



**RISK MANAGEMENT STRATEGIES AND PERFORMANCE OF NATIONAL GOVERNMENT CONSTITUENCY DEVELOPMENT FUNDS PROJECTS IN KIAMBU COUNTY, KENYA**

<sup>1</sup> Anne Wambui Wachira & <sup>2</sup> Dr. Joshat Kyalo, PhD

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<sup>1</sup> Wachira, A. W., & <sup>2</sup> Kyalo, J.

<sup>1</sup> MBA Student, School of Business, Economics and Tourism, Kenyatta University, Kenya

<sup>2</sup> Lecturer, Department of Management Science, School of Business, Economics and Tourism, Kenyatta University, Kenya

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**ABSTRACT**

*This study ascertained the relationship between national government constituency development money projects and risk management methods in Juja Constituency in Kiambu County, Kenya. The study utilized a descriptive research design which was cross sectional in nature. The population of the study was drawn from all the CDF funded projects in Juja constituency these were the on-going and complete projects for the 2020/2021 financial year. Primary data was obtained through administration of semi structured questionnaires. Data was coded, entered, and evaluated using statistics software (SPSS Version 25.0). Quantitative data was analysed utilizing descriptive statistics. The development of themes related to the study's variables, based on the qualitative information provided by the questionnaire's open-ended sections, was a component of content analysis. The results were displayed utilizing tables. The study found that risk retention, risk prevention, risk control and risk transfer had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The study conclude that risk-retention helps to avoid negligible risks while paying more interest to the project management tasks and it is a valuable strategy applicable to budgeting and prioritization of project tasks. Risk prevention measures aim to stop or reduce the likelihood of a building safety risk happening in a project. The important role of the project managers is to identify and control it and without any control, risks can become disasters, causing delay, unnecessary expenses and even bringing the project to an end. Risk transfer is a risk reduction method that shifts the risk from the project to another party. The study recommended that the organization should allocate funds for potential losses and any associated costs. The project managers should document each risk in detail, including their potential impacts and possible responses to mitigate the risk, then, assign a team member to monitor each risk as your project progresses and keep this risk log updated throughout the project. Project managers must first identify risks as soon as possible and should then analyze each identified risk and come up with a plan to deal with it. The project managers can accomplish risk transfer through non-insurance agreements such as contracts.*

**Key Words:** Constituency Development Fund, Risk Retention, Risk Prevention, Risk Control, Risk Transfer

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## INTRODUCTION

The Constituency Development Fund (CDF) was enacted in 2003 by a Parliament (CDF Act) enactment that was gazetted in Kenya Gazette Supplement No. 107. The CDF was intended to fight poverty at the local level by implementing community-based projects with the goal of enhancing the people's economic well-being and relieving parliamentary members of the onerous requirements for raising funds for projects that should be funded by the general budget (Baskin, 2010).

A project is a relatively brief endeavour intended to provide a distinctive product, service, or outcome. Project management is further described as the utilization of information, skills, tools, and processes in project operations to fulfill project specifications (PMI, 2013). If a project is finished on schedule, within the allotted budget, and meets the client's requirements, it is considered to have been effectively delivered. Project management needs specific tools, such as social media tools, in order to successfully complete projects (Kraushaar & Akumu, 2013).

Project performance measurement is essential for managing projects because it allows the project manager to identify issues with scope and budget early on and create appropriate solutions (Dissanayaka & Kumaraswamy, 2013). McFarlan (2011), argues that project failure arises due to failure to pay strict attention to each project risk separately, the total risk in projects, or realizing the different types of projects require a variety of risk management practices. In this aspect, a disregard for potential risk typically results in project delays and budget overruns.

Berg (2012) defines risk as the vagueness that surrounds upcoming events and results that may have an impact on whether or not organizational needs are met. Njagi (2016) assert that a risk is a perception with a potential impact on some significant features it could be caused by certain past, current, or hypothetical events. Consequently, risk management is a crucial component of project

management's strategic planning that is a procedure that is performed over the entire project's lifecycle.

Project managers employ a variety of techniques to detect and manage risks to their projects in order to reduce their negative effects. These techniques are referred to as "risk management methods" (Cooper, 2015). Risk management, according to Smith, Merna, and Jobbling (2016), entails utilizing executive procedures, processes, and techniques to the tasks of establishing the specific scenario, differentiating, deconstructing, analyzing, treating, observing, and communicating risks in a methodical manner. To increase risk management effectiveness, to have a clear understanding of the possible risks in projects, and to improve control of the entire project, risk management methods should be continually improved throughout the entire project.

Juja is an electoral constituency in Kenya. It is amongst the four seats in the former Thika District and one of the twelve in Kiambu County. The district was created in time for the 1969 elections. The constituency was divided into the Juja, Ruiru, and Thika Town seats before to the 2013 elections. The area of the constituency is square kilometres (Approx. 326.60). The town is situated between Thika and Ruiru town, around 30 kilometres north of Nairobi. According to Kenya's Vision 2030, Juja is a part of the Nairobi Metropolitan Authority. The estimated population of Juja Constituency is 272,737. Out of 290 constituencies in Kenya, this one is number 113.

In 2017, Juja National Government Constituency Development Fund (NG CDF) was ranked the best performing in the Central region and 7th countrywide out of the 290 constituencies. Its achievements were attributed by its effective awarding of tenders for implementation and completion of projects in the financial year 2017/2018. Juja Constituency has/is vastly growing and so far has exceeded the previous population estimate. Education and security projects by the Juja NG-CDF have greatly contributed to its growth

making it a haven for the majority. Businesses and companies' development has been a key mover in the Juja constituency economy.

Schools-nursery, primary and secondary constructions, additions, libraries, and staff quarters to accommodate the increased number of pupils owing to Free Primary Education (FPE) are among the sectors that the CDF in Juja has greatly contributed to. Rural electrification projects and illumination for public buildings. Health Projects: Mobile clinics, health centres, and dispensaries. 10% bursary. In the event of one, there will be an emergency fund to assist in responding to crises, revitalizing initiatives, and addressing unique requirements. (5%) Police stations, administrative camps, and security equipment (Waribu, 2016).

#### **Statement of the Problem**

The mismanagement and theft of CDF funds by Constituency Development Fund Committees (CDFC) have been documented in the nation, according to the National Taxpayers Association (2012). Approximately Ksh. 242 million of the funding given to the Constituency Development Funds (CDF) Committees in the 2010–2011 fiscal year was misappropriated, missing, or embezzled, claims Lobby Group. If individuals in charge of the CDF funds are required to account for them, management of the funds will be greatly improved.

Further a report of the auditor-general on NG-CDF-Juja constituency for the year ended 30 June 2017 showed unsupported bursary disbursements, the report noted that the financial statements for the year ended 30 June 2017 reflects other grants and transfers balance of Kshs.84,702,324 which includes Kshs.28,859,580 in respect of bursary-secondary schools which was awarded to various beneficiaries in learning institutions as bursaries to needy students. Nevertheless, out of the total disbursements, Ksh. 27,613,990 was not backed by statements or receipts of appreciation from the organizations that got the bursary grants to prove that it was deposited and accounted for. Consequently, was not been possible to ascertain

whether the bursaries awarded reached the intended beneficiaries (Auditor General report, 2017).

Roba (2014) assert that there has been an increase in concern regarding the implementation of endorsed and established projects as well as the effective use of community development funds throughout the nation since the enactment of the CDF Act. The major objective of any project is its effective completion, even though the process of project implementation is complicated and usually requires simultaneous attention to a number of different factors, such as managerial assistance. There is uncertainty regarding whether the fund is being utilized effectively or if politicians have taken advantage of it to develop their patron-client networks (Kimenyi, 2005). According to the Juja Constituency Development Fund Project Implementation Status Report (2017), the Kshs. 3,479,565.6 earmarked for the Athi Bridge has not yet been utilized from the scheduled year 2008/09, despite the whole amount having been disbursed. Despite the distribution of the allotted Kshs. 7,056,000, the construction of a perimeter wall at Abba Salama Primary School, which was planned for the year 2008/09, is 75% complete (The Auditor-General, 2015).

Several studies have been conducted as a means of addressing the issue of risk and project performance. Carvalho and Junior (2013) examined risk management practices in a range of Brazilian industrial sectors as part of their study. The study's conclusions suggested that utilizing the most effective risk management strategies has a beneficial impact on a project's success. Rubio, Ferrada, Serpella, and Howard (2013) conducted a survey of Chilean construction projects, and the findings showed that failing to implement risk management procedures had adverse effects. In Kenya Ngugi & Odhiambo (2014) argued that strong risk management practices facilitated the initiatives' success facilitated the initiatives' success because they decreased the likelihood that unfavourable

risks would materialize and lessened their effects when they did. 24 Constituency Development Funds in Kiambu county were assessed by Wachuru (2013). Due to a poor implementation of risk management procedures, the study's conclusions about project success were limited.

Additionally, research by Kariuki (2013), Oyalo (2015), and Sugal (2017) were based in the respective constituencies of Gachoka, Kangundo, and Balambala. They did not, however, concentrate on how risk management techniques affected the execution of CDF projects in the Juja constituency. It is clear that there is little study on risk management tactics and CDF project implementation in the Juja constituency because the results of the studies mentioned above and others have limited applicability to the current constituency. The current study determined the existing gaps in the studies and tries to close them by evaluating the effects of risk management procedures and the effectiveness of NG-CDF projects in Juja constituency in Kiambu County.

### **Objectives of the Study**

The study's main objective was to examine the correlation between risk management procedures and the effectiveness of projects financed by NG-CDF in Juja Constituency, Kenya. The study's specific objectives were;

- To ascertain the influence of risk retention on the performance of NG-CDF in Juja constituency in Kiambu county, Kenya.
- To determine the effects of risk prevention on the performance of NG-CDF projects in Juja constituency in Kiambu county, Kenya
- To examine the impact of risk control on the performance of NG-CDF projects in Juja constituency in Kiambu county, Kenya
- To assess the influence of risk transfer on the performance of NG-CDF projects in Juja constituency in Kiambu county, Kenya

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

#### **Prospect Theory**

R. McDermott (2001) asserts that this approach entails decision-making under risky circumstances. According to this idea, choices are founded on discernment and the situation of the external world. Internal disagreement regarding value trade-offs is resolved. Making decisions becomes challenging when options support ideals and objectives that are in conflict. Prospect theory examines the decision-making process involves presenting and weighing these possibilities. This theory was deemed to be prominent in the examination of option decision-making under risk by Kahneman & Tversky (1979). Making decisions when there is risk involved is seen as a decision between prospects and gambles. This philosophy places more emphasis on gains and losses than on finished assets. People are risk-averse when it comes to profits but risk-acceptant when it comes to losses, and they assign losses greater weight than equal gains (Levy, 1992).

As a result, it is believed that utility curves in a domain of gain and a domain of loss are different. According to Kahneman & Tversky (1975), fatalities are prioritized more in decision-making because the psychological effects of advantages are significantly lower than that of losses. The decision weight of each outcome is multiplied by the significance of each outcome while making decisions. Decision weights are significant because they provide an empirically obtained evaluation of how decision makers determine how likely something is to happen. Tversky and Kahneman (1979) assert that low probabilities are often overweighed whereas large probabilities are typically underweighed. Risk, according to Dionne (2013), is the total of an event's likelihood and its likely consequences. The volatility of the results can be used to measure it, although more often than not, more dispersion moments are needed. Uncertainty is less exact since the chances of an indeterminate event and their effects are often unknown.

Prospect theory is applicable to all independent variables, including risk avoidance, whereby project team members may decide to shorten the project's duration in order to reduce hazards. As part of risk transfer, the project team will decide to assign tasks with a strong likelihood of risk to a third party who is financially prepared and willfully to manage the risk if it materializes. The project team can opt not to take any action in response to a risk that has been detected, or they can try to reduce all risk circumstances to controllable or reasonable levels given the project's timelines.

### **Enterprise Risk Management Theory**

Nocco &Stulz (2006) assert that Enterprise Risk Management (ERM) is a risk management approach that favors managing substantial risks that affect a certain organization as a whole rather than treating each risk separately. Its primary goal aims to integrate all of the organization's risk management silos into a single, systematic approach. According to the ERM risk management framework for managing risk, senior corporate leaders and personnel must play an active role in assessing and addressing a range of business risks as part of the risk management process (Hallowell, Molenaar, &Fortunato, 2013). This concept emphasizes all organization members, not only chosen few, to participate in risk management.

The ERM also emphasizes how crucial it is to manage risks with clear procedures and guidelines. The theory also states that if 10 enterprises adopt written rules that specify risk appetite, strategic goals, tolerance, and standardized processes, they will be able to increase their capacity for identifying, assessing, and managing risks (Olson and Wu 2010). The theory additionally emphasizes on creating a culture of risk management whereby all parties involved have the power and obligation to manage risks. ERM techniques, according to Cormican (2015), are associated with improved organizational enduring success, stakeholder trust, and competitive edge. Despite being created for the control of corporate risks, the ERM theory has

gained popularity in project management methodologies. Drumll (2001) posit that applying the ERM concept in the construction industry is a smart move because it is applicable to sectors with a high rate of failure. Our idea is pertinent to this research since these failures arise from a failure to recognize, manage, and control risk across the entire organization. This hypothesis accounts for all independent variables.

### **Uncertainty Theory**

Liu (2010) established the concept of uncertainty theory as a result of the generalization of the uncertainty domain. The truth value is described as the uncertain assessment that the statement is true in Li and Liu's (2010) application of uncertainty theory to uncertain logic. Additionally, Liu created the concept of uncertain entailment that takes into account the truth values of other uncertain formulae to determine the actual meaning of an uncertain formula. Project management does, at all, take uncertainty into account. The 1950s saw the early development of activity network approaches like PERT (Program Evaluation and Review Technique), which recognized the potential for task length variability. For example, probabilistic branching was added to these techniques in the 1960s. To assist project managers in preparing for uncertainty through risk prevention and contingency planning, qualitative approaches like the Synergistic Contingency Evaluation and Review, Technique for Graphical Evaluation and Review, Technique and Analysis of Potential Problems were developed (Henriksen & Uhlenfeldt, 2010).

### **Theory of projects implementation**

Nutt (1986) assert that Project implementation theory is a sequence of decisions made by accountable organizational agents to manage a change process and secure the cooperation necessary to implement changes. Managers utilizes implementation to make planned changes in their organizations by establishing circumstances that allow for changes to survive and take root. The anticipated changes in an organization are

implemented via a method called implementation, which is overseen by a manager. There is broad consensus that managers are the essential players in the process and that implementing intended changes, if they are distinctive or conventional, is the main objective of implementation. Nonetheless, since implementation is so common, it's proven difficult to pinpoint the precise steps involved. Amachree (1988) made a number of important distinctions regarding these phases of planned change, classifying four components as the entrepreneurial, exploratory, control, and implementation subprocesses. This point of view suggests that implementation may be thought of as a planning technique for a change process that defines the steps that all parties involved will do to support the change.

### **Empirical Review**

Anca, Cezar, and Andrian (2015) define risk retention as a method when the project team acknowledges a risk but chooses to do nothing about it. When addressing a particular risk cannot be done in a way that is cost-effective, this technique is used. Methods for accepting risks can be divided into two categories: passive risk acceptance and active risk acceptance. Documenting the risk and dealing with it as it arises are the only actions necessary for passive risk acceptance. Active risk acceptance comprises building up emergency funds, as well as the time, effort, and resources needed to deal with the risk. Potts (2008) perceives risk acceptance as a choice if it cannot be transferred or prevented but needs to be regulated to decrease its impact.

Ploywarin and Song (2014) analyzed risk retention utilizing contingency planning, taking accurate knowledge about risk as it arises, and self-insurance in their research on the evaluation of risk acceptance/retention predicated on railway building initiatives in Thailand. Active and passive risk retention was further differentiated by them. Passive risk retention refers to dangers that project managers are not equipped to handle during a

project. Active risk retention involves actively and methodically identifying risks. They observed that errors in risk identification and risk analysis led to risk retention in the engineering construction. Risk management employees should work to minimize these mistakes as well as take timely risky decisions. and implementation for the execution of substantial and large projects. They deduced from their assessment that the risk retention method, used in 53.49% of Thai railway construction projects, was the most widely used risk response measure.

Zamzam (2014) that examined the risk-avoidance tactics employed by Equity Bank (Kenya)Ltd. to boost performance clearly demonstrates how dangers have proliferated in the banking industry and how crucial risk management is to Equity Bank's success. Five senior managers were selected as respondents by the author, and content analysis was performed to analyze the data. It was underlined that using risk avoidance, which involves balancing risk with performance, was a crucial step in the need analysis process. He assessed risk avoidance by increasing reserves (contingency planning) and running credit checks on all prospective borrowers.

Wanyonyi (2015) evaluated the impact of risk avoidance strategies on the performance of certain multinational development agencies in Nairobi. He stated that risk avoidance meant looking for alternatives in projects and using established strategies rather instead of inventing new ones to lessen the users' needless stress. He collected respondents from each international organization using the purposive sampling method. He then went on to assess risk avoidance utilizing work plans, contingency plans, safety systems, and safety inspections. The analyses showed a positive connection and a 5% significant level, which suggests a high association between risk avoidance and project performance. He continued by claiming that minimizing tasks with a higher risk of losses renders it more challenging for risk to materialize in projects.

Risk management is the practice of acting promptly to lessen the likelihood or impact of risks. By minimizing the size of the risk and the likelihood that it will occur or its impact, risk control is the process of enhancing risk acceptance by the organization (Hillson, 2001).

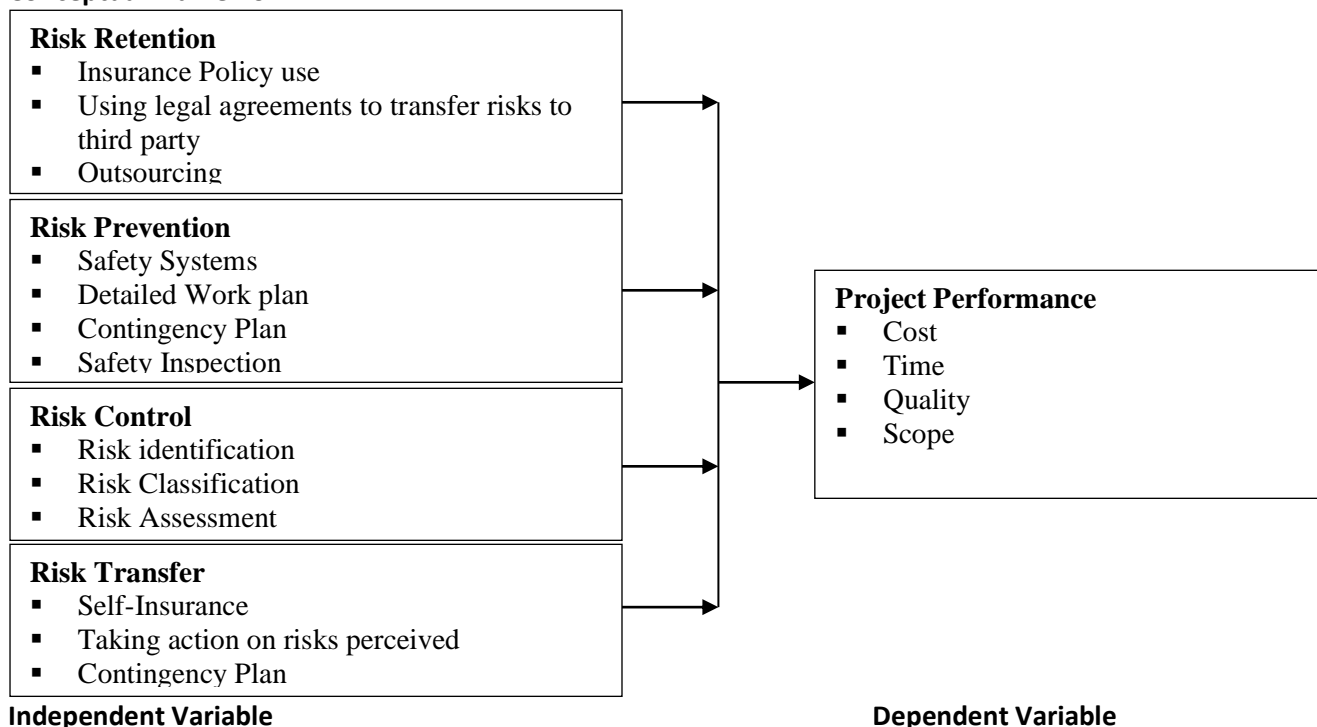
Kinyua, Ogollah, and Mburu (2015) underlined the benefits of risk reduction on project performance of small and medium information communication technology firms in Nairobi, Kenya in their study. They said that the degree of hazards vary from project to project depending on how sophisticated they are, and that includes projects for developing IT software. To obtain a representation of the target population, the authors used the Random approach in their sampling. By using emergency plans, signing contracts, and holding crisis meetings, risk reduction was quantified. They came to the conclusion that

risk management techniques have a profound effect on the performance of modest Kenyan ICT projects.

Risk transfer is the process of transferring the risk of loss to a different independent party that is stable financially at an affordable rate under a binding contract. Reduced risk-related losses are the goal of risk shifting (Bekefi, Epstein, and Yuthas, 2008).

The best course of action is to transfer a risk if it can be handled by a different expert with superior skill or capacity. According to Michaela, the responsibility for managing the risk should be passed to them. Depending on how the risk is characterized, it may be shifted to the client, the contractor, the subcontractor, the designer, etc. This could result in risk premium, or more expenditures and labour. It is important to realize that the risk is not eradicated but just moved to the party who can manage it the best (PMI, 2014).

**Conceptual Framework**



**Figure 1: Conceptual Framework**  
**Source: Researcher (2022)**

**METHODOLOGY**

A descriptive research design with a cross-sectional approach was used for this study. All of the project

managers, committee members, and community leaders who were engaged in the continuing and completed CDF projects in Juja constituency for the



2020–2021 fiscal year made up the study's population. A sample was taken from the following categories, which made up 89 projects with a total human population of 534. The formula developed by Nassiuma (2009) was used in this investigation to determine the sample size. The study used stratified sampling in the first stage, where sample participants were chosen depending on the relative strength of the strata. Semi-structured questionnaires were utilized by the researcher to gather primary data. In this study, the concept, predictive, and content validity was all examined. SPSS Cronbach's Alpha Reliability Test was utilized by the researcher to evaluate the reliability of the instrument. The field data was sorted, gleaned, and filtered in accordance with the study's goals. The data was coded, entered into a statistics program, and examined (SPSS Version 25.0). The quantitative data was analysed using descriptive statistics. The standard deviation, means, frequencies, and percentages were all calculated. The development of themes related to the study's variables were part of the content analysis process for the open-ended questionnaire sections' qualitative data. Tables were used to present the results.

Multiple regression analysis aided in analyzing inferential data. The model also helped in obtaining the relation between the dependent and the independent variable. The model took the form of the equation below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby:

$Y$  = Project Performance

$\beta_0$  = Constant Term

$\beta_1, \beta_2, \beta_3, \beta_4$  = Beta Coefficients

$X_1$  = Risk Retention

$X_2$  = Risk Prevention

$X_3$  = Risk Control

$X_4$  = Risk Transfer

$\varepsilon$  = Error Term

## FINDINGS AND DISCUSSION

### Results of Descriptive Statistics

The study carried out descriptive statistics to summarize the characteristics of a data set using Mean (M) and Standard Deviation (SD) that were generated using SPSS version 20.0. The results were presented as follows;

#### Risk Retention

The study sought to ascertain the influence of risk retention on the performance of NG-CDF in Juja constituency in Kiambu County, Kenya. This was achieved by presenting a list of statements describing risk retention of NG-CDF in Juja constituency in Kiambu County, Kenya for the respondents to rate their level of agreement on each statement. The results were presented in Table 1.

**Table 1: Risk Retention**

Statements	M	SD
Despite the awareness that risks could cause the project to be delayed, there are situations when nothing is done to identify risks.	4.51	0.486
The implementation of contingency planning is encouraged to prevent situations that could result in project delays.	4.67	0.329
Self-insurance is utilized in CDF projects to prevent the manifestation of incidents that cause delays.	4.56	0.440
The organization classifies all risks in the project	3.96	1.037
There is provision for measuring all current risks	4.08	0.918
There is provision for measuring all expected risks	4.21	0.788
The organization always anticipates a project to have risks	4.30	0.679

Source: Research Data (2023)

The results in Table 1 indicated that the statements that were strongly agreed by the respondents were; the implementation of contingency planning is encouraged to prevent situations that could result in project delays (M=4.67, SD=0.329), self-insurance is utilized in CDF projects to prevent the manifestation of incidents that cause delays (M=4.56, SD=0.440) and that despite the awareness that risks could cause the project to be delayed, there are situations when nothing is done to identify risks (M=4.51, SD=0.486). The findings agree with Anca, Cezar, and Andrian (2015) who define risk retention as a method when the project team acknowledges a risk but chooses to do nothing about it. When addressing a particular risk cannot be done in a way that is cost-effective, this technique is used. Methods for accepting risks can be divided into two categories: passive risk acceptance and active risk acceptance.

The statements that were agreed by the respondents were; the organization always anticipates a project to have risks (M=4.30,

SD=0.679), there is provision for measuring all expected risks (M=4.21, SD=0.788), there is provision for measuring all current risks (M=4.08, SD=0.918) and that the organization classifies all risks in the project (M=3.96, SD=1.037). According to Strelnick (2016) risk retention is the act of acknowledging the existence of a threat yet choosing to accept the corresponding amount of risk without taking any steps to reduce it. When hazards cannot be avoided or shifted, the party involved is left with little choice except to assume the risk and enjoy the results that come with it.

### Risk Prevention

The study sought to determine the effects of risk prevention on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. This was achieved by presenting a list of statements describing risk prevention of NG-CDF in Juja constituency in Kiambu County, Kenya for the respondents to rate their level of agreement on each statement. The results are presented in Table 2.

**Table 2: Risk Prevention**

Statements	M	SD
Regular inspections are performed on projects to check problems that could cause delays.	4.59	0.408
A comprehensive work plan is implemented to ensure that nothing will happen to cause the construction project to be delayed	4.50	0.500
Alternative or contingency plans are put in place to prevent any situations that could cause a project delay	4.55	0.448
Risky parts of a project are avoided	3.71	1.287
We frequently review our operations in order to avoid risks	4.04	0.955
Frequent reviews on operations are conducted in order to avoid risks	4.05	0.946
We are occasionally trained on risk prevention	3.83	1.165

**Source: Research Data (2023)**

The results in Table 2 indicated that the statements that were strongly agreed by the respondents were; regular inspections are performed on projects to check for problems that could cause delays (M=4.59, SD=0.408), alternative or contingency plans are put in place to prevent any situations that could cause a project delay (M=4.55, SD=0.448) and that a comprehensive work plan is implemented to ensure that nothing will happen to cause the

construction project to be delayed (M=4.50, SD=0.500). The results agree with Soofifard and Gharib (2012) who propose a model for the selection of proper risk prevention from the responses portfolio with the objective of optimization of defined criteria for projects. In addition, risk response helps to eliminate those risks or reduce them and thereby increasing the success of the project and the achievement of its goals.

The statements that were agreed by the respondents were; frequent reviews on operations are conducted in order to avoid risks (M=4.05, SD=0.946), they frequently review their operations in order to avoid risks (M=4.04, SD=0.955), they are occasionally trained on risk prevention (M=3.83, SD=1.165) and that risky parts of a project are avoided (M=3.71, SD=1.287). The results agree with Hallgren and Wilson (2011) who observe that risk prevention as a tool in project risk management, show that risk response is used in the collective information in the analysis stage and in order to take decision how to improve the possibility to

complete the project within time, cost and performance.

### Risk Control

The study sought to determine the effects of risk control on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. This was achieved by presenting a list of statements describing risk control of NG-CDF in Juja constituency in Kiambu County, Kenya for the respondents to rate their level of agreement on each statement. The results are presented in Table 3.

**Table 3: Risk Control**

Statements	M	SD
Control measures are put in place to curb risks	3.96	1.040
A risk matrix is generated and utilized when carrying out undertakings	4.58	0.419
All projects have a cushion measure to anticipate risk	4.45	0.548
There is a system in place to minimize negative effect of risk	4.21	0.787
We have ways to identify risks associated with projects	4.35	0.649
We separate actual risk events from sources of risks	3.75	1.247
Risk audits are conducted regularly	4.51	0.485
We frequently alter our risk-reduction practices to assist lower risk,	4.62	0.376

**Source: Research Data (2023)**

The results in Table 3 indicated that the statements that were strongly agreed by the respondents were; they frequently alter their risk-reduction practices to assist lower risk (M=4.62, SD=0.376), a risk matrix is generated and utilized when carrying out undertakings (M=4.58, SD=0.419) and that risk audits are conducted regularly (M=4.51, SD=0.485). The findings agree with Nyakundi (2011) who observe that risk control is a mix of factors taken into account with the potential to reduce vulnerabilities across society, to prevent, limit, and generate readiness for hazards' effects and its relationship to sustainable development in general.

The statements that were agreed by the respondents were; all projects have a cushion measure to anticipate risk (M=4.45, SD=0.548), they have ways to identify risks associated with projects (M=4.35, SD=0.649), there is a system in place to minimize negative effect of risk (M=4.21, SD=0.787),

control measures are put in place to curb risks (M=3.96, SD=1.040) and that they separate actual risk events from sources of risks (M=3.75, SD=1.247). According to Twigg (2015), certain programs to lessen risks have efficient information methods, insurance plans, and highly developed emergency response systems. Risks are minimized in projects to a tolerable level that is durable if the initiatives are performed successfully.

### Risk Transfer

The study sought to assess the influence of risk transfer on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. This was achieved by presenting a list of statements describing risk transfer of NG-CDF in Juja constituency in Kiambu County, Kenya for the respondents to rate their level of agreement on each statement. The results are presented in Table 4.

**Table 4: Risk Transfer**

Statements	M	SD
Most tasks that could impede a project team's progress are outsourced.	3.52	1.478
Legal contracts are signed with third parties, when things happen that delay projects.	4.64	0.356
The project managers pay insurance premiums on certain of the project deliverables to prevent the project scope from being impacted	4.53	0.469
We have a system that ensures risk is transferred to minimize financial stress	4.10	0.899
All project risks are carefully documented before any transfer	3.74	1.258
The organization is in partnership with others for risk handling	4.37	0.628
We outsource tasks that, if carried out by the project team, might cause delays.	4.60	0.400
The community is involved on security risky project tasks	3.64	1.355

**Source: Research Data (2023)**

The results in Table 4 indicated that the statements that were strongly agreed by the respondents were; legal contracts are signed with third parties, particularly when things happen that could delay projects (M=4.64, SD=0.356), they outsource tasks that, if carried out by the project team, might cause delays (M=4.60, SD=0.400) and that the project managers pay insurance premiums on certain of the project deliverables to prevent the project scope from being impacted (M=4.53, SD=0.469). According to Bekefi, Epstein and Yuthas (2008) risk transfer is the process of transferring the risk of loss to a different independent party that is stable financially at an affordable rate under a binding contract. Reduced risk-related losses are the goal of risk shifting.

The statements that were agreed by the respondents were; the organization is in partnership with others for risk handling (M=4.37, SD=0.628), they have a system that ensures risk is transferred to minimize financial stress (M=4.10, SD=0.899), all project risks are carefully documented before any

transfer (M=3.74, SD=1.258), the community is involved on security risky project tasks (M=3.64, SD=1.355) and that most tasks that could impede a project team's progress are outsourced (M=3.52, SD=1.478). The result agree with Ahamed and Azhar (2014) study which evaluated the most recent risk management and transfer strategies used by contractors in the Florida construction sector and the findings also show that Florida contractors utilize both project-related risk transfer methods, such as insurance, and special subcontractors, but they favour the latter when the potential loss is bigger.

#### **Performance of NG-CDF Projects**

The study sought to examine the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. This was achieved by presenting a list of statements describing the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya for the respondents to rate their level of agreement on each statement. The results are presented in Table 5.

**Table 5: Performance of NG-CDF Projects**

Statements	M	SD
Projects are carried out within the stipulated budget	4.53	0.466
Every activity is matched at every stage from input to output	4.57	0.427
Projects are carried out within the stipulated time schedule	3.71	1.286
Projects executed are at the intended quality	3.94	1.060
Projects carried out address the needs of customers.	4.50	0.500
Project performance is affected by risk management practices	3.93	1.068
Stakeholders are invited at project inception	4.25	0.746
The government has a watchdog for project beneficiary risks	4.11	0.886
Projects are reviewed together with stakeholders	4.56	0.436

**Source: Research Data (2023)**

The results in Table 5 indicated that the statements that were strongly agreed by the respondents were; every activity is matched at every stage from input to output, projects are reviewed together with stakeholders, projects are carried out within the stipulated budget and that projects carried out address the needs of customers as shown by mean score of 4.57, 4.56, 4.53 and 4.50 respectively and standard deviation of 0.427, 0.436, 0.466 and 0.500. According to Dissanayaka and Kumaraswamy (2013) project performance measurement is essential for managing projects because it allows the project manager to identify issues with scope and budget early on and create appropriate solutions. According to Stevens (2016), a project's success is determined by how well it performs, and project performance is determined by the scope of the project, the agreements established in the contracts, the relationships between the parties involved, the skills of the project manager, and the competencies of the other stakeholders.

The statements that were agreed by the respondents were; stakeholders are invited at

project inception the government has a watchdog for project beneficiary risks projects executed are at the intended quality, project performance is affected by risk management practices and that projects are carried out within the stipulated time schedule as shown by mean score of 4.25, 4.11, 3.94, 3.93 and 3.71 respectively and standard deviation of 0.746, 0.886, 1.060, 1.068 and 1.286 respectively. According to Takim, Akintoye and Kelly (2013) the performance of a project is typically assessed and evaluated on the basis of the measurements based on its performance, about its inputs, project efficacy, and project efficiency. Therefore, the success of a project can be determined by how much money was spent, how long it took, how well it was done, and whether it met the needs of the users.

#### Results of Regression Analysis

The study carried out regression analysis to establish the degree to which risk retention, risk prevention, risk control and risk transfer influenced the performance of NG-CDF projects. The results are presented as follows:

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712 <sup>a</sup>	.805	.798	1.075

Source: Research Data (2023)

The results in Table 6 indicated that risk retention, risk prevention, risk control and risk transfer, explain 0.798(79.8%) of the performance of NG-CDF in Juja constituency in Kiambu County, Kenya as

represented by the adjusted R square value. This therefore means that other factors not studied in this research contribute 0.202(20.2%) of the project performance.

**Table 7: Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	201.345	4	50.336	506.629	.001
	Residual	10.631	107	.0994		
	Total	211.976	111			

Source: Research Data (2023)

The results in Table 7 showed that the statistical F value is greater than the statistical mean square

value (14.718 > 4.138) at 5% significance level. The value 0.001 shows the significance level is less than

0.05 showing a statistical significance of the model on how independent variables studied influenced

the dependent variable. These conditions confirm the significance of the model.

**Table 8: Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	201.237	4	50.309	267.705	.001
	Residual	20.860	107	.188		
	Total	222.097	111			

Source: Research Data (2023)

The results in Table 8 indicated that the statistical F value was greater than the statistical mean value of mean square (267.705>50.309) at 5% significance.

Furthermore, the value 0.001 shows the significance level is less than 0.05 which confirms the significance of the model.

**Table 9: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.609	.167		3.647	.001
	Risk retention	0.834	.264	2.675	3.159	.000
	Risk prevention	0.768	.347	1.308	2.133	.000
	Risk control	0.699	.161	5.128	3.416	.001
	Risk transfer	0.504	.117	2.555	4.311	.000

Source: Research Data (2023)

From the results in Table 9, holding all the independent variables studied constant, the dependent variable would be 0.609(60.9%). The findings also indicate that if risk retention is increased by one unit the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya would be at 0.834(83.4%), if risk prevention is increased by one unit the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya would be at 0.768(76.8%), if risk control is increased by one unit the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya would be at 0.699(69.9%) and if risk transfer is increased by one unit the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya would be at 0.504(50.4%).

The final regression equation is described as follows:

$$\text{Project performance} = 0.609 + 0.834 (\text{risk retention}) + 0.768 (\text{risk prevention}) + 0.699 (\text{risk control}) + 0.504 (\text{risk transfer})$$

The results in Table 9 also indicated that the risk retention had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya as indicated by t-value of 3.159 and a significance value of 0.000 which is less than 0.05. The findings agree with Ubani, Amade, Benedict, Aku, Agwu, and Okogbuo (2015) study conducted a study in Nigeria to investigate the influence of risk retention on project performance of construction industry and found that risk retention positively influences projects performance of the construction firms.

The study revealed that risk prevention had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya as indicated by t-value of 2.133 and a significance value of 0.000 which is less than 0.05. The result agree with Wabomba (2015) who conducted a study in Nairobi Kenya to investigate the influence of risk management strategies on performance of projects among International Development Organization and the study revealed that the organization adopted changing of work plans to avoid risks, contingency, regular inspections, operational reviews training and skill enhancements in order to prevent risk.

The study found that risk control had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya as indicated by t-value of 3.416 and a significance value of 0.001 which is less than 0.05. The findings concur with Okumu and Wanjira (2017) study which investigated the risk control strategies adopted by Insurance firms in Kenya. The findings of the study implicated that risk control strategies such as identifying risk events, quantifying risk, responding to risk as defied in risk management plan, risk control meetings, use of quality assurance, signed contracts, and use of contingency positively influenced project performance of the motor insurance companies.

The study found that risk transfer had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya as indicated by t-value of 4.311 and a significance value of 0.001 which is less than 0.05. The findings are in line with Kolo (2015) study which investigated the influence of risk transfer in construction projects in Abuja Nigeria. The findings of the study revealed that the construction firm adopted risk transfer strategies such as insurance policy and risk premiums influenced project performance of the projects in terms of cost time and quality.

## CONCLUSIONS AND RECOMMENDATIONS

### Summary of Findings

The first research objective sought to ascertain the influence of risk retention on the performance of NG-CDF in Juja constituency in Kiambu County, Kenya. The study found that risk retention had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The respondents strongly agreed that the implementation of contingency planning is encouraged to prevent situations that could result in project delays, self-insurance is utilized in CDF projects to prevent the manifestation of incidents that cause delays and that despite the awareness that risks could cause the project to be delayed, there are situations when nothing is done to identify risks.

The second research objective sought to determine the effects of risk prevention on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The study revealed that risk prevention had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The respondents strongly agreed that regular inspections are performed on projects to check for problems that could cause delays, alternative or contingency plans are put in place to prevent any situations that could cause a project delay and that a comprehensive work plan is implemented to ensure that nothing will happen to cause the construction project to be delayed.

The third research objective sought to determine the effects of risk control on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The study found that risk control had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The respondents strongly agreed that they frequently alter their risk-reduction practices to assist lower risk, a risk matrix is generated and utilized when carrying out undertakings, risk audits are conducted

regularly and that all projects have a cushion measure to anticipate risk.

The fourth research objective sought to assess the influence of risk transfer on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The study established that risk transfer had a positive significant influence on the performance of NG-CDF projects in Juja constituency in Kiambu County, Kenya. The respondents strongly agreed that legal contracts are signed with third parties, particularly when things happen that could delay projects, they outsource tasks that, if carried out by the project team, might cause delays and that the project managers pay insurance premiums on certain of the project deliverables to prevent the project scope from being impacted.

### **Conclusions**

Based on the findings, the study reached the following conclusions;

The study conclude that risk-retention helps to avoid negligible risks while paying more interest to the project management tasks and it is a valuable strategy applicable to budgeting and prioritization of project tasks. The risk retention strategy is a part of risk management policy in organizations in which small and insignificant risks that may arise during project implementation are considered bearable and have a very low impact on the project progress. If the cost of managing risk is bearable, project managers choose to let them remain as it is rather than acting on them instantly.

The study concluded that risk prevention measures aim to stop or reduce the likelihood of a building safety risk happening in a project. Risk prevention stops risks from happening, where possible, that poses a threat to delivering a successful project outcome, mitigates risks that cannot be avoided by planning the most appropriate response and act upon risks that might present positive opportunities. That is, viewing risk from a different perspective one that does not always assume risks are bad for a project.

The study concluded that that the important role of the project managers is to identify and control it and without any control, risks can become disasters, causing delay, unnecessary expenses and even bringing the project to an end. With risks being actively tracked and managed, the project team can maintain a focus on the critical outcomes. Knowing that risk is being actively managed sets an expectation for project success. With the framework in place to deliver despite the known risks, and open communication about the project's challenges with senior managers, everyone begins work knowing that success is the expected outcome.

The study concluded that risk transfer is a risk reduction method that shifts the risk from the project to another party. Risk transfer allocates risk equitably, placing responsibility for risk on designated parties consistent with their ability to control and insure against that risk. Liability should ideally rest with whichever party has the most control over the sources of potential liability.

### **Recommendations for Policy and Practice**

The study makes the following recommendations as per the objectives;

The study recommended that the organization should allocate funds for potential losses and any associated costs. The organizations may choose to retain a risk when the potential losses associated with it are small enough that the cost of transferring the risk would be more expensive than the cost of the losses and if the risk is difficult to transfer or insure. The organizations may also choose to retain a risk if the potential losses associated with it are variable and/or unpredictable.

The study recommended that the project managers should document each risk in detail, including their potential impacts and possible responses to mitigate the risk, then, assign a team member to monitor each risk as your project progresses and keep this risk log updated throughout the project. Prioritisation of risks should rely on a combination



of how likely the risk is to occur and its effect on the project's schedule or budget. Once compiled, the detailed and prioritised list of all the known risks needs to be communicated to the team members, stakeholders and anyone else involved in the project and finally consider what the best solution to the problem would be, should it occur.

The study recommended that project managers must first identify risks as soon as possible and should then analyze each identified risk and come up with a plan to deal with it. Since risks can change at any time and new risks can present themselves without warning, risks need to be addressed throughout a project's life cycle. The potential for risk should be reviewed before the project and then on a regular basis throughout the project life cycle and discussed as a part of regular project meetings. The project manager should be on the lookout for unknown risks that may arise as well.

The study recommended that project managers can accomplish risk transfer through non-insurance agreements such as contracts. These contracts

often include indemnification provisions. The project managers can also accomplish risk transfer through an insurance policy. This is a voluntary arrangement between two parties, the insurance company and the policyholder, where the insurance company assumes strictly defined financial risks from the policyholder.

### **Suggestions for Further Studies**

The context of the current study was projects financed by NG-CDF in Juja Constituency, Kenya. Therefore, the study suggests that further study should be done that focus on other constituencies in Kiambu County, Kenya. The study identified a gap of 20.2% in regression analysis that account for other factors that influence project performance in Juja Constituency. Therefore, there is need to similar study focusing on other risk management strategies apart from risk retention, risk prevention, risk control and risk transfer.

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