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Effects of Project Risk Management Practices on Performance of Consulting Civil Engineers: A Case of Nairobi County

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Abstract: **The construction industry in Kenya and the world at large faces more risks and uncertainty than many other sectors. The process of project execution from initial investment appraisal, completion and final use is complicated and involves time-consuming ground investigations, design and production processes. These processes are highly specialized and are spearheaded by qualified and licensed civil engineering consultants. Each of the processes in construction carries with it a measure of risk factors ranging from cost overruns, quality of the final product, litigations, time overruns, and riots, among others. Thus, the main objective of this study is to determine the effect of project risk management practices on performance of civil engineering consultants practicing in Nairobi County. The specific objective was to examine effect of risk identification practices, determine effect of risk monitoring and control practices and to establish effect of risk response practices on performance of consulting civil engineers. The study focuses on registered consulting civil engineers practising in Nairobi County either as individual consultants or as registered engineering firms. The study was informed by prospect theory and enterprise risk management theory. The study employed descriptive cross-sectional study. The study targeted 256 registered consulting civil engineers in Nairobi County. Simple Random sampling was used to select a representative sample consulting civil engineers practising in Nairobi County for purposes of this research. The research data was collected by use of questionnaires. Data was analysed by use of SPSS version 23. Data analysis was done by use of descriptive statistics including means, standard deviation, percentages and frequency tables and inferential statistics with multiple regression analysis. This study will be significant to engineering fraternity, the general public, engineering students and the consulting engineering firms' regulators as it will offer valuable contributions from both a theoretical and practical perspective. The findings show that risk identification does not have a significant effect on project performance, $\beta 1= 0.012$, $p = 0.777$. Furthermore, risk monitoring has a positive and significant effect on project performance, $\beta 2= 0.150$, $p = 0.018$. Risk response has a positive and significant effect on project performance, $\beta 3= 0.347$, $p < 0.001$ while risk governance has a positive and significant effect on project performance, $\beta 4= 0.478$, $p < 0.001$. Given the gaps identified through this study, there is need to further enhance the processes of risk identification by strengthening already existing practices and investing more in risk identification resources. There is more need for more investment in control systems and ensure they are effective and stakeholder participation in decision making. In addition, the consultants need to class the risks they have failed to identify as being tolerated without knowledge, they need to involve all in deciding to pass the risk or costs of the impact outside the organization in case of a risk and they need to accept the risk and its impact as it stands, that is self-insured or decide to cover any losses. Finally, there is need to enhance the knowledge of project main risk operations, project risk competence, identification of the risks posed by entrants, new products and services as well as competitors, main processes of the project and ensuring the board exhibits diversity in terms of project risk would enhance project performance.**

Keywords: **Project Management, Risk management, Project Performance.**

1. INTRODUCTION

In United States, the risks at construction project planning stage include poor scope definition, poor estimating and development of a budget based on incomplete data. The risk management practices required at this stage include risk profiling and identification, the architect and engineer selection process, construction site review and validation, needs identification and validation and preliminary budget and schedule development [10]. Several articles in developed nations like Russia, [6] have presented risk management as a series of interconnected processes involving specific techniques and tools. [7] proposed six risk management processes: risk management planning, risk identification, qualitative risk analysis, quantitative risk analysis, risk responses planning and risk monitoring and control. The construction industry in Kenya is currently facing serious challenges resulting from poor or lack of project risk management. This includes poor or lack of project risk identification, analysis, and assessment. Such losses have had a great negative impact on the country's gross domestic product (GDP) due to lost revenue. These challenges have proven to be costly, especially when clients are forced to procure experienced foreign contractors for major projects in the country, who are generally more expensive compared to their local counterparts[9]. The construction industry, in particular, water projects, plays a significant role in socio-economic development as it provides the essential services such as water supply and sanitation which are necessary for the wellbeing of the society [4]

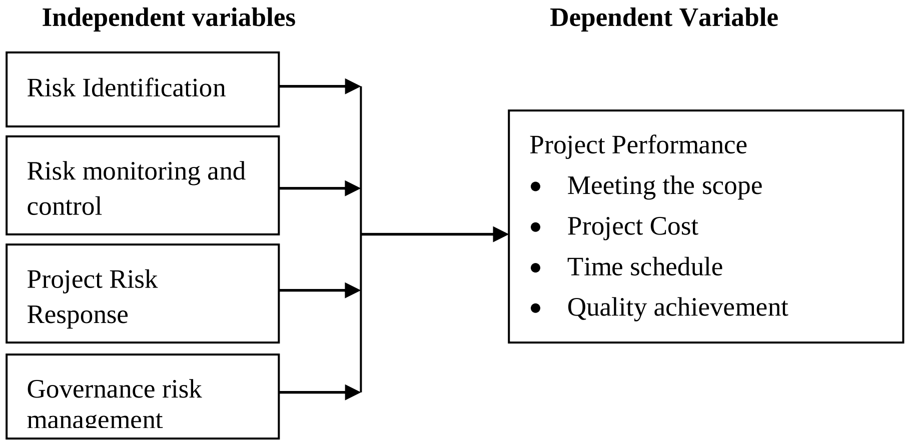
2. EMPIRICAL REVIEW

IT Project performance-Project timeliness-Schedule-Quality of products Achieving project objectives Profitability Project risk assessment- Reduction, - Transferring -Time available, -Avoidance, -Occurrence of risks. The methodological approach involved a survey of 415 projects at different companies in IT sectors in Brazil. The results demonstrate that adopting risk assessment and planning has a significant positive impact on project success as project staff were able to identify and take measures to mitigate the occurrence of risks to a greater extent. The study found that assessing uncertainties during the project, making use of the risk management strategies and deeply understand the business environment are critical success factors had a significant impact on project performance ($P<0.05$, $r=0.002$, $b=0.413$). The results demonstrated that the impact of project risk assessment on project success was positive

[1] Investigated the effects of project risk planning on IT project performance focusing on a case of China vendor firms. The study sought to find the objectives, Project risk planning and control makes a more significantly positive contribution to project performance at low levels of inherent uncertainty than at high levels. The study used a questionnaire to collect data from a 181 sample of software project managers and other key informants from software houses in Hangzhou City, China, by mail and email. The respondents were requested to provide information concerning one or more recently completed outsourced IS development projects. From the finding, the study found that there existed a significant positive relationship between project risk planning and project performance ($P<0.05$, $r=0.015$, $b=0.813$). The results indicated that project risk planning and control improve project performance making project complete within schedule, at the budgeted and vender firm enhanced on profitability level.

[13] Carried out a study to determine how portfolio risk management influences IT project portfolio success in IT enterprises in the UK. The objective of the study was to examine whether portfolio risk management influence IT project performance. Data was collected using a questionnaire a cross-industry sampling was adopted to select a sample of 176 firms. The results indicated that portfolio risk management shows a significant positive relationship with project performance ($b=0.16$, $p<0.05$). The study concluded that IT project portfolio risk management, portfolio risk identification, risk prevention, risk monitoring, integration of risk information into the project portfolio management, formalization of portfolio risk management has a positive impact on IT project performance.

3. CONCEPTUAL FRAMEWORK



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4. SUMMARY AND CRITIQUE OF EXISTING LITERATURE

It is apparent from the literature review that there is no universal view of risks among the different players in construction projects. The value of systematic risk management of project activity is not fully recognized by the construction industry [11]. The literature review shows that most researchers have focused on different techniques for risk management and the role of risk management in construction projects. While most literature acknowledges that risk management is a process, the issue of how this process should be adapted to the construction process is not very clear. Most literature approaches the construction process as an organized and standardized production process like manufacturing.

Due to the decentralized nature of risk-taking within firms, and the high-powered incentives of executives, the literature views favorably a strong and independent risk management function [8]. It is unclear however what determines the strength of the risk management function within a firm. The limited evidence on this subject suggests that the risk management function is itself defined by the firm's overall governance structures.

However, the construction process often has special features for every project that burden the process and makes changes leading to process improvement difficult. Production processes duration in construction projects is often long, which increases the probabilities of risk and uncertainty events on both cost and schedule [2]. When process time is long, often many several years, risk management becomes theoretical, and the only other way is to add an arbitrary contingency sum. While a lot of literature is available on how to calculate risk, there is very little appreciation of the fact that extended process durations brings about risks that cannot be accurately analyzed and quantified [5]While the construction industry continues to mechanize, the fact that a lot of work is still manual makes change and process improvement slow compared to other industries.

The review of the literature revealed a wide range of risk types and sources in construction projects, and that various risk management methods and techniques can be employed in the management of construction projects to control potential risks. Risk management in construction projects is a widely researched area. Most of the studies reviewed to identify and prioritize risks through empirical research to suggest mitigating measures. Although they are important to clients for future projects, the studies fail to provide any framework for risk management from engineer 'perspective'.

5. RESEARCH METHODOLOGY

The descriptive cross-sectional study design was used to allow the researcher to estimate the occurrence of risk factors in the construction industry and the approach taken by consulting engineers to address them. The cross-sectional survey design also allows the use of various methods of data collection. The target population for this study was registered consulting engineers who were mainly civil engineers because of their wide involvement in most of the aspects of construction such as the project design, quality control, and general project management roles and are well versed with the project risks. From the target population of 283, a sample size of 162 consulting civil engineers was selected as adequate representation. The study used self-administered questionnaires and observation schedules. This study utilized both primary and secondary data. Questionnaires were used to collect primary data which was distributed to the staff.

Multiple regression analysis helped the analysis of the variable relationships as follows: $Y= \beta o + \beta 1X1 + \beta 2X2+ \beta 3X3+ \beta 4X4 + e0$

Where; Y= Project Performance (dependent variable)

βo = Constant (Coefficient of intercept)

X1= risk identification

X2= risk monitoring and control

X3= risk response

X4= risk governance

e0=Error term

$\beta 1$, $\beta 2$, $\beta 3$ and $\beta 4$ = regression coefficient of the four variables

6. RESULTS AND DISCUSSION

Response Rate:

A total of one hundred and three respondents were selected for the study. From the data gathered, out of the 105 questionnaires administered to the respondents, 95 were filled and returned meaning a response rate of 90.4%. The high response rates facilitated adequacy of the data. The data is representative of generalized opinions of respondents to the study problem in the target population.

The study sought to assess the demographic information of the respondents. Demographic information aides in the laying of social, economic foundations that might influence the direction of the investigation. The study assessed the gender of the respondents, the age and the nature of the business.

6.1 Risk Identification:

The findings showed that 46.3% (n=44) and 22.1% (n=21) of the respondents agreed and strongly agreed respectively that they identify risk when selecting a project while 6.3% (n=6), 7.4% (n=7) and 17.9% (n=17) strongly disagreed, disagreed and were neutral respectively. The mean value was 3.71 and standard deviation 1.09 implying that majority of the registered civil engineers identify risk during project selection. Further, the findings show that 41.1% (n=39) and 28.4% (n=27) agreed and strongly agreed respectively that they make and present various risks identified while 1.1% (n = 1), 9.5% (n=9) and 20% (n=19) strongly disagreed, disagreed and were neutral respectively giving a mean response of 3.86 (SD = 0.97) indicating majority of the respondents go ahead and make as well as present the various risks they have identified during project selection.

The findings also show that 35.8% (n=34) and 47.4% (n=45) agreed and strongly agreed respectively that they select and prioritize risk while 9.5% (n=9) and 7.4% (n=7) disagreed and were neutral regarding this. The mean response was 4.21 (SD = 0.94) showing that majority of the registered civil engineers further prioritize the risk identified. The findings also showed that 38.9% (n=37) and 25.3% (n=24) of the respondents agreed and strongly agreed respectively that they have set out criteria for identify and predicting risk while 6.35 (n = 6), 1.1% (n=1) and 28.4% (n=27) strongly disagreed, disagreed and were neutral in their perspective thereby giving a mean response of 3.76 (SD = 1.05) indicating that majority of the respondents have defined criteria for identifying and predicting risk.

Furthermore, 38.9% (n=37) and 25.3% (n=24) of the respondents agreed and strongly agreed respectively that they have permanent expert committee who identify risk while 6.3% (n=6), 1.1% (n = 1) and 28.4% (n=27) strongly disagreed, disagreed and were neutral regarding this giving a mean of 3.94 (SD = 1.17) indicating the presence of an oversight committee especially for identifying risk and the committee is made of experts in civil engineering.

Finally, the findings also showed that 49.5% (n=47) and 33.7% (n=32) of the respondents agreed and strongly agreed respectively that they collect and analyze data before identifying while 8.4% (n=8), 6.3% (n=6) and 2.1% (n=2) strongly disagreed, disagreed and were neutral respectively regarding this. The mean response was 3.8 (SD = 0.77) revealing a high level of use of information in risk identification. In general, the results on the respondents' perception about risk identification had a mean of 3.88 (SD = 0.76) meaning that the majority of the registered civil engineers were in agreement about the various aspects of risk identification and how this can influence project risk management processes and after that, the performance.

6.2 Project Monitoring:

The findings showed that 68.4% (n=65) and 13.7% (13) of the respondents agreed and strongly agreed respectively that they engage their evaluators in training 17.9% (n=17) of the respondents were neutral. The mean response was 3.96 (SD = 0.563) and indicated the presence consultative decision-making process regarding training. Furthermore, 33.7% (n=32) and 26.3% (n=25) of the respondents agreed and strongly agreed respectively that they monitor project risk regularly while 2.1% (n=2) and 37.9% (n=33) disagreed and were neutral respectively giving a mean response of 3.84 (SD = 0.842) revealing that there was routine monitoring of risk as part of the process of risk management within the projects.

Further, it was revealed that 29.5% (n=28) and 14.7% (n=14) of the respondents agreed and strongly agreed respectively that The project risk control systems are very effective in their functions while 15.8% (n=15) and 40% (n=38) disagreed and were neutral respectively. The mean response was 3.43 (SD = 0.93) indicating that majority of the respondents were not sure regarding the effectiveness of the risk control systems thereby presenting a gap within the project risk management process.

Furthermore, 53.7% (n=51) and 33.7% (n=32) of the respondents agreed and strongly agreed respectively that the project risk is evaluated now and then while 12.6% (n=12) were not sure thus giving a mean response of 4.21 (SD = 0.651) that indicated that project risk was evaluated constantly thus confirming that majority of them monitor risk regularly. Although this was the case, only 38.9% (n=37) and 10.5% (n=10) of the respondents agreed and strongly agreed respectively that There is regular check of input activities while 26.3% (n = 25) and 24.2% (n=23) disagreed and were neutral regarding this respectively giving a mean response of 3.34 (SD = 0.985) indicating that majority of the civil engineers were not sure on this thus indicating a gap in the monitoring process.

The findings also show that 30.5% (n=29) and 3.2% (n=3) of the respondents agreed and strongly agreed respectively that participatory oversight has been made during risk monitoring while 22.1% (n = 21), 9.5% (n=9) and 34.7% (n=33) strongly disagreed, disagreed and were neutral respectively regarding this giving a mean response of 2.83 (SD = 1.182) indicating that majority of the respondents are not sure whether there is participatory oversight is carried out during risk monitoring thereby showing that there is a centralized oversight structure. It was further revealed that 33.7% (n = 32) and 26.3% (n = 25) of the respondents agreed and strongly agreed respectively that there is continuous review and evaluation of risk while 2.1% (n = 2) and 37.9% (n = 36) of the strongly disagreed and disagreed respectively with this thus giving a mean of 3.84 (SD = 0.842) showing that majority of the civil engineers continuously review and evaluate risk thereby strengthening the risk monitoring process which they carry out regularly.

Finally, the findings show that 53.7% (n = 51) and 33.7% (n = 32) of the respondents agreed and strongly agreed respectively that portfolio managers continually monitor project risks while 12.6% (n = 12) disagreed. The mean response was 4.21 (SD = 0.651) showing that majority of the respondents agreed on this and this shows that those that are responsible for continual monitoring of project risks carry out their activities in line with their mandate. The overall mean response for project monitoring was 3.62 (SD = 0.678) that showed that majority of the civil engineers agree on the various aspects regarding project monitoring despite there being a few gaps in 3 areas of project monitoring.

6.3 Project Risk Response:

From the findings, 23.2% (n=22) and 23.2% (n=22) of the respondents agreed and strongly agreed respectively that they involve all in deciding to pass the risk or costs of the impact outside the organization in case of a risk while 9.5% (n=9), 14.7% (n=14) and 29.5% (n=28) strongly disagreed, disagreed and were neutral respectively regarding this thus giving a mean response of 3.36 (SD = 1.254) indicating majority were not sure. In addition, it was revealed that 34.7% (n=33) and 15.8% (n=15) of the respondents agreed and strongly agreed respectively that in case of risk, they contract out the risk or takeout insurance to cover the costs of the impact while 1.1% (n = 1), 6.3% (n=6) and 42.1% (n=40) strongly disagreed, disagreed and were neutral regarding this respectively thereby giving a mean response of 3.58 (SD = 0.87) indicating that there are measures taken especially on insurance to cover the costs of the impact of the risk thereby cushioning them against serious effects.

The findings further showed that 32.6% (n=31) and 30.5% (n=29) of the respondents agreed and strongly agreed respectively that in case of a risk, they decide to eliminate the risk by ceasing the activity or the pursuance of the objective that presents the risk while 1.1% (n=1) and 35.8% (n=34) disagreed and were neutral regarding this giving a mean response of 3.93 (SD = 0.841) showing that majority of the civil engineers eliminate the risk by stopping the activity or the continuation of the objective that brings about the risk thereby reducing the costs incurred. It was noted however that, only 34.7% (n = 33) and 9.5% (n = 9) of the respondents agreed and strongly agreed respectively that in case of a risk, they accept the risk and its impact as it stands, that is self-insure or decide to cover any losses while 6.3% (n = 6), 16.8% (n = 16) and 32.6% (n = 31) strongly disagreed, disagreed and were neutral regarding this and this might be due to the fact that majority are insured in case of risk thereby giving a mean response of 3.24 (SD = 1.049).

The findings further showed that 35.8% (n=34) and 26.3% (n=25) of the respondents agreed and strongly agreed respectively that the risks they have failed to identify are classed as being tolerated without knowledge while 8.4% (n=8) and 29.5% (n=28) disagreed and were neutral with this thus giving a mean response of 3.8 (SD = 0.929) indicating that majority of the respondents agreed on this. Finally, 15.8% (n=15) and 24.2% (n=23) of the respondents agreed and strongly agreed respectively that in case of a risk, response involves taking action to reduce the risk by lessening the impact while 12.6% (n=12) and 47.4% (n=45) disagreed and were neutral regarding this thereby giving a mean response of 3.52 (SD = 0.999) showing majority of the respondents agreed on this although a significant number did not. The overall mean response for project risk response was 3.57 (SD = 0.858) indicating agreement by a majority of the civil engineers.

6.4 Risk Governance Structure:

From the findings, it was revealed that 38.9% (n=37) and 26.3% (n=25) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of project main risk operations while 6.3% (n = 6), 14.7% (n=14) and 13.7% (n=13) strongly disagreed, disagreed and were neutral regarding this thus giving a mean response of 3.64 (SD = 1.202) indicating agreement with the statement. Furthermore, the findings show that 61.1% (n=58) and 17.9% (n=17) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of project risk competence while 6.3% (n=6), 6.3% (n=6) and 8.4% (n=8) indicated otherwise giving a mean of 3.78 (SD = 1.023) indicating that majority of the respondents agree on this.

The findings further show that 36.8% (n=35) and 8.4% (n=8) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of project weak sides and products and services while 7.4% (n = 7), 27.4% (n=26) and 20% (n=19) indicated otherwise regarding this giving a mean response of 3.12 (SD = 1.129) indicating that majority of the respondents were not sure about the statement an indication of a gap in terms of the level of knowledge of the board members on project weak areas, products, and services.

The findings also showed that 30.5% (n=29) and 23.2% (n=22) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of threats from entrants and new products and services while 14.7% (n = 14), 6.3% (n=6) and 25.3% (n=24) indicated otherwise by strongly disagreeing, disagreeing and being neutral respectively giving a mean response of 3.41 (SD = 1.317) indicating a gap in terms of knowledge on threats from entrants and new products and services. In addition, 54.7% (n=52) and 20% (n=19) agreed and strongly agreed respectively that their board members have extensive knowledge of threats from entrants and new products and services while 8.4% (n=8) and 16.8% (n=16) disagreed and were neutral respectively regarding this thereby giving a mean response of 3.78 (SD = 1.044) indicating majority agreed regarding knowledge of threats from their competitors as well as new products and services that can enable them to change their strategy. The findings further show that 38.9% (n = 37) and 26.3% (n = 25) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of the project market opportunities while 13.7% (n = 13), 14.7% (n = 14) and 6.3% (n = 6) strongly disagreed, disagreed and were neutral regarding this thereby giving a mean response of 3.54 (SD = 1.402) that showed that majority agreed on the level of knowledge of the project market opportunities.

The findings further revealed that 35.8% (n = 34) and 26.3% (n = 25) of the respondents agreed and strongly agreed respectively that their board members have extensive knowledge of project's main operations while 8.4% (n = 8) and 29.5% (n = 28) of the respondents disagreed and were neutral respectively regarding this resulting in a mean response of 3.80 (SD = 0.929) indicating agreement by majority of the respondents. The findings also showed that 36.8% (n = 35) and 27.4% (n = 26) of the respondents agreed and strongly agreed respectively that their board members have diversity with regard to project risk while 8.4% (n = 8), 7.45 (n = 7) and 20% (n = 19) strongly disagreed, disagreed and were neutral regarding this giving a mean response of 3.71 (SD = 1.317) showing that majority agreed regarding this. The overall mean response was 3.545 (SD = 0.897) indicating agreement with the aspects of risk governance structure by the majority of the respondents despite the gaps identified from the views of the civil engineers.

6.5 Project Performance:

From the findings in Table 4.863.2% (n=60) and 20% (n=19) of the respondents agreed and strongly agreed respectively that the project was completed within the time while 15.8% (n=15) and 1.1% (n=1) disagreed and were neutral giving a mean response of 3.87 (SD = 0.914) indicating that majority of the projects are completed within the planned timelines. Furthermore, 58.9% (n=56) and 9.5% (n=9) of the respondents agreed and strongly agreed respectively that the projects were completed within set budget indicating the effectiveness of the projects and efficiency with the allocated resources. Only 24.2% (n=23) and 7.4% (n=7) disagreed and were neutral regarding this thus giving a mean response of 3.71 (SD = 0.742) indicating the majority of the projects were completed within the budget.

The findings also showed that 35.8% (n=34) and 20% (n=19) of the respondents agreed and strongly agreed respectively that the project can now service its purpose while 12.6% (n=12) and 31.6% (n=30) disagreed and were neutral respectively giving a mean response of 3.63 (SD = 0.946) which is an indication that the projects are well planned and can attain the objectives that were set from the onset. Furthermore, 49.5% (n=47) and 36.8% (n=35) of the respondents agreed and strongly agreed respectively that there are other new projects that need to be implemented while 13.7% (n=13) were neutral giving a mean response of 4.09 (SD = 0. 957) indicating that majority of the respondents agreed with this statement.

The findings also showed that 46.3% (n=44) and 20% (n=19) agreed and strongly agreed respectively that most of their employees are always willing to serve and participate in project decision making while 7.4% (n=7) and 26.3% (n=25) disagreed and were neutral regarding this. This showed another side of project performance regarding benefiting all internal and external stakeholders. The mean response was 3.79 (SD = 0.849) indicating agreement by a majority of the civil engineers. Finally, 41.1% (n=39) and 27.4% (n=26) of the respondents agreed and strongly agreed respectively that employees can promptly respond to their requests even when they are busy while 7.4% (n = 7) and 24.2% (n=23) disagreed and were neutral respectively resulting a mean response of 3.88 (SD = 0.898) indicating agreement by majority of the respondents. The overall mean response was 3.701 (SD = 0.631) showing agreement by a majority of the respondents regarding various aspects of project performance.

6.6 Correlation Results:

Correlation analysis is vital in a research undertaking. It is a measure of the existing relationship between the independent factors or variables and the dependent factor or variable and also between the independent factors.

The findings showed that risk identification does not have a significant relationship with project performance, $\rho = 0.109$, $p = 0.371$ indicating that although there is a probability of 0.109 of increase in project performance given increased risk identification, this is not significant at 0.01 level of significance. Furthermore, risk monitoring has a positive and significant relationship with project performance, $\rho = 0.687$, $p < 0.001$ meaning that there is a 0.687 probability of project performance increasing with increased risk monitoring. The findings further showed that risk response has a positive and significant relationship with project performance, $\rho = 0.693$, $p < 0.001$ implying that there is a probability of 0.693 that project performance will increase with increased risk response. Finally, the findings also revealed that risk governance has a positive and significant relationship with project performance, $\rho = 0.609$, $p < 0.001$ meaning that there is a probability of 0.609 that project performance will increase with increased risk governance. Also, the inter-factor relationships showed that there were significant and positive relationships.

6.7 Model Summary:

The coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (project performance) that is explained by the independent variables. The model summary findings were presented in Table 6.1.

Table 6.1: Model Summary

R	R-Square	Adjusted R-Square	SE of the Estimate
0.932a	0.868	0.862	0.2346
a Predictors: (Constant), Risk Identification, Risk Monitoring, Risk Response, Risk Governance			

The findings in Table 6.1 revealed that that risk identification, risk monitoring, risk response and risk governance account for 86.8% of the variation in project performance (R-square = 0.0.868, adj. R-square = 0.0.862). Furthermore, the findings in Table 6.2 for the analysis of variance revealed that the variation accounted for the model on project performance was significant, $F (4, 90) = 147.606$, $p < 0.001$.

Table 6.2: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.496	4	8.124	147.606	0.000b
Residual	4.954	90	0.055		
Total	37.45	94			
a Dependent Variable: Project Performance b Predictors: (Constant), Risk Identification, Risk Monitoring, Risk Response, Risk Governance					

7. CONCLUSION

Risk identification has no significant effect on project performance. This is mainly because there is no optimal identification of the risk when selecting the project, presentation of risks, prioritization of risks, predicting risk, having enough experts to identify risk and use of data in risk identification. Furthermore, risk monitoring has an enhancing effect on project performance especially in the engagement of evaluators especially in training, regular monitoring of risk, routine review and risk evaluation and availing the necessary human resources to drive the risk management process.

Enhancing the level of risk response through eliminating the risk by ceasing the activity or the pursuance of the objective that presents the risk in case there is risk, contracting out the risk or taking out insurance to cover the costs of the impact and in case of a risk, response involves taking action to reduce the risk by lessening the impact. Finally, putting in place resources and implementing practices that enhance risk governance through investing governance especially the board would strengthen project performance.

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