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Influence of Risk Responses as a Risk Management Practice on Project Performance in Kenya Commercial Banks

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Abstract
Undertaking an information technology project in a banking environment is a complex task. Studies globally and locally indicate a high failure rate of information technology projects. Standish group report 2019 states that 83.9 percent of information technology projects partially or completely fail. The majority of projects 52 percent were over budget, overdue, or lacked promised functionality. Previous studies indicate information technology projects in commercial Banks in Kenya experience the same project performance variations, as projects are either delayed, over budget or have issues with functionality. Risk is a factor that challenges project performance. Project risk management includes risk identification, analysis, response, and monitoring and control of risk in a project. The goal of this study was to examine the relationship of risk responses and information technology project performance in Kenyan commercial banks. The target population was forty projects in Kenyan commercial banks in Kenya which made the unit of analysis. Stratified and simple random sampling technique was used. Questionnaires were used to collect the data from the targeted one hundred and eight respondents. The instrument was tested for reliability by use of Cronbach's alpha coefficient of internal consistency test and validity by use of selected information technology project professionals' review. Drop and pick method of administering questionnaires was used so as to allow respondents enough time to go through the questionnaires and give their responses. An option of online questionnaires was also available to respondents. Based on a survey, the research used both descriptive and explanatory analysis designs. The association between risk analysis and performance of information technology projects in Kenyan commercial banks was investigated using multiple regression. Quantitative data was analyzed using multiple regression analysis model software tool SPSS Version 25. The study adopted empirical model of least squares method while testing the hypotheses. The researcher conducted diagnostic tests of Normality, Linearity, Homoscedasticity and Multicollinearity to see if the data conforms to the basic assumptions of linear regression. The findings were presented using statistical parameter estimates. Tables and figures were used to present data, and supported by explanatory annotations. The results indicated that risk responses had significant effects on the performance of information technology projects in the banking sector. The study recommends that banks should consider implementing and fully operationalize risk responses in information technology projects. The Central Bank of Kenya should also consider putting in place an information technology projects risk policy framework to aid the banks in project undertakings. The finding in this research will aid project managers and different stakeholders in the banking and related sectors in managing information technology projects risks and hence increase the success rate of the projects. The knowledge gap is also addressed by scholarly work that has resulted from this research by providing statistical data analysis and explanations on the IT project performance in relation to risk responses influence in commercial banks in Kenya.

Key Words: Risk Management, Risk Responses, Project performance

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I. Introduction

The success or failure of IT projects has piqued scholars' curiosity throughout the last two decades (Pimchangthong & Boonjing, 2017). Mandal and Pal (2015) states that there are several examples of failed software projects. The study presents the Standish group international statistics, European service strategy unit and KPMG survey that indicate that up to 70% of all IT projects fail to meet their objectives. Great IT projects ran 45 percent over budget and 7% behind time in 2012, according to the McKinsey Global Institute (MGI), delivering 56 percent less value than expected.

The Project Management Institute (PMI) reported in 2017 that 14% of IT projects fail. "That number, however, only includes total failures. In the projects that didn't fail outright, 31% failed to accomplish their

objectives, 43% went over budget, and 49% were late. IT project implementation is a complex task". One aspect that directly influences this success or failures in the IT project is the inherent risks within the Project. Despite the fact that management of risk is critical to IT project accomplishment, its acceptance and implementation are inconsistent in many organizations. Furthermore, due to financial constraints, a number of project managers have opted not to use risk management. This is depicted in the paper by (Kutsch & Hall, 2009).

Information technology (IT) is critical to economies, and the performance of IT projects is seen as critical (Javani &Rwelamila, 2015). This is true to the banking sector in Kenya. Because of organizations like banks' reliance on computer-based systems to remain competitive, IT projects have become a vital feature of most companies (Jiang et al., 2002). The Kenyan banking sector has gone under a massive digital transformation in the last decade. These initiatives are undertaken through IT related projects. Cracknell (2019) study, the young generation, mobile money, smartphones and fintech are driving forces in the banking sector's disintermediation, which necessitates more IT projects.

1.1 Project Performance

To be deemed satisfactory, an IT project must be completed at a cost that is equal to the budgeted amount, on time, and with all of the necessary functionalities delivered(Alami, 2016) In today's economy and industry, information technology (IT) is critical. Banks consider the progress of IT projects to be equally significant. The implementation of IT projects has become a crucial feature of most companies, according to Jiang et al. (2002), due to organizational dependence on digital systems to remain strategic. Several companies are working on IT ventures as part of their ongoing strategy to stay on the cutting edge of competition. The broad nature of a project in terms of its impact, esteem among recipients, execution adequacy, quality, and sustainability is referred to as project performance. (Gemuenden & Lechler, 2010)

The high failure rate of IT projects is well-known. Baccarini et al (2015) detailed interview with IT specialists from leading companies in Australia was conducted in the study of management of risks in information technology projects to check the way IT risks were handled in respective projects. 27 IT risks were rated in terms of probability and implications in order to classify the most significant risks affecting the Projects' results. The care method of risk reduction was used by the vast majority of respondents. Furthermore, rather than being technological systems, these methods were largely project management processes.

Akrofi (2017) a project is taken as effective if it is concluded on time, on budget, and with deliverables that meet the requirements. This is the conventional viewpoint; however, there are a variety of ideas about what constitutes a successful project, especially an IT project. Also, for the projects that are accomplished on schedule, on budget, the majority struggle to achieve planned business results, according to the project database. (Gulla, 2011). This clearly demonstrates that completing IT projects on time and on budget does not guarantee success. Other aspect of consumer satisfaction and uptake of the service comes into play.

Karlsen (2017) notes that an IT project is rarely a complete success or failure, according to the author. Instead, the performance of the IT project would be calculated in degrees of success. This research would look at risk management and its effects on performance of IT projects. Measuring the project performance indicators such as scope, schedule, budget, and quality can serve as baseline pointers of success (PMI, 2018). According to project management institute, six ways to measure project performance are scope, budget, schedule, team satisfaction, client satisfaction and Quality. In this Study performance was evaluated on four lines of quality, budget, schedule and scope aspects of the project and whether the project attained its overall objective.

1.2 Performance of IT projects in Kenyan Banking Sector

Mangare and James (2017) indicate an empirical study by Onsogo (2008). According to the findings of an IT investment study of commercial banks in Kenya, 56 percent of the banks assessed have had more than two (2) failed IT projects owing to failure to achieve originally set targets, project failure to be within budget, and fail to be completed within the prescribed time. According to Onsogo (2008), small banks experienced the greatest number of project failures, accounting for 41 percent of all failures compared to 25 percent for big banks.

According to the CBK 2019 banking supervision annual report, uptake of technology in the banking sector has resulted in a significant shift in the strategies of banks. According to the 2018-2019 Innovation Survey conducted by CBK, 94 percent of Kenyan banks introduced a fintech product between January 1, 2015 and December 31, 2019. Moreover, according to the 2019 Innovation Survey, 80 percent of the banks and 86 percent of Micro-Finance Banks (MFBs) introduced a new Fintech product between January 1, 2019 and December 31, 2019.

The Kenyan Banking sector has gone under a massive digital transformation in the last decade. One of the leading contributing factors to this scenario is the digital transformation. This transformation is driven by Information Technology based Projects. The growth of the younger generation, the smartphone, mobile money, and fintech are all driving forces in the banking sector's disintermediation.(King, 2012)

Cracknell (2019) notes that Kenya deserves its fair share of credit. The Kenya Mobile money transformation started with the introduction of M- PESA in 2007. In the spirit of the 'financial inclusion for all' agenda, the Central Bank of Kenya (CBK) enabled it to function on a 'test and learn' basis. The digital transformation and data on the Projects being undertaken by the Banks is less reported due to the Competitive nature of the Sector.

The transformations projects include revamping the Core Banking systems, Mobile money applications projects, Internet Banking projects, agency Banking projects and lately mobile applications projects. Other developments include those in payments, which see everyone paying bills straight through their mobile payment wallets or traditional bank accounts, as well as the upsurge of digital Micro -credit and MShwari.

According to the CBK the year 2017 saw a number of Kenyan Banks engage it on licensing financial technology use cases. e.g. Block chain Technology, Chat bots, Video Teller Machines (VTMs, Psychometric credit scores). This is an indication to increased uptake of IT related platforms for business performance. These emerging disruptive technologies Projects bring with them, various forms of challenges in project performance with regards to budget overruns, project delays and technical functionality lapse.

Some of the Major undertaken projects in the sector involves setting up of the Core Banking system. With the Covid-19 pandemic, Banks have been urged to digitize to build resilience and sustain progress. Banks in Kenya have introduced a number of core banking system initiatives, including: Flexcube system by DBK and DTB, The Mysys Bank Fusion Universal Banking_ (Co-op Bank), Finacle10 (ABSA & Equity Bank), Temenos' T24 (CBK, KCB), Fusion Banking Essence (FBE), eBBS (Standard Chartered Bank). The number of projects vary with each Bank and practices of risk management in these projects is not certain and shall be evaluated in this study. The level of project complexities and risk culture in these projects also vary and the contingent effect was analysed in the study results.

1.3 Risk Management

Meyer (2015) Project risk management, according to the author, is a well-defined field of study with numerous books and papers on the topic. "In the best interests of accomplishing project objectives, project risk management is the art and science of recognizing, investigating, and responding to risk throughout the life of a project"(Schwalbe, 2012). Alhawari et al.(2012) "project risk management entailed analysing and comprehending possible risks that might arise during the project, as well as how they could obstruct project efficiency. Incorrect risk management was found to be common reason of project issues like delays in many studies. Risk management plays a critical element of effective IT project execution and performance."

Varajão and Amaral (2020) risk management in projects assists project managers in defining and prioritizing risks in line of their occurrence with actionable information. As the scale, complexity, dimension, and level of creativity needed are greater, risk management becomes much more important. There are compelling factors for incorporating risk management processes into information technology project management on a regular basis.

According to the 10th global project management survey (2018) of the institute of project management a question was posed on how often organizations use risk management practice. The results 27 percent always, 35 percent often, 25 percent sometimes, 11 percent rarely and 3 percent never. This shows that the use of risk management is not standard across organizations globally. Shrivastava (2012) project risk management is least well-known yet most successful tools project managers can use to improve the chances of a project's success.

Many things are unpredictable, and risks are described as those uncertainties that will have an effect on the project if they arise(Weaver, 2008).A research done by ISACA and the Risk Management Society RIMS (2019) states risk management ought to be part of technology implementation from the start of a project and across its life cycle in order to achieve maximum value. IT and risk management experts will recognize the best opportunities for cooperation by considering the technology life cycle.

Banking and financial services are fundamentally conservative because they are heavily regulated. It's the one sector where a dedication to creativity and immediate action is counterproductive and, in the case of failure, poses a major risk to the institution. The Central Bank of Kenya (CBK) has released a cyber-security guidance note to resolve technology and cyber threats, as well as the related reputational harm, that have arisen as outcome of the growing digitization in financial services.

Risk management was divided into four categories in several research to explore the connection between risk management and IT project performance. The four categories were risk assessment, risk analysis methods , risk response preparation, and monitoring and control (Didraga, 2013). The project's subjective success was unaffected by risk detection and risk mitigation, reliability, easiness, versatility, satisfaction, or quality according to the findings.

According to analyst prep (2018) there has been an intense change in the role of risk management in the years. Moreover, in the last decade, the work of risk management has not just involved the purchase of insurance but also expanded beyond its limits and evaded financial exposure to cater to various risks. There are

two ways in which corporations can manage their risks: tackling risks at a time in a systematic and devolved manner or operating from all points of view in a systematic and corresponding manner enterprise risk management (ERM). It notes that ERM is more robust and should be adopted by organizations.

Shields et al. (2010) discovered that usage of risk-aligned project management strategies was uncommon. It brings to focus the actual interphase between the theory of risk management and actual practice. Kutsch and Hall (2009) few studies show what project managers really do in relation to risk management. In this study, focus was on actual practice of risk management and its linkage to performance of IT Projects.

PMBOK 6th edition outlines Project risk management as "risk identification, analysis, response, monitoring and Control of risk in a project. The goals of these techniques are to raise the probability / impact of positive risks while lowering the likelihood / impact of negative risks in order to maximize project success prospects". This study intended to analyses the risk management on risk identification, risk analysis, risk responses and risk monitoring and control and their relation to the outcomes of IT projects in Banks in Kenya.

1 .4 Statement of the Problem

Project completed on schedule, on budget, and with deliverables that meet the requirements, is considered successful (Akrofi, 2017). Undertaking an IT project in a Banking environment is a complex task. Major projects like changing the Core Banking System is equated to changing the engine of an Airplane mid-air (Arumugam, 2017). Mangare and James (2017) indicate an empirical study by Onsogo (2008) according to research on IT venture evaluation of commercial banks in Kenya, 56 percent of the banks studied had more than two failed IT projects owing to failure to meet initial set targets, budget, and completion within the prescribed timeframe. Onsogo (2008) recognized that the uppermost number of project failures happened in smaller banks accounting for 41 percent of the total, while big banks accounted for 25 percent.

In the Kenyan context, though limited in published survey, several examples can be sighted in the IT project performance in one aspect or another. Core Banking System (Flexcube) Development project by a Bank that was to be implemented in two years, took over five years to implement with numerous vendor and technical challenges. National Bank's 2018 report identifies failure of integrating the In Duplum Rule (section 44A (1) (b) of the Banking Act) into the core banking system which makes it impossible to operationalize the rule on interest accrued on the non-performing loans over and above the outstanding principals. In 2015 Equity Bank had to upgrade its System to a new version Finacle Version 10, to deal with a public relations crisis following widespread IT system breakdown.

According to a study published by the PMI in 2017, 14 percent of IT projects fail. Usmani (2015) notes that it's truly amazing that in this age and time, so many system implementations still fail, that it is baffling. Randell et al. (2014)notes 70 percent of software projects fail owing to poor requirements, resulting in an annual rework expense of slightly about Usd 45 B. Jenner (2015) expounded on disheartening IT project underperformance rates amid 50 to 70 percent. Lehtinen et al. (2014) elaborates that software project failures are common.

Mandal and Pal (2015) argues that there is a sufficient amount of proof of software project failures. Studies have been done in various jurisdictions to analyses the place of risk management practice in performance of IT related projects (Ziemba& Kolasa 2015; Javani & Rwelamila 2016; Akofi 2017). This has contributed to varied results as to the influence of risk management practices on projects performance. (Baccarini et al.; Kutsch & Hall, 2009; Tams& Hill 2015). According to a global survey conducted by the Standish Company, 83.9 percent of IT projects fail partially or entirely.

One aspect that can contribute to IT project performance is the risk management. With these challenges in implementing IT projects and high failure rate, a study is necessary to evaluate the risks management practices and how it affects performance of the IT Project. There is research gap in evaluating risks management practices in IT projects in the banking sector in Kenya. Mutua and Kirui (2020) notes that risk management in finance and banking has been less explored hence creating research gaps in performance of core banking systems in Kenya's banking industry. Studies reviewed have been conducted in other jurisdictions and are in other sectors. Results generated may not be in context with the Kenyan commercial banking Sector scenario.

This research aimed to assess risk management and project performance in Kenyan commercial banks IT projects, noting the moderating control of project complexity and the mediating effect of risk culture. This study generated data that quantify the contribution by risk management field of study on performance of IT projects and make recommendations to the Banks. This study's findings improve awareness of project risk management in IT projects in Kenyan banks, thereby addressing the research gap; "the effect of risk management on IT projects performance in commercial Banks in Kenya".

1.5 Objectives of the Study

The study's objective was to examine the influence of Risk Responses on IT Project performance in commercial Banks in Kenya.

1.6 Research Hypothesis

The Study Hypothesis was that Risk Responses doesn't have a significant weighting on performance of IT projects in the commercial Banks in Kenya.

II. Theoretical Literature Review

2.1 Enterprise Risk Management Theory

Initial scholarly articles of enterprise risk management theory were written by (Nocco & Stulz, 2006). The authors argue in the context of well-designed ERM program, where all significant organizational risks are treated and handled within one framework, can provide long-term competitive advantage and value by affecting both the company-wide and the business unit level. Outside pressure, resulting from corporate scandals involving huge risks, has had a significant impact on this growth.(Gates, 2006). Jankensgård (2019) explains that ERM quickly established as the mainstream theory of corporate risk management.

The ERM theory of project risk management includes the agency problem of undertaking risk management under the risk governance pillar that includes "the processes of conducting risk management planning, risk identification, risk analysis, response planning, response implementation, and monitoring risk on a project". Nocco and Stulz (2006) according to the study, corporate risk management has grown further than insurance and financial liability hedging in the last years to include other types of risk, including reputational risk, operational risk and strategic risk. Eaton (2015) expounds that "ERM is a relatively new all-inclusive and strategic approach for handling risks in today's organizations." As a result, ERM theory builds on conventional corporate risk management theory, which focuses on removing the impact of external frictions like the taxation or contractual issues amid the company and other business stakeholders(Smith & Stulz, 1985).

Galer (2015) highlights the main critics of ERM that it cannot identify and protect an organization from all significant uncertainties, ERM tends to focuses on the negative aspects of risk rather than the positive and that implementing an ERM model is expensive to organizations. As a key theory in risk management, the enterprise risk management theory has vast relevance in this study. This is because the study evaluates the practice of and the application of risk management and performance of IT projects. The theory thus anchors the hypotheses relating to risk responses. The research objective was illumined by this theory.

2.2 Critical Success Factor theory of Information Technology.

Grunert (1992) states that the idea that there's a few factors that are critical to the company's performance, and they are determinable, was initially brought to fore by Daniel (1961) and then largely expounded by Rockart (1979; Bullen & Rockart, 1981) in the context of undertaking management information systems. From the 1960s, there have been authors (e.g. Ingram, 2000; Wright, 1997; Turner, 1993) who have specified that success in project undertaking is a result of three constraints in the sets of time, cost and specification, this has been the indication of project success.

Milis & Vanhoof (2006) conducted research on success criteria for ICT projects. According to the findings, the triple constraints have a minor effect on performance evaluation. Other factors, such as customer satisfaction and financial or commercial performance, matter even more. This theory anchors the dependent variable, Project performance. Adzmi and Hassan (2018) points out that businesses have made substantial investments in ICT projects in the hopes of gaining competitive advantages, development, and productivity improvements. On the top of debates in the project management field is the project's progress and shortcomings.

Chiemelie (2014) states that for a high-potential ICT project, the project manager must recognize the parameters by which project performance is assessed, and meeting these criteria ought to be the project manager's top priority. In regards to ICT project, the determination of whether a project is successful or not is different from the normal projects and more compound thing to do (Belassi &Tukel, 1996) In this study aspects considered included: desired quality, project within budget, project within schedule and project undertaken within scope. This theory anchors the dependent variable, project performance.

III. Empirical Literature Review

3.1 Risk Responses and Project Performance.

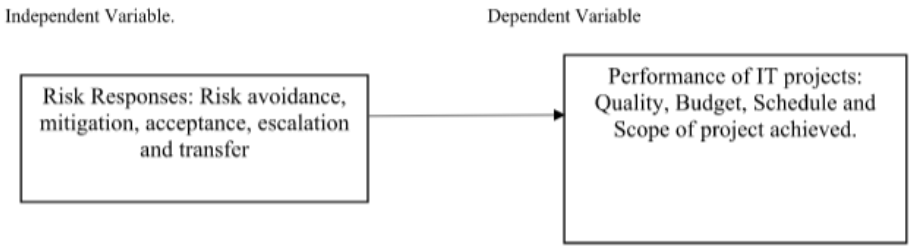
Firmenich (2017) in the paper customizable framework for project risk management, risk mitigation options were presented in a study conducted in Switzerland as risk avoidance, elimination, insurance, the transfer of risk and risk acceptance. The study's goal was to highlight the importance of efficient and successful project risk management methods, as well as to assist project leaders in increasing project cost by introducing a new project risk management system. Risk reduction, according to the findings, is the phase that entails

assessing and acting to change the project founded on the preceding risk analysis. To control the efficiency of the risk mitigation actions, risk controlling closes the circle by comparing the current project situation to the initial project schedule.

Didraga (2013) risk management activities were divided into four categories in a study of Romanian IT projects. The approach used was based on a survey of documentary studies and an interpretation of the literature's concepts. The thesis looked at literature from major IT project management journals and articles published between 1978 and 2012. Risk management is a critical component of the project undertaking process, and it is implicitly believed to function in support of project performance, according to the findings. Risk response preparation is associated with subjective perceptual risk, according to the hypothesis. The subjective performance of the IT project, was not accepted, since the significance level was 0.120 (>0.05). The correlation association between the risk response mechanisms and the subjective performance of IT projects was not significant from a statistical point of view.

Baccarini (2004) states that the handling of risk encompasses the involvement of the most aligned strategies for handling the incidences. There are four key methods for dealing with project risks: avoidance (doing nothing about the risky activity), mitigation (doing something about the risky activity), and adaptation (doing something about the risky activity). Reduce the likelihood of a risk event happening, as well as the effects of that event. The most popular risk-handling strategy is risk mitigation. Shift – the transfer of all or part of a danger to another entity. Accept the risk and, as a result, the consequences if the risk occurs.

Dey & Ogunlana (2004)the carrying out of risk management in projects is demonstrated in the study "collection and application of risk management methods and techniques for build-own-transfer projects". The research focused on the use of risk management approaches and strategies in projects, and it developed a model for choosing risk management processes for build-own and transition projects based on reviews of applicable literature. The research looks at risk response allocation and handling in practice, among other things. The findings revealed that only a small risk response framework was being used in projects. Wallmuller (2010) states that after a risk has been assessed, one or more strategies for how team participants can manage and react to the risk should be identified.



IV. Research Methodology

Descriptive and explanatory research design was used in this study. Information obtained was illuminated as part of results attained in the study. Descriptive and explanatory design is used in this study. Information obtained is illuminated as part of results attained in the study. The research design is described as the study's whole strategy for incorporating the various modules of the study in a consistent and organized manner, ensuring that the research issue is well addressed (De Vaus, 2001). This study employs the descriptive and explanatory research design on a survey to ascertain the consequence of risk analysis on performance of IT projects in the commercial Banks in Kenya.

The target population in this study was forty (40) projects in forty commercial Banks licensed in Kenya as per the indication of the published 2019 banking supervision report. For each project, three (3) respondents were targeted. Staff in the project departments, IT department and risk management departments were the respondents.

Sampling of the above respondents was by stratified random sampling which is considered the most effective probability sampling method where the target populations are not homogeneous(Kothari & Garg, 2019). Proportionate stratified random sampling was used because the population is diverse, scattered, and of various tiers. The stratification was done using the bank's tier, then the project at the commercial banks. Yamane (1967) formulae to recognize a representative sample was used.

$n = N / 1 + N (e) 2$

n= represent the required sample size

N= the total population

e = donates accuracy level required.

The Standard error = 5%

Derived from a population of 40 projects, the sample was:
$n = 40 / 1 + 40 (0.05)^2$
n= 36 projects
The response rate when using questionnaires is highly variable (Saunders and Lewis, 2012). The key data gathering tool in this study was semi-structured questionnaires. Data was collected on the targeted 108 professionals that entailed project Leads, IT managers, the IT analysts in the risk management departments in the commercial Banks in Kenya then analysed. The three kinds of validity that were put into consideration in this research were content validity, face validity and construct validity. Face and content validity was checked by engaging a selected number of PMI and ISACA members in a pilot study who have a vast experience in IT projects risk management Cronbach Alpha was used in this study, and a reliability alpha value of above 0.70 was used because it provides a quantitatively unique estimate. Construct validity in this study was ensured by using a five point Likert Scale as proposed by(Likert, 2017).
The study assumed a regression model of the form $P = \beta0 + \beta1RR + \varepsilon$ where P= Performance of IT project, RR= Risk Responses, β0=constant, β1 is a Beta Coefficient while ε=Error Term.

V. Study Findings

The questionnaire items in this section sought to measure responses on what respondents felt were risk responses activities undertaken in the IT project. The questionnaire items were adapted from the project management book of knowledge (PMBOK) 6th edition and PMI risk management practice guide thereby addressing concerns on IT project performance. The presentation on the responses to the items has been made using table 5.11 with brief discussions of the descriptive statistics being made below the table.

Table 5. 1Risk Responses Descriptive Statistics Results

Descriptive Statistics				
	N	**Mean**	**Std. Deviation**	**Variance**
Some parameters of the project were changed to avoid risks.	87	3.6782	0.97043	0.942
Project team ensures improved communication to avoid risks.	87	3.8506	0.98274	0.966
Project transferred risks by taking insurance covers.	87	2.7126	1.25668	1.579
Performance bonds, warranties, and guarantee were used in the project.	87	2.8851	1.18543	1.405
Redundancy system were incorporated in the project.	87	3.2989	1.0243	1.049
Several tests were conducting in the project to ascertain functionality	87	4.1149	0.85488	0.731
The project had established a contingency reserve to deal with risks.	87	3.5862	1.11597	1.245
Periodic reviews of the threat were done to ensure that they do not change significantly.	87	3.6092	0.95669	0.915
Threats outside the project scope were escalated.	87	3.7471	1.02547	1.052
Each project risk was assigned a risk owner.	87	3.6207	1.14365	1.308
Aggregate Score		**3.51035**	**1.051624**	**1.1192**

Source: Survey data, 2021

Results from Table 5.11 above shows that the aggregate scores to the questionnaire items risk responses was 3.51, with standard deviation of 1.05. The aggregate mean score that scored the lowest in this category was whether the project transferred risks by taking insurance covers (mean of 2.71 and standard deviation 1.25). This indicates that most respondents disagreed to the fact that risks were insured in the projects as a response strategy. The respondents also disagreed with the fact that performance bonds, warranties, and guarantee were used in the project as a risk mitigation option (mean of 2.88 and standard deviation of 1.18).

Most respondents agreed to the question on whether several tests were conducting in the project to ascertain functionality of the systems, with mean of 4.1 and standard deviation of 0.85. This indicates that testing during the project life cycle was the most practised risk response strategy. This strategy was followed closely with project team ensuring improved communication to avoid risks, scoring a mean of 3.85 and a standard deviation of 0.98. And escalation of threats outside the project scope, which scored a mean of 3.74 and a standard deviation of 1.02.

Table 5. 2 Model Summary Results

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.930[a]	.866	.859	.25154

Source: Survey data, 2021

Table 5.21 shows the results of ANOVA that was used to test the overall significance of the model.

Table 4. 3 ANOVA Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.477	4	8.369	132.274	.000[b]
	Residual	5.188	82	.063		
	Total	38.665	86			
a. Dependent Variable: Information Technology Project Performance						

Source: Survey data, 2021

Table 5. 4 Coefficients Results

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	**Sig.**
1	(Constant)	.287	.149		1.929	**.057**
	Risk Responses	.263	.115	.266	2.288	**.025**
a. Dependent Variable: Information Technology Project Performance						

Source: Survey data, 2021

In the empirical model, Risk Responses was regressed on IT project performance and Summarized as follows

P = 0.287 + 0.263 RR

Where;

P= Performance of IT projects

RR= Risk Responses

Table 5.22 shows that Beta coefficient for risk responses was 0.266 and with P-value of 0.025. The results indicated that if the other factors were held constant, a magnitude change in risk responses leads to 0.266 positive change in IT projects performance in commercial banks in Kenya. The results P-value was less than 0.05 ($P < 0.05$) indicated that null hypothesis (H_{03}) was rejected implying that risk analysis had statistical significance influence on the performance of IT projects in commercial banks in Kenya. Consequently, hypothesis three is rejected at 5% significance level, which then implies that based on the data collected, there is sufficient evidence to indicate that risk responses contribute to the performance of IT projects in commercial Banks in Kenya. This result is in agreement with Pimchangthonga and Boonjing (2017), risk response planning influenced IT project success at the statistical significance level of 0.05 with a beta coefficient of 0.333, according to their multiple linear regression analysis findings.

VI. Conclusions

Inferential statistics of the risk responses determined that the variable has a significant positive effect on the performance of IT projects in Kenyan commercial Banks. This implies that activating risk response strategies such as risk avoidance, transfer, escalation and acceptance in the undertaking an IT project are likely to have a positive effect on the IT projects in the commercial banks. This confirms that when risks in a project are responded to appropriately, the project performance is enhanced. Therefore, risk responses were confirmed as a significant factor in the performance of IT projects.

VII. Policy Recommendations

The Central Bank of Kenya should set policy guidelines on project risk management activities and applications to guide commercial banks in Kenya undertake the IT projects. This can be derived from risk management guideline 2013. The policy formulation can be undertaken through the collaborations with commercial banks, Information Technology companies and fintech, Kenya bankers' associations and related service providers in project management and professional association's bodies like PMI.

VIII. Suggestions for Further Research

The study recommends that further study be undertaken to establish the maturity level of risk management practice in commercial banks in Kenya and the related regulatory financial institutions. The study also recommends that further investigation be undertaken to determine the integration of risk management functions and the practice of risk management in other projects. To address the limitations highlighted in this

study, it is suggested that a longitudinal study be undertaken to establish whether the findings of this study could hold. This is important given that the study was undertaken in a period when the banking sector and the business fraternity as a whole in Kenya was undergoing a turbulent time occasioned from the effects of the Covid -19 pandemic that occasion working from home that may impact on business operations.

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