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## PROJECT COST MANAGEMENT PRACTICES AND THE PERFORMANCE OF AFFORDABLE HOUSING PROGRAM IN KENYA

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### ABSTRACT

**Purpose:** The study examined the influence of project cost management on the performance of the Affordable Housing Programme (AHP) in Kenya. It specifically focused on how cost estimation, budgeting, expenditure monitoring, and cost control contribute to the effective implementation and performance of affordable housing projects.

**Methodology:** The study adopted a positivist research philosophy and combined descriptive survey and correlational research designs. The target population comprised project management personnel involved in the planning, implementation, coordination, monitoring and control of Affordable Housing Programme projects in Kenya. Using Cochran's formula, a sample of 384 project personnel was determined, with respondents selected through multistage stratified purposive sampling. Data were collected using structured questionnaires and analysed using descriptive and inferential statistics, with qualitative responses analysed through content analysis.

**Findings:** The findings established a statistically significant positive relationship between project cost management and the performance of the Affordable Housing Programme ( $R = .525$ , adjusted  $R^2 = .273$ ,  $p < .001$ ). Project cost management significantly predicted programme performance ( $\beta = .525$ ,  $t = 10.133$ ,  $p < .001$ ). The findings indicate that effective cost estimation, budgeting, resource planning, expenditure monitoring and cost control are associated with improved programme performance. Consequently, the null hypothesis was rejected.

**Recommendations:** The study recommends strengthening cost management throughout the implementation of the Affordable Housing Programme. Implementing agencies should improve cost estimation and budgeting, undertake continuous expenditure monitoring, and promptly address cost deviations. The use of work breakdown structures, detailed resource estimates and earned value management is also recommended to improve cost and progress control.

**Keywords:** Project Cost Management; Cost Estimation; Project Budgeting; Cost Control; Expenditure Monitoring; Affordable Housing Programme; Project Performance; Kenya.

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## INTRODUCTION

Adequate and affordable housing is closely associated with household welfare, employment and sustainable urban development. However, rapid population growth, urbanisation, rising land values and increasing construction costs have made decent housing increasingly difficult to access for many low- and middle-income households (Ariaee & Takaloo, 2024). UN-Habitat (2023) identifies adequate housing, basic urban services and improved human settlements as important foundations of sustainable urban development. Governments have consequently adopted large-scale housing programmes that combine public investment, private-sector participation and supporting infrastructure (Canelas & Alves, 2024). Such programmes involve multiple projects, contractors, government agencies, financiers, communities and beneficiaries, making effective management of project resources particularly important. Among the core project management practices, cost management is critical because it involves estimating, budgeting, monitoring and controlling financial resources throughout implementation (PMI, 2021; Hanioglu, 2022). Effective cost management is therefore necessary to maintain expenditure within approved budgets while ensuring that projects deliver the required outputs, quality and value.

The importance of cost management is particularly evident in construction, where changes in material prices, labour requirements, financing conditions, project scope and implementation schedules can significantly affect expenditure. International evidence indicates that cost overruns remain a persistent concern in construction, with weaknesses in project control, planning and resource management contributing to poor cost performance (Gómez-Cabrera *et al.*, 2024; Elserougy *et al.*, 2024). In large housing programmes, these challenges can extend beyond individual projects because several projects may compete for limited financial and material resources. Beste and Klakegg (2022) emphasise the importance of strategic coordination in achieving cost efficiency across public construction portfolios, while Panchal and Khokrale (2024) note that changes in scope and schedule can have direct implications for project budgets. African construction projects similarly continue to experience cost escalation, delays and financial constraints associated with inadequate planning and project management (Kusongwa *et al.*, 2025; Muhirwa, 2026). Evidence from Kenya also shows that financing constraints, delayed release of funds, variations and other project management challenges can affect housing and construction performance (Khisa & Mutuku, 2023; Republic of Kenya, 2024).

Kenya faces a substantial housing deficit, particularly in urban areas where demand continues to exceed formal housing supply. The State Department for Housing and Urban Development (2024) estimates that urban Kenya requires approximately 250,000 housing units annually, compared with formal provision of about 50,000 units. The Government therefore established the Affordable Housing Programme (AHP) as a major intervention to increase the supply of social and affordable housing. The programme targets approximately 200,000 housing units annually and involves projects implemented in different locations and at different stages. However, implementation evidence indicates a considerable gap between planned and realised outputs. During FY 2023/2024, only 815 housing units were completed against the annual target of 200,000, while substantial numbers remained under construction or procurement (State Department for Economic Planning, 2025). The government has also identified inadequate funding, delayed release of resources, lengthy approval processes and land-related challenges among factors affecting housing and urban development programmes (Republic of Kenya, 2024). Although the Affordable Housing Act, 2024 established a legal framework for financing and implementing affordable housing, these implementation challenges demonstrate the continuing importance of effective management of project resources and costs.

Within this context, project cost management is important to the performance of the AHP because the delivery of affordable housing depends not only on the availability of financial resources but also on how effectively those resources are planned, allocated, monitored and controlled. Poor cost estimation, weak expenditure monitoring, delayed payments and uncontrolled cost variations can affect the ability of projects to remain within budget and may contribute to delays in completing planned housing units. Existing Kenyan studies

have examined different project management practices, including stakeholder management, scope management, resource scheduling and project integration (Kimani & Kamaara, 2024; Chileshe *et al.*, 2022; Oyier & Tumuti, 2025; Chepkwony, 2026), but there remains limited empirical evidence specifically explaining the influence of project cost management on AHP performance. Given the scale of the programme and the continuing difference between planned and realised housing outputs, examining how cost estimation, budgeting, monitoring and control relate to programme performance is important. This study therefore focuses on the influence of project cost management on the performance of the Affordable Housing Programme in Kenya.

### **Statement of the Problem**

Access to adequate and affordable housing remains a major development challenge in Kenya, with an estimated housing deficit of about two million units, particularly in urban areas experiencing rapid population growth, urbanisation, high land costs and limited household incomes (State Department for Housing and Urban Development, 2024). The Government of Kenya established the Affordable Housing Programme (AHP) to expand housing supply, with an annual target of approximately 200,000 units supported by related social and physical infrastructure. The Affordable Housing Act, 2024 further established a statutory framework for financing and coordinating affordable housing development through the Affordable Housing Fund. Despite these measures, implementation has remained considerably below the intended target. In FY 2023/2024, only 815 housing units were completed against the 200,000-unit target (State Department of Economic Planning, 2024). Although 1,140 units were completed in FY 2024/2025 and another 1,630 units between January and October 2025, the output remained substantially below the annual target, while 162,131 units were still under construction at different stages (Architectural Association of Kenya, 2025). Inadequate funding has also been identified as a major challenge affecting implementation (Republic of Kenya, 2024). These outcomes point to continuing difficulties in managing the financial resources required to keep housing projects within approved budgets while maintaining their planned scope, schedules and quality standards.

Existing studies have examined various project management practices in Kenya's construction and housing sector (Kimani & Kamaara, 2024; Oyier & Tumuti, 2025; Cholo *et al.*, 2026), but limited empirical attention has been given specifically to how project cost management influences the performance of the AHP. The persistent difference between planned housing outputs and actual completion levels, together with funding constraints, raises questions about the effectiveness of cost estimation, budgeting, expenditure monitoring, cost control and management of cost variations across AHP projects. In particular, there is insufficient evidence on whether effective management of project costs contributes to keeping housing projects within budget while supporting timely completion and achievement of required project standards. This study therefore examined the influence of project cost management on the performance of the Affordable Housing Programme in Kenya.

### **Research Objective**

The study sought to determine the influence of project cost management on the performance of the affordable housing program in Kenya.

### **Research Hypothesis**

- **H<sub>01</sub>:** Project cost management does not significantly influence performance of the affordable housing program in Kenya.

### **Theoretical Review**

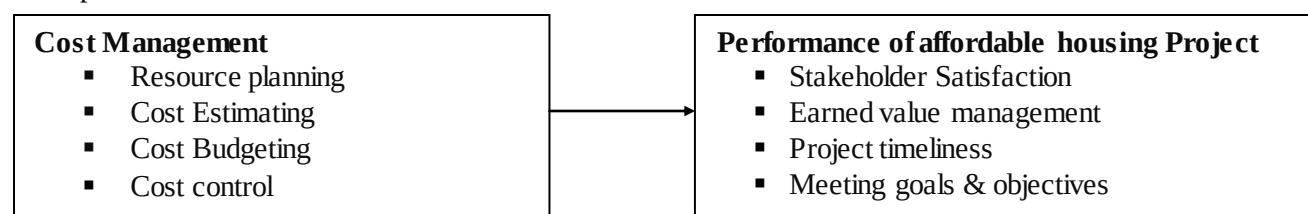
ABJ Sticky Cost Theory explains how project costs respond to changes in activity and managerial decisions concerning resource commitments. Unlike conventional cost models, which assume that costs adjust proportionately with changes in activity, the theory recognises that costs may decline less when activity falls than they increase when activity expands because managers may retain committed resources to avoid adjustment costs (Anderson *et al.*, 2003; Shahu *et al.*, 2012). This perspective is relevant to project

management because decisions concerning labour, equipment, materials and contractual commitments influence the extent to which project costs can be adjusted when implementation conditions change.

The theory is applicable to the Affordable Housing Programme (AHP), where changes in project scope, construction schedules, material requirements and resource availability can affect expenditure across projects. Effective cost management requires continuous budgeting, cost monitoring, variance control and timely corrective action to ensure that expenditure remains within approved limits. Where resources remain committed during delays or reductions in project activity, costs may continue to accumulate and affect project performance. Conversely, expansion or acceleration of construction may require additional resource commitments. ABJ Sticky Cost Theory therefore provides a useful basis for explaining how managerial cost decisions and the adjustment of committed resources can influence the performance of AHP projects in terms of budget adherence, timely completion and achievement of required project standards (Ward & Daniel, 2013).

### Conceptual Framework

In this study the conceptual framework shows the relationship between the independent variable (Cost management) and the dependent variable (Performance of affordable housing program). Figure 1 shows the conceptual framework.



### Independent Variables

### Dependent Variables

Figure 1: Conceptual Framework

### Project Cost Management

This is the process of ensuring the project is kept within its defined budget (cost). It is also an essential part of project management. Cost estimating, cost budgeting and cost control are three cost-related processes that interact with each other and with other areas of project management (Hanioglu, 2022). These processes require appropriate effort, information and knowledge of project costing. The complexity of the project determines the requirements in such a way that it may require one person, and they may occur more than once during the life of a project (Sadeghi, 2024). This process of cost estimating involves resource planning with knowledge that scope change can affect project tasks and activities, meaning rework costs for work that has already started or wasn't completed. According to PMI (2021), in order to guarantee that the project stays within the authorised budget (cost), the activities in the project cost estimation knowledge area create resource cost estimates, create budgets, and monitor those costs.

Although resource costs are the main focus of this subject area, project managers should also consider other expenses. Budgeting for project costs can be relatively straightforward or quite complicated. The budgeting method must be taken into consideration if cutting back on the project is likely to result in higher maintenance expenses once the project is over (Blessing & Ifeanyi, 2025). This method, commonly known as life cycle costing, can lower project costs while raising the calibre of the final product. However, project management should also take stakeholders' opinions regarding the project's cost into account. They will measure costs at various times and in different ways.

According to Hanioglu (2022), in addition to focusing on the internal efficiency of the projects being carried out, the traditional cost methods focused on time cost and quality monitoring. Conversely, cost control is a process of quality planning and cost reduction that controls expenses before they arise. A well-designed cost

control system will enhance a project's usefulness, cost, and quality (Kimotho *et al.*, 2024). Construction projects use modern cost control techniques in their daily operations, which has a great impact on their program performance (Elserougy *et al.*, 2024).

### **Performance of Projects**

Performance is the accomplishment of a given task, in this case a project, measured against preset known standards of accuracy, completeness, cost, and speed (Kerzner, 2023). The success level of a program based on the following criteria: effectiveness, relevance, impact, efficiency, timeliness and sustainability. This model suggested that a project is successful when it is completed on time, budget estimates are met and all predetermined specifications are met. However, the concept of program performance has been enriched and expanded beyond the three project constraints (Jewer *et al.*, 2024).

### **Empirical Review**

Sintayehu (2024) assessed project cost management practices in selected public building construction projects in Addis Ababa. The study focused on cost planning, cost estimating, cost budgeting, and cost control. The study adopted a mixed methods approach of descriptive survey and interviews. The study highlighted the inadequacy of formal cost planning in many projects, noting a lack of systematic processes that integrate scope, risk, and time into cost frameworks, resulting in weak baselines for cost control. Additionally, cost estimating practices suffered from under-development, marked by limited robust techniques and insufficient historical data, leading to inaccurate estimates and potential overruns. Cost budgeting was inconsistent, with some projects lacking alignment with comprehensive work breakdown structures and resource plans, limiting their effectiveness for monitoring and control. Cost control practices, which involve tracking actual expenses, analyzing variances, and implementing corrective measures, were also erratic and often reactive, resulting in minor deviations escalating into substantial overruns. The findings that partial and inconsistent application of cost management practices leads to poor financial outcomes highlight the risk side of cost management for the affordable housing programme (Sintayehu, 2024).

Chepkwony *et al.* (2023) investigated the relationship between project cost management and performance of National Housing Corporation (NHC) projects. The study adopted a descriptive survey design, targeting NHC projects across all the 47 counties in Kenya. The study found a statistically significant positive correlation between project cost management and performance of NHC projects in Kenya, indicating that better cost management is associated with better project outcomes. However, the study found a weak but significant correlation suggesting that cost management is an important, but not the only, driver of project performance in NHC housing projects. The study underscores that government-funded housing projects place a premium on successful performance and that success requires not only adherence to scope and time but also sufficient and well-managed financial resource. The evidence that cost management is positively and significantly related to NHC project performance suggests that similar mechanisms are likely to operate in the affordable housing programme; projects with stronger cost estimation, budgeting, and cost control should perform better on cost, time, and quality (Chepkwony *et al.*, 2023).

### **Research Gaps**

Research on project cost management confirms its positive influence on performance but highlights inconsistent application in public projects. However, studies have focused on cost estimation, budgeting, and control as technical processes, with little attention to transparency, stakeholder engagement, and accountability. This creates a gap in understanding the influence of cost discipline, acceptance of cost changes, and overall financial performance in government-funded housing programmes.

## METHODOLOGY

The study was guided by a positivist research philosophy, which assumes that reality can be objectively observed, measured and explained using systematic procedures (Flick, 2018). The philosophy was appropriate because the study primarily relied on structured instruments to collect measurable responses from project management personnel, with most items measured using a Likert scale. The study employed a combination of descriptive survey and correlational research designs. The descriptive design enabled the study to establish the prevailing project cost management practices within the Affordable Housing Programme (AHP), while the correlational design was used to examine the relationships between project management practices and programme performance. The target population comprised project management personnel involved in the planning, implementation, coordination, monitoring and control of AHP projects in Kenya.

The unit of analysis was the individual Affordable Housing Programme project, while the unit of observation comprised project management personnel working on the sampled projects. According to the Architectural Association of Kenya (2025), the AHP project list contained 122 active projects distributed across 41 of Kenya's 47 counties, with five projects reported as complete. The sample size was determined using Cochran's formula, which is appropriate for studies involving relatively large populations where the proportion of the population possessing the characteristics of interest is not known with certainty. At a 95% confidence level, a 0.05 margin of error and an estimated population proportion of 0.5, the formula produced a sample size of 384 project personnel. The respondents comprised project managers (122), consultants (44), resident engineers (44), site managers (44), planning officers (42), and quantity surveyors (44) and portfolio managers (44).

A multistage stratified purposive sampling technique was employed to obtain respondents with direct knowledge and experience of AHP project management activities. In the first stage, AHP projects were stratified according to their geographical location across counties or regions. In the second stage, projects were purposively selected from the geographical strata, with emphasis placed on projects that were active, substantially implemented or recently completed. The third stage involved purposive selection of project management personnel from the sampled projects. Selection of respondents was based on their direct involvement in project planning, implementation, coordination, monitoring and control, ensuring that the information collected was obtained from personnel with relevant project management experience.

Primary data were collected using a structured questionnaire. The instrument contained mainly closed-ended items measured on a Likert scale, together with open-ended questions that allowed respondents to provide additional views on project management practices and programme performance. Quantitative data were analysed using descriptive and inferential statistics. Descriptive statistics, including means and standard deviations, were used to summarise respondents' views, while inferential analysis was used to establish the relationships between the study variables and test the study hypotheses. Qualitative responses obtained from the open-ended questions were analysed using content analysis and used to complement the quantitative findings. Hypotheses were tested at the 5% level of significance, with decisions based on the resulting p-values. A p-value below 0.05 was considered evidence of a statistically significant relationship between the variables under investigation.

## FINDINGS AND ANALYSIS

A total of 384 questionnaires were distributed, 272 were duly filled and returned. According to Kothari (2012) a response rate of 50% should be considered average, 60% to 70% considered adequate, while a response rate above 70% should be regarded as excellent. This implies that the response rate of 70.83% was adequate for analysis, drawing conclusions and reporting.

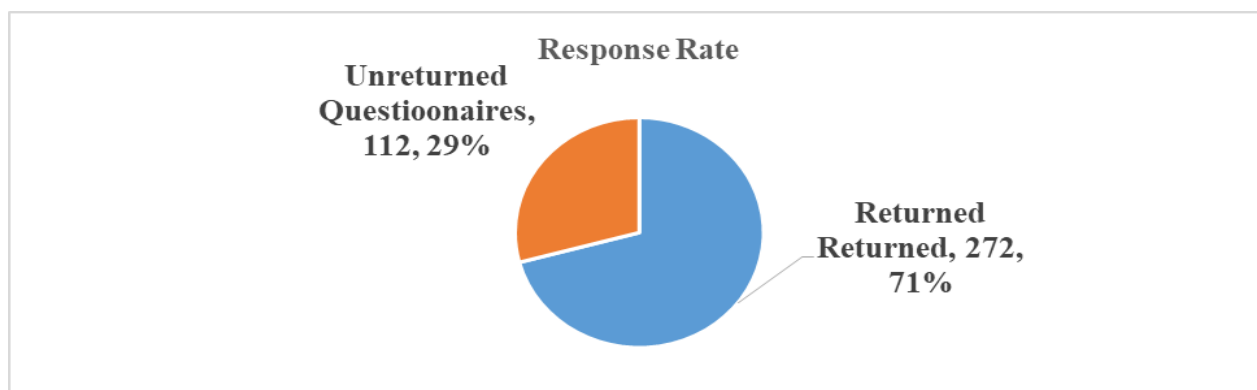


Figure 1: Conceptual Framework

### Descriptive Analysis

In this section, the study presents findings of respondents on their level of agreement or disagreement with various statements about project cost management on performance of the affordable housing program in Kenya.

### Project Cost Management

From the finding in Table 1, the respondents generally agreed on the statements about project cost management on performance of the affordable housing program in Kenya as indicated by an aggregate mean score of 3.821. The findings further showed that the respondents strongly agreed that the duties assigned to them are well defined and clear to them ( $M=4.007$ ,  $SD=1.152$ ). The respondents also agreed that the county government defines a cost plan before every project begins ( $M=3.759$ ,  $SD=1.125$ ); that there is a department set aside to ensure that project costs are controlled ( $M=3.884$ ,  $SD=1.202$ ); and that financing of projects is normally secured before the beginning of every project in the county. ( $M=3.769$ ,  $SD=1.141$ ). In addition, respondents agreed that determination of the required budget is considered mandatory before any project is initiated in county ( $M=3.730$ ,  $SD=1.214$ ); and that projects are normally completed within the approved budget in the county ( $M=3.778$ ,  $SD=1.133$ ).

The findings agree with Hanioglu (2022) that cost estimating, cost budgeting and cost control are three cost related processes that interact with each other and with other areas of project management and that all of these processes require effort and a working knowledge of project costing. It also concurs with Sadeghi (2024) that resource planning is part of the cost estimation process, which takes into account the fact that scope changes may impact project tasks and activities and result in rework charges for work that has begun or not yet been finished. Muthini and Nyang'au (2022) also showed that clear planning instruments such as communication plans, work schedules, and defined tasks are positively associated with housing project completion. In relation to financing being secured before project stars, the findings align with how project cost management significantly predicts performance in National Housing Corporation projects, prompting recommendations to institutionalise cost-control practices across counties (Chepkwony *et al.*, 2023).

**Table 1: Descriptive Statistics on Project Cost Management**

| Statement                                                                                                  | Mean         | Std. Dev.    |
|------------------------------------------------------------------------------------------------------------|--------------|--------------|
| The duties assigned to us are well defined and clear to us.                                                | 4.007        | 1.152        |
| The county government defines a cost plan before every project begins                                      | 3.759        | 1.125        |
| There is a department set aside to ensure that project costs are controlled.                               | 3.884        | 1.202        |
| Financing of projects is secured before the beginning of every project in the county.                      | 3.769        | 1.141        |
| Determination of the required budget is considered mandatory before any project is initiated in the county | 3.730        | 1.214        |
| Projects are normally completed within the approved budget in the county.                                  | 3.778        | 1.133        |
| <b>Aggregate Score</b>                                                                                     | <b>3.821</b> | <b>1.161</b> |

### **Things to be considered in project cost management**

Respondents were requested to suggest other things to be considered in project cost. There is the challenge of budgeting. This is one of the greatest challenges that project managers deal with in effective project cost management. If there is efficient cost management, then managers can avoid complications the project might face and thus strive for better and quicker results. It is important to consider project resource planning. It is important for project managers to identify the resources required to execute a project and take it to completion. Cost estimation is another important consideration. During the entire project, it is important that project managers conduct continuous cost control. Cost management, similar to other aspects of project management, gets complex with many variables in play. The process itself is elaborate, needing attention to detail along with a rigorous approach.

### **Ways of Improving Project Cost Management**

Respondents were requested to provide their suggestions on other ways that can help improve performance of their organisation. To deal with the challenge of budgeting issues, it is important for project managers to adopt proper planning procedures and make realistic assumptions to avoid any cost overruns. Before starting the project, project managers should begin with project planning; they should have the work-breakdown structure (WBS) ready. The project team should also adopt the task-level approach; this will help them to come up with an accurate and complete inventory of all resources, which is then fed as an input into the next step of estimating costs. To ensure there is effective cost control, project managers can adopt earned value management (EVM), which is the most popular approach to measuring cost performance. To deal with the complexity of project cost management, the use of project management software can simplify this process considerably.

### **Performance of AHP in Kenya**

Respondents gave the level to which they agreed or disagreed with statements about performance of the affordable housing program in Kenya. The aggregate score was 3.734 as shown in Table 2 this was an indication that, on average, the respondents agreed with various statements regarding performance of the affordable housing program in Kenya. Specifically, the findings showed that respondents agreed that there is always a higher percentage of achieving the project milestones ( $M=3.821$ ,  $SD=1.205$ ); project is well scheduled within specified time, cost and quality ( $M=3.688$ ,  $SD=1.182$ ); and that before the beginning of any project, all stakeholders must agree on project deliverables ( $M=3.702$ ,  $SD=1.188$ ). The findings further showed that respondents agreed that there is proper monitoring and evaluation of project deliverables and performance ( $M=3.807$ ,  $SD=1.118$ ); projects implemented, which are normally done within the planned scope ( $M=3.789$ ,  $SD=1.121$ ); projects delivered normally satisfy their stakeholders expectations ( $M=3.817$ ,  $SD=1.124$ ); and that there is earned value for money on projects implemented ( $M=3.538$ ,  $SD=1.168$ ).

The findings concur with Mwangi and Mutuku (2023) who explained that governance mechanisms, particularly project control and monitoring, are positively associated with completion within schedules, budgets, and specifications. Similarly, Ombaki and Mbutu (2025) support that structured stakeholder engagement and communication reduce change orders and improve work-plan fidelity in Nairobi housing projects based on stakeholder agreement on deliverables and scope adherence. Studies also show that reports that feedback loops and budget-control practices remain uneven, even where monitoring and accountability are formally in place (Mwangi & Mutuku, 2023; Ombaki & Mbutu, 2025).

**Table 2: Descriptive Statistics on Performance of Affordable Housing Program**

| Description                                                                               | Mean         | Std. Dev.    |
|-------------------------------------------------------------------------------------------|--------------|--------------|
| There is always a higher percentage in achieving the project milestones                   | 3.821        | 1.205        |
| The project is well scheduled within the specified time, cost and quality.                | 3.688        | 1.182        |
| Before the beginning of any project, all stakeholders must agree on project deliverables. | 3.702        | 1.188        |
| There is proper monitoring and evaluation of project deliverables and performance.        | 3.807        | 1.118        |
| Projects implemented are normally done within the planned scope.                          | 3.789        | 1.121        |
| Projects delivered normally satisfy our stakeholders' expectations.                       | 3.817        | 1.124        |
| There is earned value for money on projects implemented.                                  | 3.538        | 1.168        |
| <b>Aggregate Score</b>                                                                    | <b>3.734</b> | <b>1.158</b> |

## Regression Analysis

### Project Cost Management and Performance of AHP

The results in Table 3 indicate a strong positive relationship between project cost management and the performance of the Affordable Housing Programme ( $R=.525$ ). The model produced an  $R^2$  of .275 and an adjusted  $R^2$  of .273. Using the adjusted  $R^2$ , the results indicate that the predictor explains approximately 27.3% of the variation in the performance of the Affordable Housing Programme. The remaining 72.7% of the variation is associated with other factors. The findings align with Wanjau *et al* (2024) a similar strong positive significant relationship between project cost planning and the performance of housing projects. Similarly, Chepkwony *et al* (2023) found cost management is positively and significantly related to NHC project performance, suggesting that similar mechanisms are likely to operate in the affordable housing programme. Thus, projects with stronger cost estimation, budgeting, and cost control should perform better.

**Table 3: Model Summary for Project Cost Management and Performance of AHP**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .525 <sup>a</sup> | .275     | .273              | .62638                     |

a. Predictors: (Constant), Cost Management

The ANOVA results show that the regression model is statistically significant, with  $F(1, 270) = 102.671$ ,  $p < .001$ . The  $F$ -Calculated ( $1,270$ ) = 102.671 is greater than the  $F$ -critical ( $1, 370$ ) = 3.87. This indicates that the model provides a statistically significant explanation of variation in the performance of the Affordable Housing Programme. The significant  $F$ -statistic further suggests that the regression model performs better than a model without the predictor in explaining the observed differences in programme performance.

**Table 4: ANOVA for Project Cost Management and Performance of AHP**

| Model |            | Sum of Squares | df  | Mean Square | F       | Sig.              |
|-------|------------|----------------|-----|-------------|---------|-------------------|
| 1     | Regression | 40.283         | 1   | 40.283      | 102.671 | .000 <sup>b</sup> |
|       | Residual   | 105.935        | 270 | .392        |         |                   |
|       | Total      | 146.219        | 271 |             |         |                   |

a. Dependent Variable: performance of AHP

b. Predictors: (Constant), Cost Management

The coefficient results show that the predictor has a positive and statistically significant effect on project performance. The unstandardized coefficient of  $B = .377$  indicates that a one-unit increase in the predictor is associated with an estimated .377-unit increase in project performance, holding other factors constant. The standardized coefficient ( $\beta = .525$ ) confirms a moderate positive relationship between the predictor and project performance. This relationship is statistically significant ( $t = 10.133$ ,  $p < .001$ ), indicating strong evidence that the predictor is associated with project performance.

The findings suggest that improvements in the study variable are associated with better performance of the Affordable Housing Programme. Similar studies by Chepkwony *et al* (2023), Wanjau *et al* (2024), and Sintayehu (2024) found a positive significant relationship between cost management practices and performance of projects. Obuo and Nyang'au (2024) also found cost scheduling and cost control processes have significant positive effects on infrastructure project performance in Nairobi County. These findings support the current study findings on the significance of project cost management on performance of AHP in Kenya.

**Table 5: Coefficients for Project Cost Management and Performance**

| Model           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-----------------|-----------------------------|------------|---------------------------|--------|------|
|                 | B                           | Std. Error | Beta                      |        |      |
| 1 (Constant)    | 2.274                       | .134       |                           | 16.930 | .000 |
| Cost Management | .377                        | .037       | .525                      | 10.133 | .000 |

a. Dependent Variable: Performance of AHP

The regression equation was:

$$Y = 2.274 + 0.377 \text{ Cost Management} \dots\dots\dots (i)$$

### Hypothesis Testing

**H<sub>01</sub>:** *Project cost management has no statistically significant influence on the performance of affordable housing program in Kenya.*

The null hypothesis stated that cost management has no statistically significant influence on the performance of the Affordable Housing Programme in Kenya. The regression results indicate a positive standardized coefficient of  $\beta = .525$ , with  $t = 10.133$  and  $p < .001$ . Since  $p$  is less than .05, and  $t$  (10.133) is greater than the critical value ( $\pm 1.969$ ) the null hypothesis was rejected. The results consequently demonstrate a statistically significant positive relationship between cost management and AHP performance.

The finding indicates that stronger cost estimation, budgeting, expenditure monitoring and control of cost deviations are associated with improved programme performance. This is relevant to the AHP because financial deviations can affect the availability of resources required to complete planned housing outputs. The finding is supported by Gitonga *et al.* (2022) and Ambetsa & Muchelule (2022), who established a significant relationship between project cost management and the performance of projects in Kenya. The rejection of H<sub>01</sub> therefore confirms the importance of sound financial management in supporting successful implementation of the AHP.

### CONCLUSION AND RECOMMENDATION

The objective was to investigate the influence of project cost management on performance of the affordable housing program in Kenya. The findings indicate that stronger project cost management practices are positively associated with the performance of Affordable Housing Programme. The significant relationship observed between cost management and performance demonstrates the importance of ensuring that available financial and material resources are properly planned and controlled throughout project implementation. The findings also suggest that cost management requires continuous attention because inaccurate estimates, budgeting difficulties and changes in resource requirements can affect project outcomes. Strengthening cost monitoring and adopting appropriate project cost-control techniques can therefore help improve the efficiency and financial performance of housing projects.

The study recommends stronger cost-management practices within the AHP. Policies should promote realistic cost estimation, comprehensive budgeting, resource planning and continuous monitoring of expenditure against approved budgets. Implementing agencies should strengthen mechanisms for detecting and addressing

cost deviations at an early stage. The use of work breakdown structures, detailed resource estimates can provide useful mechanisms for monitoring cost and progress simultaneously. These measures are particularly important given the significant contribution of cost management to AHP performance and the challenges relating to budgeting, cost estimation and resource planning identified in the study.

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