

Mediating effect of Contract Management on Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects in Kenya

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Abstract: The under exploitation of Renewable energy projects in Kenya has been alluded to financial constraints arising from investor's negative perception of the regions high investment risk. The purpose of the study was to assess the mediating influence of Contract management on the relationship between financial risk management instruments and performance of hydroelectric energy projects in Kenya. The study adopted pragmatism paradigm and descriptive survey design while questionnaires and interview guide were used to collect quantitative and qualitative data from a census of 94 participants. Validity coefficient of 0.775 and reliability coefficient of 0.781 were obtained. Analysis involved descriptive statistic and inferential statistic of Correlation and Regression at a significance level of 0.05. The hypothesis:2. H₀: Contract Management does not significantly mediate the relationship between financial risk management instruments and performance of hydroelectric energy projects in Kenya was rejected since $P=0.000<0.05$. Therefore the study concluded that there is significant mediating effect of contract management on the relationship between financial risk management instruments and performance of hydroelectric energy projects in Kenya. It is recommended that Project management and policy makers should integrate appropriate contract management standards regarding financial risk management instruments to improve performance of hydroelectric energy projects to boost investors and lenders confidence. Further research should be carried out on other factors that can influence performance of power projects other than Contract management.

I. INTRODUCTION

Though Kenya is endowed with an estimated hydropower potential of about 6,000MW for large hydros (above 10MW) and over 3,000MW for small hydros, only 823.8 MW of large hydros and less than 25MW of small hydros has been exploited (Ministry of Energy, 2020). For this massive infrastructural investment to be realized the financial markets must play critical role in stimulating private investments into the renewable energy development to bridge the scarce resources at disposal of the public sector (Rezec and Scholtens, 2017). But due to investors negative perception of

Kenya's high investment risk and low creditworthiness, the degree of private capital penetration has generally remained low (OECD, 2013). Thus, appropriate contract management and utilization of financial risk management instruments to de-risk renewable energy infrastructure projects is essential for reducing private investment cost. Financial risk management instruments are approaches to risk mitigation for renewable energy projects and they include alternative risk transfer, contingent capital, hedging derivatives, credit enhancement, and insurance. Renewable energy development thus demands attention on risk mitigation to ensure adequate funds can be solicited from both the local and international financial markets so as to reap from their benefits and improve performance of such project by ensuring their successful completion on schedule, within cost and quality.

Contract management practices are a necessity that project stakeholders must adhere to for purposes of achieving project objectives of quality delivery, effective cost of running the project, client satisfaction and completion of projects within scheduled time (Silvana, 2015). Other scholars like Subramaniam and Shaw (2002) postulate that enhanced contract management practice is a panacea for improving the performance of projects and integrating transparency and accountability into the system while in contrast Saxena (2008) argued that contract management is not an end unto itself but should rather focus on the outcomes to be achieved and thus the contract managers should equip themselves with relevant skills. According to Yegon and Mbeche (2018), a contract is a written legally binding agreement between two or more parties to fulfill agreed upon terms and conditions while contract management is an organized systematic process that ensures the project parties meet their contractual obligations as per contract document for quality achievement, cost reduction and completion within time schedule (Arrowsmith, 2004). This study defines contract management as the effectiveness and efficiency by which project parties accomplish their respective obligations as per the contract agreement for the delivery of quality electricity within

time and cost with client satisfaction.

The study problem is that financing of renewable energy projects remains constrained due to risk barriers in financial access coupled with investors and developers perception that the projects are highly risky even in the event that the project satisfies the economic feasibility in the long run especially in developing nations like Kenya. The purpose of the study is to assess the extent to which contract management mediates the relationship between financial risk management instruments and performance of hydroelectric energy projects in Kenya. The study provides a reference for other scholars, policy makers and investors besides contributing valuable knowledge on appropriate contract management practices in the utilization of financial risk management instruments in reducing the inherent risks in hydroelectric energy projects thereby attracting securitized financing pools. Equally, the study came up with and suggested efficient contract management practices which meet project stakeholder needs, ensures quality delivery within time and cost with minimal risks. The study was organized into introduction, literature review, findings and discussion, and conclusion.

II. LITERATURE REVIEW

2.1 Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects

Financial risk management instruments such as Alternative risk transfer (ART), hedging derivatives, contingent capital, credit enhancement and insurance, if used appropriately, could reduce renewable energy infrastructure projects' cost as risks will be transferred away from investors and lenders (Suprpto et al., 2016). Wing and Jin (2015) showed that Catastrophe bonds enable the transfer of operational risk to bond investors thereby enabling renewable energy developers to secure low cost capital in the financial market. Contingent capital provides projects with strong and efficient recapitalization incentives when they experience significant equity loss or upon reaching a trigger threshold (Calomiris and Herring, 2013). Observations also showed that contingent capital offers cheaper recapitalization costs compared to ordinary equity offerings, hence limiting the cost of financial distress (Vall'ee, 2016). Contingent capital can reduce financial distress by injecting liquidity to the project hence reducing risks and improving performance of renewable energy projects.

Credit enhancement in the global financial market has been instrumental in strengthening the credit profile of participants to fulfill financial obligations at a cheaper cost thereby reducing demand pressure on the banking system (Dhruba, 2018; Chowdhury, Chen and Tiong, 2015). Even though credit enhancement products have been used extensively in the global financial markets, their application to renewable energy sector has experienced challenges which have made access to affordable financing a nightmare for such projects. Hedging derivatives are important financial risk management

instrument that can be used in a project to prevent losses and maintain high returns (Basha, 2013). However, scholars like Giraldo-Prieto, Uribe, Bermejo and Herrera (2017) believe that the instruments themselves carry with them certain risks such as counterparty risk and legal risk which may make the contract enforceable when it's required to perform and thus adequate understanding and supervision of derivatives transaction should be done with maximum accuracy. In Kenya, Waswa and Wepukhulu (2018) observed a positive relationship between derivative usage and financial performance of NSE listed non-financial companies. However, these studies did not link to renewable energy projects thus prompting further research to provide project context understanding away from the conventional cooperate world.

Insurance companies as the paramount financial organizations in any surviving economy, have the prime business function of accepting and underwriting unwanted risk on insuring public's behalf at a premium (Soye, Adeyemo and Ayo, 2017). Renewable energy as a new technology remains a challenge to the insurance companies due to the difficult in their pricing and demand for a higher underwriting capacity, hence requiring innovative insurance instruments to mitigate the emerging risk classes (Gatzert and Kosub, 2015).

2.2 Contract Management and Performance of Hydroelectric Energy Projects

Contract management entails the process of delivering project objectives as per the obligations of the respective parties in the project contract to achieve value for money (Yegon and Mbeche, 2018). Effective contract management should ensure that stakeholders are satisfied, quality products are delivered, cost is reduced, and competitive procurement is stimulated, and risks and liabilities are managed. United States' Department of Defense (DoD) as the single largest contracting agency with an estimated procurement capacity of \$370 billion in FY2009 (FPDS, 2010) faced contract management deficiencies due to ineffective administration and contractor oversight according to records by Government Accountability Office (GAO) (Rendon and Snider, 2008). Similarly, in Uganda constraints in monitoring and execution of contracts were experienced by some procuring and disposing entities (PPDA Capacity Building Report, 2010) thus calling for the need to offer innovative strategies and skills on contract management. Kenya's state corporations have equally experienced challenges in the management of long term procurement contracts leading to low productivity and high cost and time overruns (Yegon and Mbeche, 2018) and therefore transparency in contract management is a panacea to enhanced project performance (Subramaniam and Shaw, 2002). In Kenya, Lucas and Rambo (2016) examined concessional factors influencing financing and performance of BOT railway project through causal-comparative design and semi-structured questionnaires for collecting data from a sample of 348 respondents out of a target population of 402 senior managers while analysis involved descriptive and

inferential statistics of Chi square tests, one-way ANOVA and Relative Importance Index (RII). Findings revealed that understanding concessionaire's technical capacity, revenue flow structure and concession fee charges and concession period in the contract document is directly significant to the performance of BOT projects.

III. METHODOLOGY

The study adopted pragmatism paradigm and descriptive survey design for collecting qualitative and quantitative data and triangulation of results to deduce in-depth knowledge of the problem under study without manipulating the environment (Creswell, 2013). A census of 94 participants consisting of 84 respondents and 10 Key Informants were involved while questionnaire and Interview Guide were used to collect data. The data collection instruments were pre-tested in 10 unselected participants and a validity coefficient of 0.775 and reliability coefficient of 0.781 obtained. Analysis involved descriptive statistics and inferential statistics of correlation and regression at a significance level of 0.05. The multiple regression models took the form:

1. H_0 : Contract management does not significantly mediate the relationship between combined financial risk management instruments and performance of hydroelectric energy projects in Kenya

Performance = f(financial risk management instruments, contract management, and the interaction term between Financial Risk Management Instruments and performance of hydroelectric energy projects, random variable)

$$Y_j = \beta_0 + \beta_1 X_j + \beta_2 X_m + \beta_3 X_m + \beta_2 X_i + \beta_3 X_i + \alpha$$

IV. FINDINGS AND DISCUSSION

The study realized a 100% questionnaire return rate. The study sought the perspectives of participants on intervening influence of Contract Management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. Financial Risk Management Instruments used in this study were; Alternative risk transfer, Contingent Capital, Credit Enhancement, Hedging derivatives, and Insurance.

Table 4.1: Combined Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects.

| Combined Financial Risk Management Instruments | n | Mean | Standard deviation |
|--|------|------|--------------------|
| Alternative risk transfer | 84 | 3.96 | 0.445 |
| Contingent Capital | 84 | 3.95 | 0.344 |
| Credit Enhancement | 84 | 4.25 | 0.210 |
| Hedging derivatives | 84 | 4.12 | 0.197 |
| Insurance | 84 | 3.92 | 0.223 |
| Composite mean standard deviation | & 84 | 4.04 | 0.166 |

4.1. Analysis of Intervening influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects

The study sought the views of participants on intervening influence of Contract Management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The subsequent results using descriptive statistics is given in Table 4.37

Table 4.37: Intervening influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects

| Contract Management, Financial Risk Management Instruments | n | Mean | Std. Deviation |
|--|----|-------|----------------|
| Alternative Risk Transfer | 84 | 3.999 | 0.276 |
| Contingent Capital | 84 | 3.995 | 0.236 |
| Credit Enhancement | 84 | 4.145 | 0.180 |
| Hedging Derivatives | 84 | 4.079 | 0.209 |
| Insurance | 84 | 3.979 | 0.199 |
| Contract Management | 84 | 4.036 | 0.338 |
| Composite mean & standard deviation | 84 | 4.039 | 0.206 |

Table 4.37 presents the descriptive statistics on participants' perspectives on moderating influence of Communication strategy on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The study results indicates that following the moderating effect of communication strategy (Mean=4.38, SD=0.300), the means for each financial risk management Instruments increased. This can be shown by comparing mean scores results from Table 4.32 before communication strategy was introduced; (Alternative risk transfer (Mean=3.96), Contingent capital (Mean=3.95), Credit enhancements (Mean=4.25), Hedging derivatives (Mean=4.12) and Insurance (Mean=3.92)) with Table 4.37 mean score results after the moderating influence of communication strategy (Alternative risk transfer (Mean=4.17), Contingent capital (Mean=4.16), Credit enhancements (Mean=4.31), Hedging derivatives (Mean=4.24) and Insurance (Mean=4.15)). The mean for Credit enhancement was the highest (Mean=4.31, SD=0.200), followed by Hedging derivatives (Mean=4.24, SD=0.184), Alternative risk transfer (Mean=4.17, SD=0.267), Contingent capital (Mean=4.16, SD=0.225) and Insurance (Mean=4.15, SD=0.196). The study results further revealed that composite mean of mean was 4.23 and standard deviation of 0.194; meaning that communication strategy moderated the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. Though Chihuri and Pretorius (2010) and Serpell et al., (2015) only revealed that communication strategy influences Performance of Hydroelectric Energy projects, the current study has gone further to find that communication strategy has an increasing

moderating influence between financial risk management instruments and performance of hydroelectric energy projects.

These findings were further supported by qualitative data and this is what the participant had to say on influence of contract management on performance of Hydroelectric Energy project. The participant from KenGEN said that,

“...the adoption of framework contracting for delivery of spare parts on a need-be-basis by suppliers and compliance with Public Procurement and Asset Disposal Act, 2015 for an equitable, transparent, competitive, timely and cost effective procurement processes is a major milestone in the sector. In addition, we undertake proper planning to ensure adherence to plant and equipment maintenance programs.” Equally, *“We continue to improve on procurement management to ensure only skilled and experienced Engineering, Procurement Construction (EPC) contractors and consultants are engaged for all projects besides execution of agreements that require the contractors to pay sufficient liquidated damages in the event of default.”* Further, *“...we leverage on robust ICT systems to create a digital space that facilitate more horizontal business solutions for customer productivity and internal speed, for example, “...the digitization of procurement process in order to get value for money in contracts has ensured timely procurement of quality goods and services with the right specifications that meet user needs with cost efficiency.”*

When asked about contracting efficiency on power purchased, the KenGEN participant responded that

“...the 15 year long-term Power Purchase Agreement with Kenya Power, allows the company to bill and recover all realized foreign currency fluctuations relative to the base rates. This ensures power plants’ availability meet threshold targets in harmony with industry practice that provides for planned and unforeseen machine outage as per the signed Power Purchase Agreements with the off-taker – Kenya Power.”

Concerning financial risks the participant from KenGEN said that

“...market risk such as interest rate, equity prices and foreign exchange rates risks are managed through forward and future contracts and Power Purchase Agreement contracts that allows the company to recover a foreign exchange movement and price risk from Kenya Power while fixed rates on borrowings minimize exposure to interest rate risk and the company only sells generated electricity to Kenya Power to minimize credit risk exposure through a contract that stipulates a 40 day

credit period.” On liquidity risk management contract *“...we manage an escrow account that considers the accounts receivables from KPLC and development funding from the Ministry of Energy and maturity of financial instruments, together with projected cash flows from operations to ensure there is always sufficient liquidity to meet liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to our reputation.”* For uninterrupted electricity supply *“...we ensure that equipment breakdown risks are contained through a stock holding policy and operational and maintenance contracts with the suppliers of equipment that ensures adequate spare parts are available all times hence minimizing the scope for equipment breakdown.”* Lastly, *“...we manage political risk, competition risk, fiscal policy risk, liquidity risk and default/credit risk through PPA contract with the off-taker, KPLC that penalizes the latter for delays in servicing the company’s invoices thus optimizing the return on risk.”*

4.2. Correlation Analysis of Mediating Influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects

Inferential statistics was conducted on Intervening influence of Contract Management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. Pearson product moment correlation coefficient was used in order to establish whether Contract management mediates the relationships between financial risk management Instruments and Performance of Hydroelectric Energy projects. The correlation results showed that all the financial risk management Instruments and Contract management, (Alternative Risk Transfer ($r=0.670$; $p\text{-value}=0.000<0.05$), Contingent Capital, ($r=0.648$; $p\text{-value}=0.000<0.05$), Credit Enhancement, ($r=0.707$; $p\text{-value}=0.000<0.05$), Hedging Derivatives, ($r=0.700$; $p\text{-value}=0.000<0.05$), Insurance, ($r=0.486$; $p\text{-value}=0.000<0.05$) and Contract management ($r=0.652$; $p\text{-value}=0.000<0.05$) were significantly related ($P\text{-values}=0.000<0.05$) against the Statements of Performance of Hydroelectric Energy projects. The overall correlation coefficient for the mediating effect of contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects was found to be 0.910 with a $p\text{-value}$ of $0.000<0.05$; implying that there is a significant mediating influence of Contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects, leading to rejection of the null hypothesis; 2. H_0 : Contract management does not significantly mediate the relationships between financial risk management Instruments and Performance of Hydroelectric Energy projects. The result support findings by

Lucas and Rambo (2016) and Subramaniam and Shaw (2002) that contract management influences performance of projects by modeling the concept of mediating influence of Contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The correlation results are shown in Table 4.43

The small p-values ($p=0.000<0.05$) implies that there is a significant mediating influence of Contract Management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects, leading to rejection of the null hypothesis; 8. H_0 :Contract management does not significantly mediate on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects.The result support findings by Píchaa, Tomekb and Löwittc (2015) that contract management influences performance of projects by modeling the concept of mediating influence of Contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The correlation results are shown in Table 4.43

Table 4.43: Correlation Analysis of Intervening Influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects. (n=84)

| Contract Management, Financial Risk Management Instruments | | Performance of Hydroelectric Energy Projects |
|--|---------------------|--|
| Alternative Risk Transfer | Pearson correlation | 0.670* |
| | sig. (2-tailed) | 0.000 |
| Contingent Capital | Pearson correlation | 0.648* |
| | sig. (2-tailed) | 0.000 |
| Credit Enhancement | Pearson correlation | 0.707* |
| | sig. (2-tailed) | 0.000 |
| Hedging derivatives | Pearson correlation | 0.700* |
| | sig. (2-tailed) | 0.000 |
| Insurance Contract Management | Pearson correlation | 0.486* |
| | sig. (2-tailed) | 0.000 |
| | Pearson correlation | 0.652* |
| Overall correlation | sig. (2-tailed) | 0.000 |
| | Pearson correlation | 0.910* |
| | sig. (2-tailed) | 0.000 |

NB. *Correlation significant at 0.05 level (2-tailed)

4.3. Regression Analysis of Mediating Influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects

Multiple linear regressions were adopted to investigate whether Contract management intervenes the relationships between the financial risk management Instruments and Performance of Hydroelectric Energy projects. The

underpinning rational of using the regression analysis model was to establish how each predictor upon mediating effect of Contract Management significantly or insignificantly predicted Performance of Hydroelectric Energy projects; secondly to find out which of the predictors best predicted Performance Hydroelectric Energy projects and finally to confirm whether the regression model was a best fit for predicting Performance of Hydroelectric Energy projects.

The model summary suggested that there was a positive multiple correlation ($R=0.910$) between mediating influence of Contract Management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. In addition, 82.9% ($R^2=0.829$) of the variance on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects is explained by the mediating influence of Contract Management. The result support findings by Píchaa, Tomekb and Löwittc (2015) that contract management influences performance of projects by modeling the concept of mediating influence of Contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The model summary results are shown in Table 4.44

Table 4.44: Regression Model Summary of Intervening Influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects.

| Model Summary | | | | |
|---|--------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.910 ^a | 0.829 | 0.826 | 0.274 |
| a. Predictors: (Constant), Contract Management, Financial risk management Instruments | | | | |

The study sought to find out whether the regression model is best fit for predicting Performance of Hydroelectric Energy projects. The ANOVA results indicated that F-statistics ($6,77= 235.571$) is significant given that the P-value= $0.000<0.05$; which implies that the regression model results in significantly better prediction of Performance of Hydroelectric Energy projects. The ANOVA results are shown in table 4.45

Table 4.42: An ANOVA Results of Intervening influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects.

| ANOVA ^a | | | | | | |
|---|------------|----------------|----|-------------|---------|--------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 39.577 | 6 | 6.596 | 235.571 | 0.000 ^b |
| | Residual | 2.173 | 77 | 0.028 | | |
| | Total | 41.750 | 83 | | | |
| Dependent Variable: Performance of Hydroelectric Energy Projects | | | | | | |
| b. Predictors: (Constant), Contract Management, Financial Risk Management Instruments | | | | | | |

The study sought to find out whether Contract management mediated the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects. The multiple linear regression coefficients results indicated that there was significant mediating influence of Contract management on the relationship between financial risk management Instruments and Performance of Hydroelectric Energy projects (P-Value= 0.00<0.05). By substituting the beta value as well as the constant term, the proceeding multiple linear regression model was as follows:

$$Y=1.049+0.410X_1*CM+0.844X_2*CM+1.156X_3*CM+0.786X_4*CM+0.477X_5*CM+0.583CM$$

Where, CM is contract management

The model shows that Alternative risk transfer (P-value=0.000<0.05), Contingent capital (P-value 0.000<0.05), Credit enhancement (P-value=0.000<0.05), Hedging derivatives (P-value 0.000<0.05), and insurance (P-value=0.000<0.05) had statistical significance (P-value=0.000<0.05) after the mediating effect of Contract Management. In terms of the best predictor for the Performance of Hydroelectric Energy projects, the study revealed that the best predictors were as follows; Credit enhancement (beta=1.315), Contingent capital (beta=1.035), Hedging derivatives (beta=0.910), Contract management (beta=0.715), Alternative risk transfer (beta=0.553) and Insurance (beta=0.494). The regression coefficients results are in table 4.46

Table4.43: Coefficients for the Regression of Intervening influence of Contract Management on the Relationship between Financial Risk Management Instruments and Performance of Hydroelectric Energy Projects.

| Coefficients | | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|-------|-------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | |
| | B | Std. Error | Beta | | | |
| 1 | (Constant) | 1.049 | 0.245 | | 4.285 | 0.000 |
| | Alternative risk transfer | 0.410 | 0.158 | 0.553 | 2.602 | 0.011 |
| | Contingent capital | 0.844 | 0.199 | 1.035 | 4.237 | 0.000 |
| | Credit enhancement | 1.156 | 0.235 | 1.315 | 4.922 | 0.000 |
| | Hedging derivatives | 0.786 | 0.039 | 0.910 | 3.908 | 0.000 |
| | Insurance | 0.477 | 0.201 | 0.494 | 2.369 | 0.020 |
| | Contract Management | 0.583 | 0.104 | 0.715 | 5.629 | 0.000 |

a. Dependent Variable: Performance of Hydroelectric Energy Projects

Contract management practices are a necessity that project stakeholders must observe to achieve project objectives of quality delivery, effective cost of running the project, client satisfaction and completion of projects within scheduled time besides ensuring transparency and accountability.

V. CONCLUSIONS

The multiple linear regression coefficients as well as the Pearson correlation results indicated that there was significant influence of financial risk management instruments on Performance of Hydroelectric Energy projects. The small p-values (0.000<0.05) implies that there is a significant influence of financial risk management instruments on Performance of Hydroelectric Energy projects; leading to rejection of the null hypothesis 1. H₀: There is no significant relationship between financial risk management instruments and Performance of Hydroelectric Energy projects; and so it was concluded that there is significant relationship between financial risk management instruments and Performance of Hydroelectric Energy projects. The multiple linear regression coefficients as well as the Pearson correlation results indicated that there was significant (P-values=0.000<0.05) mediating influence of Contract management on the relationship between financial risk management instruments and Performance of Hydroelectric Energy projects; leading to rejection of the null hypothesis 2. H₀: Contract management does not mediate the relationship between financial risk management instruments and Performance of Hydroelectric Energy projects; and so it was concluded that Contract management significantly mediates the relationship between financial risk management instruments and Performance of Hydroelectric Energy projects.

The findings of this study thus provide significant contributions to the body of knowledge as it establishes the relationship between financial risk management instruments, contract management and performance of hydroelectric energy projects. Based on the findings, the study recommends targeted policy enactment for inclusion of financial risk management instruments in hydroelectric energy projects and awareness creation on the operations and availability of financial risk management instruments to the instruments providers and investors in hydroelectric energy projects. Contracts should be well documented with clear understandable language and defined roles for all the project parties' to achieve value for money, stakeholder satisfaction, quality products delivery, cost reduction, and competitive procurement besides risks and liabilities management. This study was delimited to Kenya and on hydroelectric energy projects alone and therefore, a study can be replicated in other developing countries and in projects other than hydroelectric energy projects to explain the possibility of other environmental factors thereby improving generalizability of the findings.

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