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The Mediating Influence of Organizational Capacity on the Relationship between Financial and Contract Management Practices and Construction Cost Overruns in Real Estate Projects within Nairobi and Kisumu Counties, Kenya

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Abstract

Real estate projects often require significant investments and involve complex processes. Understanding the mediating effects of organizational capacity on the relationship between financial and management practices and construction cost overruns could help project managers anticipate challenges and implement risk-mitigation strategies, leading to smoother project execution and timely completion. This study established the mediating effects of organizational capacity on the relationship between financial and contract management practices and construction cost overruns. Using quantitative data from 351 project professionals who worked in projects enlisted by National Construction Authority between 2018 and 2019 in Nairobi and Kisumu counties respectively. Data analysis entailed descriptive statistics, correlation and regression analysis. The data was confirmed to be normally distributed and construct valid, which permitted statistical analysis. A significant linear relationship was identified between mediating effects of organizational capacity on the relationship between financial and management practices and construction cost overruns with improvements in organizational capacity leading to predictable changes in cost overruns. The regression analysis showed a strong positive correlation (R = 0.713) and explained about 50.9% of the variance in cost overruns as a result of organizational capacity. The p-values of 0.05, implied null hypothesis was rejected, therefore suggesting organizational capacity significantly mediate on the relationship between financial and management practices and construction cost overruns in real estate projects. The findings underscore the critical role of mediating influence of organizational capacity in managing cost overruns, emphasizing the importance of effective project management and robust organizational practices. Future studies need to shift attention to other crucial tenets of organizational capacity such as legal and regulatory compliance, monitoring and evaluation and learning and innovation policies to establish their effect on construction cost overruns in real estate projects.

Keywords: *Organizational Capacity; Financial and Contract Management Practices; Construction Cost Overruns*

Introduction

Financial and contract management practices in firms is an important aspect in firm management which has a significant influence on stability and growth as well as cost control. Optimization of resource allocation and controlled expenses can lead to increased profitability as well as competitiveness (Dlamini and Cumberlege, 2021).

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Financial and contract management practices encompass an exhaustive methodology that integrates financial proficiency with contractual insight covering the entire contractual cycle from assessing needs to closing contracts which include subcontractor oversight, strategic negotiation techniques and cost reimbursement techniques (Muhammada et. al., 2019). Effective financial and contract management practices for real estate projects streamlines operations by efficient use of resources, standardized process and execution of timely contractual obligations (Alzouber, 2022).

Organizations are systems, and their ability to function depends on their available financial, technological, human, and physical resources. The ability of an organization to function by meeting stakeholder expectations and achieving its objectives is known as organizational capacity. The systems theory developed by Ludwig von Bertalanffy (1968) and George Bateson (1979) suggests that the optimal understanding of an organization's components comes from examining their interactions with each other and with other systems, rather than considering them in isolation. Numerous approaches have been used to examine the relationship between organizational capability, financial and contract management techniques, and construction cost overruns. An organization's resource base is a measure of its organizational capacity aspects, which comprise skill competency, machinery and equipment, information and technology, and training and development. Organizational capacity is comprised of procedures and processes for managing resources, both internally and externally (Malkanthi, Premalal, and Mudalige, 2017). Empirical research shows that organizational capacity is developed gradually through the construction of procedures, experience gained over the years, and human resource training rather than being planned or controlled in a systematic manner. Programs for developing hardware and software solutions are both useful tools for enhancing organizational capacity (Asiedu and Ameyaw, 2021).

Every project in the construction industry carries risk and uncertainty since it is a distinct, dispersed, dynamic, and complicated enterprise (McCord, McCord, Davis, Haran, and Rodgers, 2015). The purpose of project management theory is to achieve project goals in an efficient and effective manner by using a systematic and structured approach to project management (Engwall, 1998; Northouse, 2013). A thorough structure and set of principles for project management techniques were made available with the 1987 release of the Project Management Body of Knowledge (PMBOK Guide) by the Project Management Institute (PMI). Project Cost Management is one of the ten knowledge areas listed in the Project Management Institute guidebook. Four activities that are necessary to control costs and minimize overruns are included

in the knowledge domains of project cost management (PMI, 2013). Despite improvements in management techniques, construction cost overruns in real estate projects continue to be a problem. Accurately forecasting project expenses is difficult because of changing stakeholder expectations and the dynamism of project environments. Project managers can take a proactive approach by identifying the possible causes of budgetary deviations and putting plans in place to lessen their effects.

Henry Gantt created the Gantt chart in the early 20th century as a visual management tool to control project costs. The U.S. Navy also developed tools like PERT (Program Evaluation and Review Technique) for the Polaris missile project, and the DuPont and Remington Rand Companies developed the Critical Path Method (CPM) as a computer-based method for scheduling and planning plant maintenance and construction projects. All of the tools are matched to the bare minimum time required to finish a project; any hold-up along the critical route indicates that more time is required to finish the construction project, which raises the project's cost. The percentage of cost overruns is shown in the difference between the actual and budgeted costs. Erroneous cost forecasts, design revisions, delays, insufficient resource use, and market fluctuations can all lead to construction cost overruns. While organizations lacking adaptability may face greater costs due to rigid processes, those with strong capacities can undertake cost-cutting measures and adjust to obstacles efficiently (Liang et al., 2024).

Research Problem

This study investigates the persistent problem of cost overruns in real estate construction projects within Kenya. Despite the real estate sector's significant contribution to the country's GDP and employment, project budgets are frequently exceeded, hindering project success and economic growth. The research draws upon existing literature to establish cost overruns as a global phenomenon affecting construction projects of all types and sizes. However, the specific causes and impacts within the Kenyan context require further examination. This study aims to identify the key factors contributing to cost overruns in Kenyan real estate projects and their effects on stakeholders involved. The successful completion of construction projects hinges on adherence to budget constraints. Cost management is paramount compared to schedule and scope within the "iron triangle" of project management. Given the recent surge in Kenyan construction projects, cost overruns pose a critical threat to project viability and economic prosperity. This research will contribute to a deeper understanding of the causes and consequences of cost overruns in the Kenyan

real estate sector. By pinpointing these factors, the study aims to inform the development of mitigation strategies that enhance project success and economic well-being.

The real estate sector plays a critical role in the Kenyan economy, contributing significantly to GDP and employment (Asiedu & Adaku, 2019). However, project success is often hampered by cost overruns, exceeding initial budgets and hindering economic growth (Kogi & Were, 2017). This research investigates the persistent problem of cost overruns in Kenyan real estate construction projects. Construction projects worldwide are susceptible to cost overruns, regardless of type or size (Flyvbjerg et al., 2014). Studies report a mean cost overrun of 12.22% across 276 construction and engineering projects (Flyvbjerg et al., 2014). This problem is not unique to developed nations; developing countries like Kenya also face this challenge (Ong'ondo, Gwaya, & Masu, 2019). Project planning and management factors comprise improper documentation, inadequate stakeholder engagement, and deficiencies in monitoring and evaluation techniques are cited as causes of construction cost overruns (Adamo, 2016). Additionally, inaccurate initial estimates and design changes during construction significantly impact costs (Rosenfeld, 2014). Contractual Issues include; Ineffective contract management, unclear project schedules, and government policies can lead to cost overruns (Kogi & Were, 2017). Delays in payments to contractors and disputes over project scope can further exacerbate the problem. Factors beyond project control, such as inflation and fluctuations in resource prices, can also contribute to cost overruns.

Construction cost overruns have a detrimental impact on various stakeholders: Clients are affected through increased financial burden, potential project delays, and strained relationships with contractors (Polat et al., 2014). Contractors suffer reduced profit margins and potential project abandonment in extreme cases. Buyers/Tenants are subjected to increased costs of purchasing or renting property, leading to lower occupancy rates and defaults (Ansar et al., 2014). The national economy is affected through reduced overall economic growth due to inefficiencies and potential project stalling.

While the global prevalence of construction cost overruns is established, a deeper understanding of the link between organizational capacity and construction cost overruns specific causes and impacts within the Kenyan context is necessary. This research aims to bridge this knowledge gap by establishing the Mediating influence of organizational capacity on the relationship between financial and contract management practices and Construction Cost Overruns in real estate projects. Identifying the key factors

contributing to cost overruns in Kenyan real estate projects, analysing the impact of cost overruns on project stakeholders and formulating recommendations for mitigating cost overruns and improving project success rates in the Kenyan real estate sector will also be established through this investigation. By examining these aspects, this research will contribute to a more comprehensive understanding of the challenges faced by the Kenyan real estate industry. The findings can inform the development of effective strategies to ensure project completion within budget and timeframe, ultimately promoting economic growth and project stakeholder satisfaction.

Research Objective

The objective of this study is to establish the Mediating influence of organizational capacity on the relationship between financial and contract management practices and Construction Cost Overruns in real estate projects in Nairobi and Kisumu Counties in Kenya.

Literature Review

Review of Theoretical Literature

The relationship between financial and contract management practices, organizational capacity and Construction Cost Overruns in real estate projects is established through various theoretical perspectives which include Microeconomic Production Theory, Multiple Causation Theory and Systems Theory. Microeconomic Production Theory proposed by Lerner (1968) which studies the behaviour of individual firms in regards to fixation of price and output and their reaction to the changes in the demand and supply conditions; thus it seeks to determine the mechanism by which the different economic units attain the position of equilibrium proceeding from individual units to an industry or a market: in our case the industry being the construction industry and specifically real estate projects. The theory is concerned with the issues of resource allocation, product and factor pricing with an intimate concern on the question of efficiency and welfare (avoidance or elimination of waste; or inefficiency arising from production that is not organized in the most efficient manner).

One key element of Microeconomic production theory is cost analysis, which examines the relationship between inputs, output, and costs. It considers concepts such as total cost, average cost, and marginal cost. Total cost (TC) is the sum of all the costs incurred in the production process, while average cost (AC) is the total cost divided by the quantity of output. Marginal cost (MC) is the additional cost incurred when

producing one more unit of output. It is important for this study to find a way to structure possible explanations of cost overruns and the theory provides a framework of understanding how firms make production decisions, allocate resources, and optimize their production processes to maximize their profits. The framework for analysing cost overruns is based on microeconomic production theory and the element of a cost is key in the theory.

Multiple Causation Theory is the first complementing theory. Multiple Causation Model was introduced by Petersen in 1971 in his book titled "Technique of Safety Management" as a tool for understanding and preventing industrial accidents (AbdelHamid & Everett, 2000). The theory postulates that for a single accident, there may be different contributory factors, causes and sub-causes, and that certain combinations of these give rise to accidents. In this study the investigation on the relationship between financial and contract management practices, organizational capacity and Construction Cost Overruns in real estate projects cannot be investigated in isolation but all their constructs such as competency of skills, machines and equipment, information and technology adoption, training and development, contraction process, subcontractor oversight, negotiation strategies, cost reimbursement and percentage increase in budget are included. The major contribution of the theory is to bring out the fact that rarely, if ever, is an event the result of a single act. Whenever there is a discussion about causes of a phenomenon, it is not feasible to speak in terms of a single cause (Robert, 1999).

System Theory is the second anchoring theory. Walonick (1993) postulated that the system approach is a dynamic process that integrates all activities into a meaningful total system, systematically assembles and matches the parts of the system into a unified whole, and seek an optimal solution or strategy in solving a problem (Kerzner, 2013). Every cause, which is a sub-cause, is a part of a larger group of causes. It is important to recognize that each system has both inputs and outputs and these systems could also be viewed as a unit. Hence, the system approach is applicable to the study of cost overruns because it could be viewed as focusing on the relations between the causes and how they interact in a holistic approach.

Construction projects consist of complex interdependent components that are highly dynamic, involving non-linear relationships, and of a large number of interdependent and sequential tasks. These interdependent parts together make up a whole in that each part contributes something and receives something from the whole. Thietart and Forgues (1995) pointed out that multiple organizational actors, with diverse agenda,

inside and outside the organisation, try to coordinate their actions to exchange information and to interact in other ways, and they do all this in a dynamic manner; yesterday's action activates a reaction today which may lead to a new action tomorrow. McBride (2005) avowed that complex interactions between processes give rise to new emergent behaviour.

Chang (2002) explained that the cost of a construction project is affected by a large number of factors because of the fact that construction is a multidisciplinary industry and its work involves many parties such as project owner and various professionals, contractor and suppliers. Thus, a construction project cost does not depend on a single factor but a cluster of variables that are related to the characteristics of the project and to the construction team as well as the market conditions. Construction cost overruns could therefore be multi causal and a result of the interaction of various causes therefore, cannot be reduced to a single cause. This means that to minimize cost overruns, the various causes playing contributory roles have to be considered.

Review of Empirical Literature

Organizational Capacity refers to the strength that propels an organization to achieve its mission in relation to competency of skills, machines and equipment, information and technology adaption and training and development. The relationship between financial and contract management practices, organizational capacity and Construction Cost Overruns in real estate projects is not comprehensively outlined, but wherever earlier studies have compared any of the two variables the findings have indicated positive correlation on the relationship between cost overruns and organizational capacity or cost overruns and financial and contract management practices except one study that revealed a negative correlation. The relationship diverges on aspects of types of projects, country, contract type and technological adaptation.

Dlamin and Cumberlege (2021) identified critical competency skills required by project managers to prevent cost and time overruns. Using a quantitative research approach, a web-based questionnaire was issued to Eastern Cape Masters Builders Association (MBA) contractors. The findings revealed that the abilities required to manage cost overruns are the same as those needed to address time overruns. This emphasizes the relevance of Project Managers with these competencies in reducing delays and cost overruns in construction projects. The study emphasizes the importance of Project Managers developing their competency abilities in order to function optimally. Pondaag and Latief (2023) identified risk factors and

associated risk ratings resulting from Quantity Surveyor competency, which have the potential to cause cost overruns. Using the Delphi technique, the study tried to validate these risks identified by a thorough literature analysis. The analysis indicated 52 variables with a moderate level of risk and three variables with a high level of risk during both the pre-construction and construction periods, all of which might significantly contribute to cost overruns.

Shoar et al. (2022) proposed a robust Random Forest (RF) regression model for predicting ESCOs that took into account both project and organizational characteristics. The model was created and verified using a database of 95 high-rise residential complexes designed in Iran over an eight-year period, as well as 12 related variables. The results were compared to Support Vector Regression (SVR) and Multiple Linear Regression (MLR), and the RF regression model outperformed both with an R2 value of 0.8680 and a mean-absolute-error (MAE) of 3.88. The study has practical applications since it provides design firms with an excellent tool for screening and prioritizing projects based on the possibility for cost overruns and developing contingency plans. Giri et al. (2020) demonstrated how construction businesses approach equipment downtime costs and evaluate solutions for reducing them. The study includes surveying construction companies with a large workforce. In addition, a case study was undertaken on a building site in Pune to measure productivity losses caused by equipment downtime. The findings were based on survey data, and frameworks and integrated models for effective construction equipment management were proposed.

Abdul-Samad and Kulandaisamy (2022) researched the elements impacting costs in Malaysian ICT projects and created a framework of these factors for project managers to reference. Purposive and snowball sampling approaches were used to obtain responses from 194 Malaysian ICT project managers using a 5-point Likert scale survey. The top 15 cost affecting elements at various project phases were discovered through response analysis, and they served as the foundation for the development of a framework to improve ICT project management. Chamikara et al. (2023) investigated the role of BIM in addressing cost overruns in D&B projects. Data were acquired using a qualitative approach that included two rounds of interviews. The findings indicated 10 major reasons of cost overruns in design and building (D&B) projects, with constant design changes, construction faults, and inadequate planning being the most significant. Interoperability, clash detection, digital quantity takeoff, and cloud computing were suggested as effective techniques for addressing these issues. The study gives significant insights for professionals when selecting

appropriate BIM functionalities to reduce cost overruns in D&B projects. Further research should focus on identifying hurdles and techniques for applying BIM in D&B projects to prevent cost overruns, based on the study's results.

Annamalaisami and Kuppuswamy (2021) proposed a novel technique to managing cost risks that takes into account the peculiarities of cost overrun factors. Initially, construction cost overrun drivers were identified through a comprehensive literature search and validated through a questionnaire survey of building construction projects in India. The acquired data was then analyzed using cluster analysis, which resulted in the construction of a taxonomy of cost overrun variables divided into five categories: price-related, quality-related, design-related, execution-related, and professional skill-related. This classification clarifies the distinguishing aspects of cost overrun factors, allowing stakeholders to select the most effective cost risk management techniques. Understanding the behavioral patterns of cost overrun sources enables decision-makers to develop effective mitigation strategies in project control methods. A case study demonstrated the taxonomy of cost overrun variables' relevance in real-world circumstances.

In the contrast, Gwaya, Wanyona, and Masu (2014) in their study assessed the influence of the project manager’s competence to manage the triple constraint in projects implemented in Nairobi. The researchers stressed on the need for Kenya to adopt a different approach in the application of project management within the construction industry. This is because various research undertakings had revealed massive cost and time overruns in projects undertaken in Kenya which highlighted the need, (Mbatha, 1986; Talukhaba, 1988; Mbeche and Mwandali, 1996; Olima and K'akumu, 1999; The Kenya Alliance of Resident Associations, 2012). The study adopted an exploratory approach using a descriptive survey design on a sample of 40 respondents. It was based on the competence theory and the study established that the project manager’s experience and professional project manager’s certification do not influence his/her ability to manage the triple constraint.

Conceptual Framework

The study is guided by the conceptual framework in Figure 1 indicating the relationship of financial and contract management practices (contracting process, sub-contractor oversight, negotiation strategies, and cost re-imbursement); and construction cost overruns and the mediating effect of organizational capacity

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(competency of skills, machines and equipment's, informational technology, adaptation and training and development). The relationship of the variables will keep the research work focused on the study.

Figure 1: Conceptual framework showing the relationship between organizational capacity constructs and construction cost overruns in real east projects

Research Hypothesis

H_o: There is no significant mediating effect of Organizational Capacity on the relationship between financial and contract management practices and construction cost overruns in real estate projects.

Methodology

This study adopted Pragmatic Paradigm which provided an opportunity for wider and various worldview and dissimilar assumptions, as well as different forms of data collection and analysis using the mixed methods approach (Wambugu, Kyalo, Mbii and Nyonje, 2015; Creswell, 2003). The pragmatism Paradigm was preferred to other paradigms mainly because it provided for the use of both qualitative and quantitative research methodologies to collect information and make inquiry into complex phenomenon of social and natural contexts (Creswell, 2009; Morgan, 2007). In this study, use of pragmatism was done by conducting quantitative research analysis in order to test hypothesis and generate results that can be generalized to target population.

This study employed a descriptive research design, namely a cross-sectional survey with a correlational design. The descriptive study methodology aided in exploring the relationship between the variables and reporting the findings (Brook, 2013). It also enabled a multidimensional approach to data collection, allowing for examining project specialists' perspectives on construction cost overruns in real estate projects. The study used correlational analysis to test the generated study hypothesis. Stepwise multiple linear regression advanced by Baron and Kenny's four-step mediation model was applied to assess the mediating influence of organizational capacity (OC) on the financial and contract management practices (FMP) and

construction cost overruns (CCO) relationship. The mediation process involved a mediator influencing the dependent variable (path a), a predictor variable affecting the mediator (path b) and an explanatory variable influencing the predictor variable (path c) ensuring effectiveness and efficiency. After controlling for pathways, a and b path c becomes statistically insignificant.

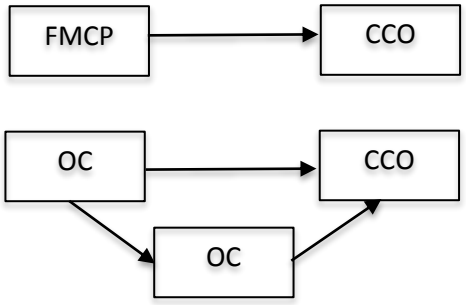

Figure 2: Simple Mediation Model

The study utilized a simple regression model (3.2a) to determine the significant effect of OC on CCO. This is the total effect given by:

($y = \beta x_1 + \varepsilon$)

$CCOit = \beta 0 + cFMCPit + \varepsilon it$ ……..... (a)

Where CCO = Construction Cost Overruns, FMCP = Financial Management Contract Practices, β0 = constant, c = path coefficient and ε = error term.

In the second step, the influence of FMCP on OC was established using a simple regression model (3.2b), which should also be significant.

$OCit = \beta 0 + aFMCPit + \varepsilon it$ …… (b)

Where β0 = constant, a = path coefficient, FMCP = Financial Management Contract Practices, OC =Organizational Capacity, and ε = error term.

In step 3, a simple regression analysis was conducted, with OC acting as a predictor of firm value. OC should significantly impact CCO while controlling for FMCP.

$CCOit = \beta 0 + bOCit + \varepsilon it$ …… (c)

Where CCO = Construction Cost Overruns, FMCP = Financial Management Contract Practices, OC =Organizational Capacity, β0 = constant, b = path coefficients, and ε = error term.

The model aims to determine if Organizational Capacity reliably predicts Construction Cost Overruns while accounting for Financial Management Contract Practices. It involves a multiple regression analysis that considers both Financial Management Contract Practices and Organizational Capacity to predict Construction Cost Overruns. If the impact of capital structure is positive, partial mediation is retained for

step four. If the impact of Organizational Capacity remains significant after controlling for Financial Management Contract Practices, full mediation is supported. If both Financial Management Contract Practices and Organizational Capacity predict Construction Cost Overruns, partial mediation is justified. A variable has an intervening effect when β_2 is significant and β_1 has a lesser impact on overall value contrasted to step one results.

$CCOit = \beta 0 + aFMCPit + bOCit + \varepsilon i$……. (d)

Where CCO = Construction Cost Overruns, FMCP = Financial Management Contract Practices, OC =Organizational Capacity, $\beta 0$ = constant, a and b are the path coefficients, and ε is the error term.

Findings and Discussions

Table 1: Descriptive Statistics, Diagnostic Test and Correlation Analysis

Statistics Variable	N	Mean	SD	Min	Max	Skewness
Contracting Process	336	4.68	0.421	1	5	-1.01
Subcontractor Oversight	336	4.66	0.473	1	5	-1.56
Negotiation Strategy	336	4.64	0.414	1	5	-0.727
Cost Reimbursement	336	4.63	0.454	1	5	-1.22
Organizational Capacity	336	4.40	0.467	1	5	-1.41
Construction Cost Overruns	336	4.43	0.596	1	5	-1.37

The findings established that Contracting Process among financial and contract management practices was consistent, with a mean of 4.68, a standard deviation of 0.421, and a variance of 0.177, suggesting minimal variation. The data distribution was relatively less picked and negatively skewed with a long left tail distribution. Additionally, the descriptive statistics for Subcontractor Oversight showed a mean of 4.66, a standard deviation of 0.473, a variance of 0.224, a minimum of 1, and a maximum of 5. The data indicated normal variation in Subcontractor Oversight among financial and contract management practices, with a negatively skewed distribution of -1.56 implying that there was a long left tail distribution and a relatively less peaked relative to the normal distribution.

Further, the negotiation strategy varied marginally among financial and contract management practices, with a mean of 4.64, a standard deviation of 0.414, a variance of 0.171, a minimum of 1, and a maximum of 5. The data distribution was negatively skewed and platykurtic, suggesting a flatter shape than a normal distribution with a stronger inclination to the left. Moreover, the analysis revealed that cost reimbursement among financial and contract management practices depicted a mean value of 4.63, with a standard deviation of 0.454 and a variance of 0.206. The cost reimbursement ranged from a minimum of 1 to a maximum of 5. Thus, the data distribution displayed a negative skewness of -1.22 a relatively less peaked distribution.

Diagnostic Tests

The study was based on a set of assumptions of regression analysis that must be met to ensure the data collected is appropriate for the statistical analysis. When these assumptions are violated the results of the analysis can be erroneous. The assumptions tested include normality, multicollinearity and independence of errors. These are further explained in detail in the following sub-thematics areas:

Assumptions of Normality

An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing. The test for normality of data distribution was conducted on all the predictor variables, moderating variables using Kolmogorov-Smirnov test statistics (KS-test) and Shapiro-Wilk test (SW-test). The results of Kolmogorov-Smirnov test statistics and Shapiro- Wilk Test are shown in Table 2.

The results of Kolmogorov-Smirnov test statistics as well as Shapiro- Wilk Test shown in Table 2 indicates that all the variables under study followed a normal distribution ; For data sets less 2000, we use Shapiro-Wilk tests ; Financial and contract management Practices ; , df(336) = 802, p-value 0.771>0.05, Construction Cost Overruns; df(336) = 0.930 p-value =0.717>0.05 and Organization capacity; df(336) = 0.972 p-value =0.651>0.05.The P-values were all more than 0.05; and hence it was concluded that the samples were picked from a normal population. Based on these results, it was concluded that the data was normally distributed.

Table 2: Tests for Normality

Tests of Normality						
financial and contract management, Construction Cost Overruns, Organizational capacity	**Kolmogorov-Smirnov[a]**			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Financial and contract management practices	0.303	336	0.262*	0.802	335	0.771
Construction Cost Overruns	0.333	336	0.126*	0.930	335	0.717
Organizational capacity	0.416	336	0.100*	0.972	335	0.651

Linearity Test of Assumption

Prior to conducting linear regression, a linear relationship ought to exist between the dependent and independent variables (Tabachnick & Fidell, 2013). ANOVA test for linearity was done to establish if significant deviation from linearity was greater than 0.05 or not in order for the relationship between the independent variable to be confirmed as linearly dependent and admissible. The results are as shown in Table 3.

From the results in Table 3, based on the ANOVA output results , values sig. deviation from linearity of Financial and contract management practices 0.218>0.05, Construction Cost Overruns 0.782>0.05 and organizational capacity 0.566>0.05 indicates that there is a linear relationship between Financial and contract management practices, Construction Cost Overruns and organizational capacity and hence it was concluded that there was a statistically significant linear relationship between Financial and contract management practices, organizational capacity and construction cost overruns of real estate projects in Kisumu and Nairobi Counties.

Table 3: Linearity Test for financial and contract management practices, Construction Cost Overruns and Organizational Capacity

Construction cost overrun & Financial and contract management practices, Organizational Capacity		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	48.672	133	0.366	1.142	0.197
	Linearity	0.918	1	0.918	2.863	0.092
	Deviation from Linearity	47.754	132	0.362	1.129	**0.218**
Within Groups		64.745	202	0.321		
Total		113.417	335			
Construction cost overrun & Construction Cost Overruns		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	15.446	54	0.286	0.820	0.808
	Linearity	0.000	1	0.000	0.001	0.979
	Deviation from Linearity	15.416	53	0.291	0.836	**0.782**
Within Groups		97.970	281	0.349		
Total		113.417	335			
Construction cost overrun & Organizational Capacity		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	17.928	54	0.332	0.968	0.542
	Linearity	0.574	1	0.574	1.675	0.197
	Deviation from Linearity	17.354	53	0.327	0.955	**0.566**
Within Groups		96.331	281	0.343		
Total		114.259	335			

Testing for the Presence of Multicollinearity

Presence of Multicollinearity was tested using Variance Inflation Factors (VIF). The threshold used to test existence of Multicollinearity was set at a minimum value of 10 as per Ringle, Sarstedt and Schlettgen (2014). Consequently, a VIF value above 10 was deemed to imply existence of Multicollinearity. A collinearity diagnosis of the independent variable was performed and the results are presented on Table 4.

Table 4: Collinearity Statistics

Variables	Tolerance	VIF
Financial & contract management	0.515	**1.942**
Construction Cost Overruns	0.551	**1.816**
Organizational capacity		**1.169**
	0.856	

From Table 4, the tolerances were all above 0.2, the Variance Inflation Factors (VIF) were also all below 5. Since Multicollinearity is associated with VIF above 5 and tolerances below 0.2, all the variables under the study were therefore deemed not to exhibit Multicollinearity and were considered fit for analysis.

Correlation Analysis

Table 5 outlines the relationships between different variables. Capital structure displayed a positive but weak and statistically insignificant association with corporate governance ($r = 0.019$, $p > 0.05$), while firm value demonstrated a weak yet significant positive correlation with corporate governance ($r = 0.120$, $p < 0.05$). The correlation between capital structure and firm value was positive but weak and statistically insignificant ($r = 0.084$, $p > 0.05$), suggesting that capital structure may not significantly influence firm value in this context.

Table 5: Correlation Analysis Results

	FMCP	OC	CCO
FMCP	1.00		
OC	0.688	1.00	
Sig (2-tailed)	0.000		
CCO	0.705	0.543	1.00
Sig (2-tailed)	0.000		
FMCP×OC×CCO	0.713		
Sig (2-tailed) (Overall)	0.000		

The correlation output Table 5 shows that Financial and contract management practices upon mediation effect of Organizational capacity were significantly(*P-values*<0.05) related with construction cost overruns. Similarly, the overall correlation coefficient for mediating effect of organizational capacity on the relationship between Financial and contract management practices on construction cost overruns in real estate projects was found to be 0.713 with a P-value of 0.000 < 0.05. The findings imply that there is a significant mediating effect of Organizational capacity on the relationship between Financial and contract management on construction cost overruns in real estate projects, leading to rejection of the null hypothesis; ($H_{0:}$ that Organizational capacity does not significantly mediate the relationships between Financial and contract management practices on construction cost overruns in real estate projects). The result supports the findings of studies done by Gunasekera and Chong (2017) who found that Organizational capacity significantly mediate the relationships between Financial and contract management practices and construction cost overruns in real estate projects.

Regression Analysis of Mediating effect of Organizational Capacity on the relationship between Financial and Contract Management Practices and Construction Cost Overruns in Real Estate Projects

Stepwise multiple linear regression advanced by Baron and Kenny (1986) was adopted to investigate the effect mediating of Organizational capacity on the relationship between Financial and contract management practices on construction cost overruns in real estate projects. According Baron and Kenny mediation is tested through 3 regression models steps namely: Model 1; estimating the relationship between the predictor and Outcome, Model 2; Estimating the relationship between the predictor and the moderator and Model 3; estimating the relationship between the interaction of predictor and mediator on the outcome. The models should be statistically significant.

Regression Analysis of Mediating effect of Organizational capacity on the relationship between Financial and Contract Management and Construction Cost Overruns in Real Estate Projects.

In this subsection, the hypothesis tested Mediating effect of Organizational capacity on the relationship between Financial and Contract Management practices and Construction Cost Overruns in Real Estate Projects. Precisely, Financial and Contract Management practices are discussed using stepwise linear regression to investigate the effect of Organizational capacity on the relationship between Financial and Contract Management and Construction Cost Overruns in Real Estate Projects. in the first step (model 1) only Financial and Contract management Practices (predictor) and Construction Cost Overruns of Real Estate was included and in the second stage only Financial and Contract management Practices (predictor) and Organizational capacity (mediator) was included (model 2), and finally in model 3 the interaction of Financial and Contract management Practices and Organizational capacity towards Construction cost overruns in Real Estate projects was determined. The findings are shown in Table 6.

Table 6: Regression output for mediating effect of Organizational capacity on Financial and Contract Management Practices and Construction Cost Overruns in Real Estate Projects

Model summary

Model	R	R^2	Adj.R^2	Std. error of estimate	R^2 Change	F-change	df 1	df 2
1	0.705	0.497	0.495	0.265	0.497	329.57	1,334	
2	0.543	0.295	0.293	0.314	0.202	320.32	1.334	
3	0.713	0.509	0.504	0.263	0.014	214.99	3.332	

ANOVA

		Sum of squares	df	Mean square	F	Sig.
	Regression	23.220	1	23.220	329.573	0.000
	Residual	23.532	334	0.070		
	Total	46.751	335			
	Regression	13.777	1	13.777	9.252	0.000
	Residual	32.974	334	0.099		
	Total	46.751	335			
	Regression	23.782	3	7.927	114.582	0.000
	Residual	22.969	332	0.069		
	Total	46.751	335			

Model	Unstandardized Coefficients		Standardized coefficients	T	Sig.
	B	Std. error			
Constant	1.356	0.188		7.198	0.000
Financial&contract management practices	0.733	0.040	0.705	18.154	0.000
Constant	2.096	0.227		9.252	0.000
Organizational capacity	0.569	0.048	0.543	11.813	0.000
Constant	1.273	0.207		6.136	0.000
Financial&contract management practices	-0224	0.088	-0.214	-2.553	0.011
Organizational capacity	0.716	0.075	0.688	9.516	0.000
FCM×ORG.CAP.	0.268	0.104	0.288	2.587	0.010

Dependent Variable: **Construction Cost Overruns in Real Estate projects**

The model summary results suggest that there is a positive multiple correlation(R=0.713) between mediating effect of organizational capacity on the relationship between Financial and Contract management practices and Construction Cost Overruns in Real Estate projects. Model 1 without the mediating effect of organizational capacity term predicted up to 49.7%; whereas model 3 with mediating effect of

organizational capacity term predicted up to 50.9% of the variance in Construction cost overruns in Real Estate projects. The R^2 change in model 3 is 0.014 showing an additional effect of 1.4% to the model due to the mediating effect of organizational capacity. The adjusted R-square indicated that the model with the mediating effect of organizational capacity as a new term improves the model fit more than expected by chance alone implying that it was actually a better model in terms of goodness-of-fit for the regression model.

From the ANOVA table, both model 1; F (1, 334) = 329.573 model 2; F (1, 334) =9.252 and model 3; F (3, 332) = 114.582 were statistically significant with the same P-value=0.000< 0.05 and P-value=0.000<0.05 respectively indicating the models significantly improves the ability to predict the outcome variable (Construction cost overruns in Real Estate projects).

From the coefficients table, the interaction term between Financial and Contract management practices and organizational capacity and Construction cost overruns in Real Estate projects was statistically significant (p = 0.000<0.05). Thus, organizational capacity has mediation effect on the relationship between Financial and Contract management practices and Construction cost overruns in Real Estate projects.

Given a model equation of $\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_3 + \beta_m X_1 M_{int}$.

Where; $\hat{Y}$ = Dependent variable (Construction cost overruns in Real Estate projects)

β_0 = Constant of the equation

β_1 = Constant of the independent variable (Financial and Contract management practices)

β_2 = Constant of the Interaction term

$X_1 M_{int}$ = Interaction term between Financial and Contract management practices and organizational capacity.

The proceeding multiple linear regression model after was as follows: $\hat{Y} = 1.273 - 0.224X_1 + 0.716X_2 + 0.268X_1 M_{int}$

Conclusions and Recommendations

The findings indicate that Organizational capacity mediated the relationship between Financial and contract management practices and Construction Cost Overruns in Real Estate Projects. The multiple linear regression coefficients as well as the Pearson correlation results indicated that there was significant moderating effect of Organizational capacity on the relationship between Financial and contract management practices and Construction Cost Overruns in Real Estate Projects. The small p-values implied that there is a significant moderating effect of Organizational capacity on the relationship between Financial and contract management practices and Construction Cost Overruns in Real Estate Projects.

Considering the study findings and conclusions, it is recommended that project professionals and other relevant real estate project stakeholders should encourage effective Financial and contract management practices, organizational capacity that would be critical in assembling pertinent information and creating avenues that could be utilized to improve Construction Cost Overruns in real estate projects. Project professionals and other relevant real estate project stakeholders should undertake Proper selection and adequate facilitation of subcontractors in project activities as well as observation of legal compliance in subcontractor termination. Project professionals and other relevant real estate project stakeholders should ensure measurable targets in negotiation and proper identification of potential parties' mutual interest during negotiation to positively manage construction cost overruns in real estate projects. Project professionals and other relevant real estate project stakeholders should ensure that correct payment application is done accurately and payment upon accomplishment of project activities is given due consideration to avoid unnecessary cost overruns.

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