



**EFFECT OF QUALITY COST MANAGEMENT AND PERFORMANCE OF SPORTS STADIA CONSTRUCTION PROJECTS IN KENYA**

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**ABSTRACT**

Sport stadia are some of the most complex and intricate buildings constructed throughout the world. These buildings can be extremely high energy users and take up many acres of city or countryside space. It is imperative that sustainable concepts and strategies, in design, construction, and operations, are used to help protect our environment, and contribute to the communities who house them. Kenya has been struggling in development of sports stadia. The current stadia most of them do not meet the criteria for international matches by CAF/FIFA. The study aims to determine the effect quality cost management on performance of sports stadia construction projects. The study was guided by the total quality management theory. The study targeted 17 stadia projects across the country as the unit of analysis. The unit of observation was 255 respondents involved in the 17 stadia. A census was adopted. The study used questionnaire to collect primary data. The study found Quality cost management has significant weak correlation ( $r = .291$ ,  $sig = .010$ ) with performance of sports stadia construction projects. The study also established that quality cost management explained .084 of variation in performance of sports stadia construction projects. The study recommends thorough appraisal activities to ensure failures related to quality are identified and action taken. There should be a thorough planning of Quality management to ensure sports stadia of high standards and quality are constructed.

**KEYWORDS:** Project Quality Cost Management, Project Performance, sports stadia construction projects

## Background of the Study

The African Cup of Nations (AFCON) helped Mali to accelerate the development and infrastructure of the host country. For example, the programme of major work related to the organization of the 2002 AFCON in Mali led to the modernization of the Bamako airport, the development of roads, and the improvement of telephone, telecommunications and public transport networks (Augustin, 2010). Sport stadia are some of the most complex and intricate buildings constructed throughout the world. These buildings can be extremely high energy users and take up many acres of city or countryside space. It is imperative that sustainable concepts and strategies, in design, construction, and operations, are used to help protect our environment, and contribute to the communities who house them (International Trade Administration, 2020).

The Wembley stadium in England constructed at a cost of £789 m which is currently valued at £1.2 billion is one of the most expensive stadiums. It had been initially budgeted £362.5m. Marred with delays, litigations, and obstacles the stadium was eventually opened in 2007. The Wembley stadium is considered a badly implemented project with a good outcome. The delay in implementation of the project and increased in project cost was due to underestimation of the project scope by a subcontractor, violation of safety and health laws, and a subcontractor pulling out of the project. A dispute between Multiplex and Cleveland Bridge engineering company about the rising costs of constructing the arch of the stadium resulted to Cleveland Bridge pulling out of the project. Multiplex engineering in an attempt to complete the project was overcome with challenges which made them to avoid paying the subcontractors dealing with the sewage system. However, the project was eventually successful and the FA finally broke even in 2015 and after 15 years it recoups its initial investment (Institute Project Management, 2020).

In Kenya, the government had set aside US\$18.3 million for the construction of 3 major stadiums in Eldoret, Mombasa and Nairobi as part of the preparations to bid for hosting of 2017 IAAF world youth championship in Nairobi for 2015/2016 financial year. The previous government also had pledged 5 new stadia and 30 regional stadia around the country to promote the development of sports within each of the regions as well as tap the immense talent of the youth. According to Parliamentary Committee on sports (National Assembly, 2020), stadium projects had an estimated cost of Ksh 4.4 billion, having spent 2.6 billion as at 2020, the committee complained on mismanagement of funds as the amount paid was not commensurate the work done in the stadia programme. Example in Meru County, Kirubia Stadium in Chuka commenced in January 2017 and also stalled for some time till May 2020 and was expected to be completed by July 2020 where by September 2020 70% of the project had been completed. The budgeted cost was Kshs 274, 208, 855 and Kshs 159,380,377.67 had been paid. However, the committee complained of omission of certain requirement in the projects which lead to variations in the project (National Assembly, 2020).

Quality management is one of the fundamental aspects of Total quality management (TQM), a management philosophy which focuses on the work process and people, with the major concern for satisfying customers and improving the organizational performance. It involves the proper coordination of work processes which allows for continuous improvement in all business units with the aim of meeting or surpassing customer's expectations (Tiwari, 2016). That is, the structured process for developing products that ensures that customer needs are met by the final result. The tools and methods of quality management are incorporated along with the technological tools for the particular product being developed and delivered.

## Research Problem

The Parliamentary Committee on sports revealed that sports stadia projects had an estimated cost of Ksh 4.4 billion whose expenditure was Kshs 2.6b as at the year 202. The projects had commenced in July 2016 and were expected to be completed by 2019. Kinoru stadium which that was declared by Sports Kenya to be complete and ready for use, upon inspection by the

Cabinet Secretary for Sports, it was declared substandard and could not be used for any CAF/FIFA matches. In Meru County, Kirubia Stadium in Chuka commenced in January 2017 and also stalled for some time till May 2020 and was expected to be completed by July 2020 where by September 2020 70% of the project had been completed. The budgeted cost was Kshs 274, 208, 855 and Kshs 159,380,377.67 had been paid. However, the committee complained of omission of certain requirement in the projects which may lead to variations in the project (National Assembly, 2020). Further, there was high risks of variations needed for the projects to be completed as well as a variance between the work done and the payment made. The National Assembly committee on Sports complained of omission of certain requirement in the projects led to variations in the stadium projects; mismanagement of funds as the amount paid didn't commensurate the work done (National Assembly, 2020). In a bid to co-host AFCON 2027, the country needs to show seriousness in ensuring the sports stadia are completed and conform to CAF/FIFA standards (Omtto, 2023). Quality cost management is grounded on the principles of customer focus; management process where the leadership is highly required; process management involving the supply quality management; process improvement where evaluation and process control is involved as well as employee recognition (Suleman& Gul, 2015).

### **Research Objective**

The study sought to determine the effect of Quality Cost Management on Performance of Sports Stadia Construction Projects in Kenya.

### **Research Hypothesis**

The study also guided by the following null hypothesis.

**H<sub>01</sub>:** Quality Cost Management has no significant effect on Performance of Sports Stadia Construction Projects in Kenya.

## **LITERATURE REVIEW**

### **Theoretical Review**

#### ***Deming's theory of total quality management***

The theory was originally coined by a prolific author, W. Edwards Deming, considered as the father of the total quality management movement (Stensaasen, 1995; Anderson, Rungtusanatham, & Schroeder, 1994). He is known for his ratio - Quality is equal to the result of work efforts over the total costs. If a company is to focus on costs, the problem is that costs rise while quality deteriorates (Hillmer & Karney, 1997). Deming's theory is based on the simple concept that continual improvement can help increase quality while decreasing costs, or what we can call total quality management. In an extension, the theory bases its argument on 14 principles: to create constancy of purpose for improving products and services; adopt the new philosophy; cease dependence on inspection to achieve quality; end the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier. improve constantly and forever every process for planning, production and service; institute training on the job; adopt and institute leadership, drive out fear; break down barriers between staff areas; eliminate slogans, exhortations and targets for the workforce; eliminate numerical quotas for the workforce and numerical goals for management; remove barriers that rob people of pride of workmanship, and eliminate the annual rating or merit system; institute a vigorous program of education and self-improvement for everyone and put everybody in the company to work accomplishing the transformation (Murunga & Kisimbii, 2019; Hillmer & Karney, 1997)

These total quality management principles can be put into place by any organization to more effectively implement total quality management. As such the current study likewise seeks to

theorize the relationship between quality management practices and implementation of security projects with the same principles and seek to practically validate its applicability in the current context. Therefore, the theory is found relevant in the current study since the emphasis has been placed on managing the expenses arising in the company operations and the benefits it has on improving the efficiency of operation and the final output of the company. Cost have been noted to reduce the efficiency and thus, with increase in costs, the company is subjected to poor quality delivery of services and products. This theory therefore informs the relationship between quality control cost management and the performance of sports stadia projects in Kenya.

### Conceptual Framework

The following conceptual framework was used for this study.

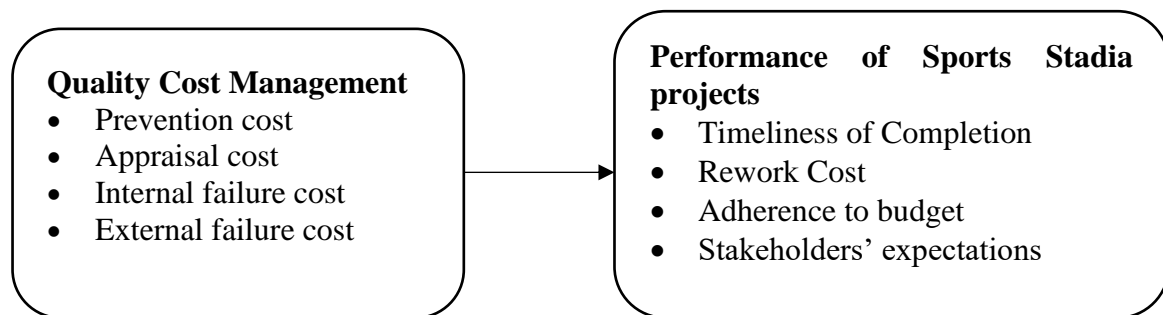


Figure 1: Conceptual Framework

### *Project Quality Cost Management*

Quality cost management can help improve the performance of project and rides along three dimensions: Time management (Chin & Hamid, 2015) – which depends on the way the project manager carries out project management and activities; Cost management of a project – the evaluation of actual cost and standard cost in determination of project profitability (Smith, 2016) and quality management – to improve the performance of project (Azman, Ramli & Zawawi, 2018). The success of the quality control tools in improving the three dimensions relies partly on the project management aspect of implementation of the processes. Quality of a performing project will therefore spread over to determine satisfaction of the stakeholders.

Quality costs are those costs that are associated with ensuring there is high quality deliverables as well as the costs that result from deliverables that are imperfect. Thus, two categories are associated with the quality cost activities i.e., control activities and failure activities. The control activities are those activities that are performed in order to detect or prevent poor quality (Kerzner, 2017). Control activities are thus made up of prevention and appraisal activities. Control costs are thus the costs of performing the control activities. As for the failure activities are performed as a response to poor quality that occurs before delivery of a product or a service to customer. They may be internal or external failure. The failure cost are the costs that are incurred when failure activities are performed. The response of a customer or other stakeholder of the project can impose costs on the project due to failure costs or failure activities (Aldridge, 2021).

Prevention costs are incurred in order to prevent poor quality in the project. An increase in prevention costs reduces the cost of failure. The prevention costs entail quality engineering, quality planning, quality reporting, quality audits, supplier evaluation, design reviews, and supply selection. The appraisal costs are incurred in order to determine whether there is conformance to the needs or requirements of the customer. They include inspection and material testing, supervising appraisal activities, inspection and testing of equipment, process acceptance, and product acceptance (Mclachlan, 2020). Internal failure costs are incurred when

products and services do not conform to the specifications or the needs of the customer. The nonconformance is detected prior to delivery of the project. Appraisal of activities thus detect these failures. These costs include rework, reinspection, design changes, retesting, scrap, and downtime as a result of defects. However, the internal failure costs disappear when there are no defects. External failure costs are the costs due to non-conformance of products or goods to requirements or the needs of customer after delivery. They include the cost of recalls, poor product performance, repairs, customer dissatisfaction, product liability, returned materials, and complaint adjustment. These costs disappear when there are no defects (PMI, 2017).

### ***Project Performance***

The main purpose of cost management in projects is to ensure there is an effective appraisal payment profiles of the actual cash outflows and their deviations. Thus, cost management includes the implementation of corrective measures in respect to cost streamlining. Underestimating and overestimating project costs can be detrimental to successful completion of projects. Overestimation of projects denies funds to be allocated to a project or rather leads to alternative choice or option while underestimation of a project precludes sufficient funds allocation to a project which may result a high risk of failure of the project. A systematic and accurate cost estimates can effectively support budgeting process and project funding during the project execution phase and project cost control processes. (Pica & Archibald, 2015).

### **Empirical Review**

#### ***Quality Cost Management and performance of sports stadia construction projects***

Razak, Mills and Roberts (2016) assessed external failure cost in construction supply chains in the UK. The study aimed at understanding the complex relationship of supply chain members and how they influence the external failure cost. The study focused on measuring external failure cost during the post-handover stage of construction. The study used an expert workshop and a trial questionnaire where industry experts in construction were involved. The methodology involved two studies to investigate the status of failure cost during post-handover of construction projects. The first study used a workshop to categories the external failure cost elements. The participants were construction industry expert which included quality constant, 2 contractors, quality manager and owner. The second study involved a survey to investigate the external failure cost issue, and understanding the influence of owner and supplier on the external failure. A total of 15 respondents were used in the survey comprising of 2 advisors, 3 suppliers, 2 contractors, and 7 owners. The study findings revealed that the total cost of external failures is anonymous and mostly arise from the owners (Razak, Mills, & Roberts, 2016).

Ditkaew (2018) investigated the consequences of cost management quality on the effectiveness of internal control and reliable decision-making in Thai industrial firms. With this information, the firms were then tested against performance. A sample of 354 new manufacturing industries in year 2017 of Thailand was chosen and data was collected through mailed questionnaires. The result of ordinary least squares regression revealed that the cost management quality was positively related to the internal control effectiveness and decision-making reliability. In addition, internal control effectiveness and decision-making reliability also had positive effects on firm performance. This implied that without accounting information system quality, a firm had a greater chance of failure. Contributions and suggestions for future research are presented (Ditkaew, 2018).

Gichuki (2014) assessed the effect of cost management strategies on the financial performance. Cost management is a process of quality planning and cost decreasing that manages the costs before their occurrence. A well-planned cost management system will provide improvements in quality, cost/price and functionality of a product. Manufacturing companies use modern cost management techniques in their daily operations which has a great impact on their financial performance. Cost management is certainly not a system that determines only product cost. Cost systems are based on controlling costs and quality and balancing them temporary, and also

focus on internal efficiency. The greater control production activities result in better quality of procedure and lowers the unit cost of goods and cost variance (Gichuki, 2014).

## RESEARCH METHODOLOGY

The study adopted positivism research philosophy since unit of analysis and observation in the current study are measurable, quantitative and numerable. A cross-sectional survey design targeting sports stadia in Kenya was also adopted and targeted the 17 stadia as the unit of analysis. The unit of observation was 255 respondents involved in the 17 sports stadia construction projects. They include project consultants & project managers, county project administrators, Sub-contractors and Sports Kenya and County representatives, Ministry of Public works. The 17 sports stadia projects in 14 counties (Mombasa, Kiambu, Makueni, Meru, Tharaka Nithi, Nairobi, Machakos, Homabay, Kisumu, Nyeri, Marsabit, Uasin Gishu, Elgeyo Marakwet and Migori) where a total of 5 sports stadia are still under construction, including Kamarany Stadium, Marsabit Stadium, Ruring'u Stadium, Karatu Stadium and Wote Stadium (National Assembly, 2020; Kenya Vision 2030., 2018). The study used a census survey to study all the 17 sports stadia projects. Primary data was collected using self-administered semi-structured questionnaires. The questionnaires were distributed was purposively distributed to aforementioned individuals who possessed the needed information for this study.

## RESEARCH FINDINGS

### Descriptive Analysis

#### *Quality Cost Management*

The third specific objective was to determine the effect Quality Cost Management on the successful implementation of sports stadia in Kenya. Table I shows the descriptive statistics for the responses. The Composite Mean of 3.56 suggested that respondents slightly agreed to some extent that Quality Cost Management influences performance of Sports Stadia construction projects in Kenya. The standard deviation of 1.220 further suggested that the responses did not deviate much from the Mean of 3.56. Quality cost management can help improve the performance of project and rides along three dimensions of time management (Hamid & Chin, 2015), Cost management of a project (Smith, 2016) and quality management (Azman, Ramli, & Zawawi, 2018)).

In project management, the cost of quality is sometimes confused with the costs of high-grade material used in the project though in reality, it deals with all the cost related to quality and quality issues. The costs include and are not limited to the costs of material. Further, the cost of quality is not limited to a particular stage in the project but rather relate to the activities from project kickoff to project delivery and beyond the project itself. Calculating the cost of quality is important in making informed decisions on balancing in investing in quality during project implementation and also dealing with the future cost of failing to prevent errors or defects. Thus, cost of quality deals with conformance and nonconformance costs (Aldridge, 2021).

Quality costs data can be used for measurement of project progress, for budgeting, and analyzing quality cost problem. Analysis of the quality costs in project helps to determine whether the project resources are appropriately allocated. Poor quality is mostly due to poor management. Kerzner (2017) opined that the through implementation of proactive quality system that accounts for 1% of the project value, there is a drop of expenditure due to repair and failure cost from 10% to 2% which is saves cost by 8%. However, the quality cost categories may increase in one area and reduce in another. In construction projects, quality is covered in the scope of work, budget, and time. Thus, cost of quality is the total cost that is incurred in the entire project life cycle of construction project in order to prevent nonconformance to the owner's requirements. Understanding the cost of quality is important to help calibrate the total amount to be spent in the project. This is needed to estimate costs and also set a proper budget (Aldridge, 2021).

**Table I : Quality Cost Management**

Quality Cost Management	SD %	D %	N %	A %	SA %	Mean	Std. Dev
Appraisal, prevention, internal failure, and external failure costs are budgeted for as part of quality costs in the projects.	1.3	11.2	19.8	37.5	30.2	3.84	1.022
During project implementation quality planning, quality training and design review costs are incurred as prevention costs to ensure conformance in the future.	8.6	27.2	19.8	22.8	21.6	3.22	1.291
The appraisal costs which include in process inspection, inspection & equipment testing, outside endorsement are included in the project to ensure the project conforms to the requirements.	9.9	21.6	11.2	28.9	28.4	3.44	1.360
The project performs rework, re-inspection and material review before delivery as internal failure costs of project to ensure conformance and reduction of failure costs.	9.9	28.4	18.5	30.2	12.9	3.08	1.225
There is consistent evaluation of quality costs in the project's stages	1.3	21.6	28.4	30.2	18.5	3.43	1.063
After delivery of project, customer complaints are processed to reduce the impact of external failure costs.	8.6	11.2	12.5	21.6	46.1	3.85	1.340
Unplanned field repairs, service, and processing of returned materials are common in the project and this shows nonconformance.	9.9	1.3	9.9	28.9	50.0	4.08	1.242
<b>Composite Mean</b>						<b>3.56</b>	<b>1.220</b>

Respondents (67.7%) agreed that quality costs which include: internal failure, external failure, appraisal, and prevention costs are budgeted in the project management while only 1.3% disagreed with only 11.2% neither disagreeing nor agreeing on the statement. The Mean of 3.84 further confirmed the respondents agreed on the statement. Prevention and appraisal costs are part of the conformance costs as they ensure the project conforms to the requirements and needs of the customers. These include the money that is spent during implementation of the project to avoid future failures. Internal and external failure costs are as a result of failures from the project such as rework and scrap and those found by the customer such as law suits and warranty work. This is the money that is wasted during and after the project delivery when the project fails to meet the customer requirements.

On whether prevention costs such as quality planning, quality training and design review costs are incurred in the project to ensure conformance in the future, 44.4% of the respondents agreed while 35.8% disagreed. The Mean of 3.22 further suggested that averagely, the respondents were undecided on the statement. According Kerzner (2017) the prevention costs are important in ensuring a quality product or service is produced. According to Aldridge (2021) prevention costs involve quality assurance which prevents poor quality from happening. They include

training the project team, keeping good documentation, doing good research, an even having the right people to do the job.

On appraisal costs, such as in process inspection, inspection & equipment testing, outside endorsement being included in the project to ensure conformance to project requirements, 57.3% of the respondents agreed while 31.5% disagreed. However, the Mean of 3.44 suggested that on the average, respondents were undecided on the statement. The appraisal costs are important in assessment of the quality of the product or service. The purpose of appraisal function is to ensure a project that doesn't conform to needs and specifications of the customer is not delivered (Kerzner, 2017). Aldridge (2021) identified appraisal costs as those resources that are used for identifying and fixing of errors in deliverables in the project. These costs are incurred during inspections and field testing.

Respondents (43.15%) agreed that, there are internal failure costs incurred in the project in form of: rework, re-inspection, and material review due to defects identified in the completed deliverables, while 38.3% disagreed. The Mean of 3.08 suggested that on average the respondents were undecided. The internal failure costs result from identifying defects or mistakes by the project team before delivery to the client. The failure costs deal with completed deliverables (Aldridge, 2021). There is consistent evaluation of quality costs in the project's stages as agreed by 48.7% with only 22.9% disagreeing. The composite Mean of 3.43 suggested that the respondents averagely could neither support nor disagree with the statement.

Majority of the respondents (67.7%) however, believed that after delivery of the project, customer complaints are processed to reduce the impact of external failure costs. The composite Mean of 3.85 further supported the strong agreement of the respondents. Further, majority of the respondents (78.9%) agreed unplanned field repairs, service, and processing of returned materials Unplanned field repairs, service, and processing of returned materials are common in the project and this shows nonconformance. The statement was further supported by the composite mean of 4.08. Aldridge (2021) explained that cost of nonconformance in projects include repairing, refunding and customer service for faulty deliverables. These are the cost of remedying the mistakes that have been identified by the end user. The costs of nonconformance are incurred when the project deliverables are not up to standards. The lower the quality of the project the higher the costs of nonconformance. The external failures are difficult to predict and have a significant impact as they are identified by the end user (Aldridge, 2021).

### Inferential Analysis

The inferential analysis was used to determine the relationship between the independent variable, the moderating variable and the dependent variable.

### Correlation Analysis

Correlation Analysis was used to establish the strength and direction of the relationship between dependent and the independent variables. Table II below shows that Quality Cost Management had a weak positive and significant relationship with performance of sports stadia construction projects in Kenya ( $r=0.291$ ,  $p=0.010$ ).

**Table II: Correlation Analysis**

		Quality Cost Management
Performance of Sports Stadia construction projects	Pearson Correlation	.291
	Sig. (2-tailed)	.010
	N	232



**Regression model for Quality Cost Management and performance of sports stadia construction projects**

From the regression results the coefficient of determination ( $R^2$ ) and the correlation coefficient ( $r$ ) show the degree of association between Quality cost Management and Performance of Sports Stadia construction projects. From Table III below,  $r$  (.291) shows a weak correlation between the predictor variable of Quality Cost Management and the dependent variable Performance of Sports Stadia construction projects. The coefficient of determination  $R^2$  (.084) implies that Quality Cost Management explains 8.4% change of Performance of Sports Stadia construction Projects in Kenya.

**Table III: Model Summary for Quality Cost Management**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.291 <sup>a</sup>	.084	.081	.83975

a. Predictors: (Constant), Quality Cost Management

b. Dependent Variable: Performance of Sports Stadia Construction Projects

The results from the ANOVA test reveal that Quality Cost Management has a significant influence on the Performance of Sports Stadia construction Projects in Kenya since the P-value (0.000) is less than the significance value of 0.05. The F-Calculated (1, 230) = 21.224 which is greater the F-Critical (1, 230) =3.882. This implies that Quality Cost Management to some extent is significant in explaining the change of Performance of Sports Stadia construction Projects in Kenya. Table IV below shows the ANOVA results for the Quality Cost Management.

**Table IV: ANOVA for Quality Cost Management**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	160.440	1	160.440	2207.409	.000 <sup>b</sup>
1	Residual	16.717	230	.073		
	Total	177.157	231			

a. Dependent Variable: Performance of Sports Stadia Construction Projects

b. Predictors: (Constant), Quality Cost management

Having found Quality Cost Management to be significant in explain the change of performance in Sports Stadia Construction Projects in Kenya, the regression coefficients were as shown in Table 4.26 below. Quality Cost Management significantly influences performance of Sports Stadia Construction Projects in Kenya P-value (.000< 0.05). Quality Cost Management also influences Performance of Sports Stadia Construction Projects by 29.1% as also shown by  $r$  (.291) in the summary model in Table 4.23. The  $\beta$  (.282) indicates a direct relationship between Quality Cost Management and Performance of Sports Stadia Construction Projects in Kenya i.e. a unit increase in Performance of Sports Stadia Construction Projects will need .282 of Quality Cost Management.

The model can be fitted as below

$$Y = \beta_0 + \beta_1 X_1 + e \dots \dots \dots (i)$$

$$\text{Performance of Sports Stadia Projects} = 2.387 + .282 \text{ Quality Cost Management} \dots \dots (ii)$$

**Table V: Regression Coefficients for Quality Cost Management**

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.387	.225		10.598	.000
	Quality Cost Management	.282	.061	.291	4.607	.000

a. Dependent Variable: Performance of Sports Stadia Construction Projects in Kenya

### Test of Hypothesis

**H<sub>a1</sub>:** Quality Cost Management has no significant effect on performance of Sports Stadia Construction Projects in Kenya.

The regression results at 95% level of confidence established that, the F-Calculated (1, 230) = 21.224 was greater than F-Critical (1, 230) = 3.882 and the P-value (.000) < 0.05 clearly indicated that Quality Cost Management is good and fit in explaining the change in Performance of Sports Stadia Projects in Kenya. The t-Calculated (6.780) was greater than the t-Critical (1.970), p-value < 0.05. Thus, the null hypothesis was rejected and concluded that Quality Cost Management has a significant effect on the performance of Sports Stadia Construction Projects in Kenya. The findings are supported by Chin and Hamid (2015) who explained that Quality cost management can help improve the performance of project and rides along three dimensions of time management, cost management, and quality management.

### CONCLUSIONS

The objective was to determine the effect of Quality Cost Management on Performance of Sports Stadia Construction Projects in Kenya. The study also sought to prove the hypothesis that Quality Cost Management has a significant effect on Performance of Sports Stadia Construction Projects in Kenya. The study found that Quality Cost Management significantly influence performance of Sports Stadia construction projects in Kenya. This was also achieved by ensuring prevention costs, appraisal cost, internal failure cost and external costs are adhered to. Thus, we conclude that quality cost management significantly influence performance of construction projects.

### Recommendation of the Study

The sports stadia construction projects have been faced with a lot of quality issues which even prompted for rework of some of them. Other have also stalled due to poor work reported by the committees. The study recommends thorough appraisal activities to ensure failures related to quality are identified and action taken. It has been witnessed in the eyes of every citizen of this country that Kenya lacks Sports Stadia that have the standard needed to host international events with only a few such as Kasarani ticking the check list though it has been under continuous renovations due to over utilization. A few years ago, Gor Mahia FC opted to use a ground in Tanzania as their home ground since the stadia in Kenya couldn't meet the required threshold by CAF for the regional tournaments and the other grounds were under renovation. Most current, the National team may play African cup qualifiers also in a neighbouring county. The country has won the joint bid for the AFCON 2027 together with other eastern African countries, the government has opted to develop new stadia for that. The current stadia lack the quality to host such ana even. Thus, Quality Management is a big issue as far as Sports Stadia Construction Projects in concerned in Kenya. The study thus recommends a thorough planning of Quality management to ensure sports stadia of high standards and quality are constructed.

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