found between budget control and budget coordination ($r=0.589$, $p<0.001$). This suggests that budget evaluation and coordination in Kenyan house construction enterprises are increased by increased budget management (Table 6 below). The outcomes are consistent with the assertion made by the Budgetary Control Theory that an effective control system increases efficiency and promotes proper expenditure management. Budget communication and evaluation process positively correlate ($r=0.546$, $P< 0.001$).

Consequently, in budget processes sharing information will improve the monitoring and valuation aspects. Likewise, and expectedly communication is positively correlated with budget coordination. The results resonate with the findings of Schoute and Wiersma (2011).

Table6. Correlation analysis

	FP	BP	BC	BCD	BCMM
Financial performance (FP)	1				
Budget planning (BP)	0.112	1			
Budget control (BC)	0.514***	0.136	1		
Budget coordination (BCD)	0.515***	0.104	0.589***	1	
Budget communication (BCMM)	0.408***	0.077	0.361***	0.518***	1
Budget evaluation process	0.539***	0.046	0.584***	0.576***	0.546***

*** 1%, ** 5%, * 10 % level of significance

Proper communication improves coordination, consequently impacting budgetary slack positively. As a result, financial performance improves. Contrary to the postulation of the Enterprise Growth Theory by Churchill and Lewis (1983), budget planning was not significantly correlated with financial performance in the present study.

5.4. Multiple Linear Regression Analysis

The variance inflation factors range was 1.046 to 1.979. Hence there was no sign of multicollinearity. The Breusch-Pagan test results yielded $\chi^2(1) = 14.88$ and $p< 0.001$; thus, the test hypothesis is rejected, implying no heteroscedasticity. The F-value of 20.047 was statistically significant at a 1% level, indicating that the regression model fit the data better than a model with no independent variables. The F-test of overall significance confirmed this. Table 7 shows the F-value of 20.047 was statistically significant at a 1% level, indicating that the model fit the data better than a model with no independent variables.

Table7. Model FIT

	Sum of Squares	df	Mean Square	F	Sig.
Regression	63.144	5	12.629	20.047	<.001 ^a
Residual	97.643	155	.630		
Total	160.787	160			

Results presented in Table 8 reveal a significant and positive association between budget control, budget coordination, budget evaluation processes and financial performance. Additionally, according to the model summary results in Table 8, the practices collectively account for 37.3% of the variance in financial performance. This is in line with Koech's (2015) finding concerning manufacturing firms showing that participatory budgeting proxy for coordination, monitoring and control process positively influences the explained variable considered in this study's financial performance.

Controlling the budget has a positive influence on how well construction companies operate. Financial performance is increased by 24.7%, ceteris paribus. As a result, implementing control activities is beneficial to improve the performance of housing construction firms. Frow et al. (2010) observe integrating control systems into routine budgeting aids managers in setting priorities and modifying plans to account for uncertainties, which helps them stay committed to budgetary targets.

The findings revealed an association between budget coordination and a company's financial performance. Increasing budget coordination by one unit is associated with a 19.5% improvement in the financial performance of construction firms, *ceteris paribus*. As a result, the findings are consistent with the research of Abongo (2018), which found that budget coordination in small and medium-sized businesses influences and improves financial performance. They concur with Pimpong and Laryea's (2016) findings that coordination across non-banking institutions slightly improves financial performance.

The results indicate that budgetary planning and budget communication do not affect construction firms' performance. The result contradicts Abongo (2018) study, which suggests that financial performance is affected by planning and communication as components of the budgetary process. However, the study differs from the present research in terms of context. The current study targeted housing construction firms across the industry, while the authors focused on the top 100 small and medium enterprises.

Table 8. Multiple regression results

	Coefficient	Std. err.	t	P>t
Budget planning	0.074	0.064696	1.14	0.256
Budget control	0.247	0.084024	2.94	0.004
Budget coordination	0.195	0.086805	2.24	0.026
Budget communication	0.080	0.079579	1.01	0.316
Budget evaluation process	0.242	0.088278	2.74	0.007
Constant	-0.011	0.062566	-0.18	0.861
F(5, 155)	20.05			
Prob > F	0.000			
R-squared	0.3927			
Adj R-squared	0.3731			
Root MSE	0.7937			

Budget evaluation significantly and positively enhances a company's financial performance. A unit increase in the budget evaluation process leads to about 24.2% improvement in firm performance, all other factors constant. This study's outcome complements earlier research that concluded that the financial performance of Ghana's listed manufacturing enterprises depends on evaluation as part of the budgeting process (Agbenyo et al., 2018).

6. CONCLUSION

Evaluating and understanding budgeting practices and financial performance are crucial for housing construction firms in Nairobi City County, Kenya, as they face significant financial challenges in these areas. The current study conducted multiple linear regression analyses on the relationship between budgeting practices and financial performance in housing construction firms in Nairobi City County, Kenya. The results revealed that budget control, budget coordination, and budget evaluation processes have a positive and significant impact on financial performance. The study also found that these practices collectively account for 37.3% of the variance in financial performance. These findings are consistent with previous research in the manufacturing sector and small and medium-sized enterprises, suggesting that participatory budgeting, control systems, and coordination improve financial performance. The study further indicates that budgetary planning and communication do not significantly affect the financial performance of housing construction firms.

In conclusion, the study highlights the importance of budget control, coordination, and evaluation in improving the financial performance of housing construction firms in Nairobi City County, Kenya. The model used in the study was substantial, demonstrating that the variables independent of each other explain a considerable portion of the financial performance variance. With an adjusted R-squared value of 0.3731, it can be concluded that roughly 37% of the financial performance difference is accounted for by the independent variables in the model.

7. RECOMMENDATIONS

Policymakers and industry players can use these findings to develop policies and practices that promote effective budgeting and financial management in the housing construction industry. Housing construction firms in Nairobi County should focus on improving their budget control, coordination,

and evaluation processes. This can be achieved by regularly monitoring and evaluating the budget, ensuring that all stakeholders are involved in the process, and using independent organisations for evaluation. By improving budgeting practices, firms can better manage their finances, reduce waste, and optimise resources. In addition, policymakers should encourage housing construction firms to adopt robust budgeting practices. This can be achieved by providing training programs and technical assistance to firms. Policymakers should also promote transparency and accountability in budgeting, including regular monitoring and evaluation of budget performance.

However, the importance of budget planning and communication should not be overlooked, despite the findings that they do not significantly affect financial performance. Firms should continue to ensure that their budget plans are comprehensive and realistic and that communication regarding the budget is clear and transparent. While the research on budgeting practices and financial performance of housing construction firms in Nairobi City County, Kenya, provides valuable insights, several areas still require further exploration. For example, future research could explore other factors influencing financial performance in the housing construction industry, such as sustainability practices and innovation. In addition, there is a need for further research on the effectiveness of different budgeting models, such as zero-based budgeting and activity-based budgeting, in the housing construction industry in Nairobi City County, Kenya. The study could compare the performance of different budgeting models and identify the most effective model for housing construction firms in the region.

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