

INFLUENCE OF PROJECT RISK IDENTIFICATION ON THE SUSTAINABILITY OF DONOR FUNDED PROJECTS IN NAIROBI COUNTY, KENYA

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Abstract: Projects funded by donors play a crucial role in improving the availability of social services, especially for low-income households. However, the majority of the projects have not been able to sustain themselves, as an increase in project failures has been observed specifically when financial support from donors is withdrawn. This prompted the investigation into how project risk management affects the sustainability of donor funded projects in Nairobi County, Kenya. Therefore, this study sought to assess the influence of project risk identification on the sustainability of donor funded projects in Nairobi County, Kenya. This study utilized a descriptive research approach. The study specifically looked at project managers within the target population of 379 donor-funded projects in Nairobi County. By using a stratified random sampling technique, a total of 142 projects were selected based on different categories of donor-funded projects. The study gathered primary data from project managers using a structured questionnaire. The survey was conducted using a drop-and-pick method. The data collected was examined using both descriptive and inferential statistics. The study showed that identifying project risks had a significant impact on the sustainability of donor-funded projects in Nairobi County ($\beta = 0.223$; $P = 0.007 < 0.05$). The study found that poor sustainability of projects funded by donors in Nairobi County was strongly linked to a lack of effective adoption of project management elements such as identifying, assessing, mitigating, and monitoring risks. It is advisable for the management team to prioritize risk management by accurately identifying, analyzing, and assessing risks, as well as implementing mitigation strategies and monitoring to improve and sustain donor-funded projects.

Keywords: Project Risk Identification, Project Sustainability.

1. INTRODUCTION

Unforeseen events, if left unchecked, can impact the results of projects. Tahir, Tahir, and Shujaat (2019) stress the importance of project managers and stakeholders developing a strong framework to mitigate risks in order for projects to be successful. This process involves managing the risks of the project. It involves creating a strategy to recognize and minimize potential risks, evaluating the extent of the risks, and establishing a control and response plan to address the risks. According to Renault, Agumba, and Ansary (2018), project risk management is seen as more than just a process needing skills and management support. It also involves being prepared to address risks early on with interventions and measures to prevent them from hindering the project's success and intended goals.

A key obstacle often cited for the ongoing project failures in today's world is the absence of proper risk management strategies. If risks are not properly addressed, they can result in a decline in the project's anticipated results, and in severe cases, they may hinder the project from achieving its goals as intended (El-Sayegh, 2014). Managing risks involves

evaluating, recognizing, reducing, and controlling potential risks that a project may encounter (Testorelli, Lima, & Verbanò, 2020; Aduma & Kimutai, 2018).

Donor-supported projects typically depend on financial support from donors like international agencies and welfare organizations. These projects primarily focus on addressing a growing or ongoing issue, typically directed towards disadvantaged and less developed regions. NGOs primarily carry out the implementation of these projects. The crucial importance of these projects lies in their essential role in the transformation of society and the improvement of the well-being of vulnerable communities. Incorporating risk management techniques in these projects is essential for enhancing their chances of achieving success and long-term viability.

Risk management involves recognizing, evaluating, and managing unforeseen events to prevent negative impacts on projects (Pimchangthong & Boonjing, 2017). Projects are often dynamic and frequently carried out in environments that are also dynamic. This means that every project will encounter various risks during its execution, some of which are anticipated while others are unexpected. Project managers have the responsibility to handle the risks projects may encounter to guarantee the projects achieve the desired outcomes (Bahamid & Doh, 2017). Projects may not succeed in fulfilling their objectives if they don't have a proper risk management plan in place (Mhirat & Irtemeh, 2017). The 2019 Project Management Guidebook explains risk management as the practice of preparing to address uncertainties and reduce their adverse impacts on projects.

On an international level, the importance of effectively handling risks in projects is widely acknowledged as a key task in any project, aiming to minimize or eliminate risks that could have a significant impact on the project's results. Li, Li, Huang, and Deng (2017) in China view project risk management as a shared responsibility for the whole project team because risks can arise from any direction, making thorough mitigating planning crucial for success. In a separate evaluation, Fakhratov, Chulkov, Kuzhin, and Akbari (2020) argue that managing project risks is the exclusive duty of the project management team, who are primarily responsible for making decisions in the project. The authors suggest that project risk management can improve when the project manager is dedicated to analyzing identified risks, planning their mitigation, and controlling them effectively. Suárez, Díaz-Puente, and Bettoni (2021) suggest that effective risk management is crucial for project success as it helps the team eliminate distractions and prevent unexpected surprises by identifying potential issues early on. Johansen, Olsson, Jergeas, and Rolstadås (2019) suggest that successfully managing project risks plays a crucial role in achieving project success by allowing the project team to proactively plan for risk identification, analysis, and control.

In different areas, project risk management has been recognized as an important task in ensuring the ongoing success of a project, playing a significant role in its implementation process (Androshchuk, Yevseiev, Melenchuk, Lemeshko & Lemeshko, 2020). Naidoo (2018) suggested that project risk management in South African construction projects allows project management to recognize and address potential issues before they negatively impact the project. Hosny, Ibrahim, and Fraig (2018) also affirmed that the majority of Egyptian Government projects are likely to be successful because of effective risk management. This involves identifying and analyzing all potential challenges and uncertainties in a project, as well as implementing appropriate measures to address them. In Cameroon, Mamai and Yinghua (2017) contend that many public-sector projects suffer from inadequate project risk management, leading to inefficient implementation due to insufficient project risk planning and control.

Within the local context, it has been documented that risk management is a crucial procedure that guarantees the successful execution of projects. According to Kinyua, Ogollah, and Mburu (2015), project risk management plays a crucial role in recognizing and addressing key risks that may impact the project's outcome. Simon and Mutiso (2021) propose that emphasizing risk management as a crucial activity during the project cycle is important because risks can arise at any stage of the project. This is further confirmed by Nguru and Yusuf (2018) who suggest that risk management should be applied throughout the entire project implementation process, from start to finish.

Aarseth, Ahola, Aaltonen, Økland, and Andersen (2017) outline two different viewpoints on project sustainability. One of the perspectives highlighted is the economic aspect, suggesting that a financially viable project can yield maximum economic advantages with minimal running costs. This is primarily observed in utility projects like roads, hospitals, electricity, dams, and other similar projects. If any of these projects are able to be sustained, it indicates that they will keep providing the planned service for the same duration as other comparable projects or as outlined in the project design. Another angle to consider is the concept of environmental sustainability. Cvijović, Obradović, and Todorović (2021) suggest that environmental sustainability is maintaining a certain level of eco-friendliness throughout a project's duration, ensuring it

fulfills its intended purpose without causing pollution or harm to the environment. A project that is sustainable from this standpoint will use only a small amount of natural resources and will have little impact on environmental pollution.

In Kenya, similar to other developing nations, donor funding is seen as a vital income source for numerous households, particularly those with less than a dollar daily. Healthcare projects have been a major recipient of donor funding in order to support the less vulnerable population. The goal of these initiatives is to improve healthcare access for impoverished families by establishing hospitals, medical clinics, and providing healthcare supplies. The primary objective is to make sure that individuals who cannot afford expensive services can still access them through projects funded by donors (Trottier, Rondier & Perrier, 2021). Therefore, the households are still benefiting from improved access to healthcare due to the success of these projects.

As stated by the Ministry of Health in 2019, reliance on donor funding is crucial for expanding health facilities and advancing healthcare nationwide. However, the issue of sustainability arises as donors are not permanent. Lee and Park (2020) also mention that the sustainability of donor-funded projects is precarious, as they often collapse when donors withdraw their support, even if the projects have been successfully implemented. As per Maina (2020), projects supported by donors are prone to failure if donors unexpectedly withdraw their support without giving prior notice to the project team. Certain healthcare initiatives in Kenya have ceased operations after their founders and backers decided to withdraw their support.

In the period from 2010 to 2021, healthcare and related projects in Nairobi County have received more than \$97 billion in funding from global donors (WHO, 2022). These initiatives primarily focus on assisting individuals residing in slums, with over 2 million people reaping the benefits of the projects. The initiatives include health centers, vaccination programs, hospitals, and hospital supplies (Kiara & Luketero, 2018). If the healthcare of the people of Nairobi County is to improve, these projects must be sustainable. This is due to certain donors who backed projects totaling over Kshs.6 billion withdrawing their support, leading to the projects failing to reach their intended objectives.

2. STATEMENT OF THE PROBLEM

Projects funded by donors play a vital role in the development process, bringing about significant changes in society, especially in underdeveloped regions. The primary funding for these projects comes from non-governmental organizations and they aim to address fundamental issues like hunger, drought, diseases, and illnesses within communities. Although they play a significant role in advancing development in at-risk areas, projects funded by donors have been experiencing a notable rate of failure (Muluh, Kimengsi, & Azibo, 2019). Even after the donors stop funding, the projects should still serve their purpose as intended for a sustained period of time (Kiara & Luketero, 2018). Nevertheless, this has not been the situation with the majority of donor-funded projects in Kenya. As per the National Council of NGOs (2021), more than a quarter of NGOs in Kenya were deregistered due to their failure to cover their operating expenses following donor withdrawal. The Non-Government Organizations Co-ordination Board (2022) stated that nearly 40% of donor-supported projects in Nairobi did not continue after donors left, with an additional 15% having to reduce their operations to stay afloat from 2019 to 2021. This indicates that donor-funded projects in the country have low sustainability, as many of them end within a year of the donors ceasing their funding (Lelegwe, 2018). The failure and lack of long-term viability of these initiatives constantly endanger the communities that depend entirely on their success for their hope. As per the Nairobi County's department of Public Health (2021) report, more than 117 projects funded by donors were at a standstill from 2018 to 2020, leading to a lack of essential services like healthcare, water, and sanitation for the affected communities.

3. LITERATURE REVIEW

Theoretical Literature Review

Theory of Constraints

The study will utilize the Theory of Constraints (TOC) to demonstrate the importance of risk management in improving the sustainability of projects. Goldratt (1990) was the first to propose the theory. It emphasizes the impact of limited restrictions on preventing an organization from achieving its goals and objectives. Constraints, according to Goldratt (1994), are unintended and easily overlooked events that can disrupt a project's implementation as planned, thereby hindering their ability to achieve their intended purpose by preventing them from staying focused on the goals established during the project's inception. Both earlier and recent research (Newbold, 1998; Steyn, 2002; Mishra, 2020) have extensively applied

the TOC theory in project management. Constraints are seen as small details in a project that are often overlooked, yet they can have a significant impact on the desired outcomes, according to the theory (Umble & Umble, 2000; Şimşit, Günay, & Vayvay, 2014). The theory emphasizes the importance of managers and decision makers being attentive to constraints, as they can significantly impact the implementation of planned strategies and goals. The process of project planning involves managing risks in order to ensure successful project implementation. Projects that are financed by donors face a range of risks, similar to any other project, and if these risks are not effectively managed, they can impact the successful execution and longevity of the projects.

According to Izmailov, Korneva, and Kozhemiakin (2016), Goldratt outlines four crucial steps for management to manage constraints effectively and reduce their occurrence. Identifying the constraints is the initial step. Izmailov et al. suggest that the system shows initial indications of limitations, but these can be pinpointed through a thorough and meticulous evaluation process. Identifying risks during the planning stage of donor-funded projects is crucial to ensure their success and long-term continuation, as these projects are not invulnerable to risks (Trojanowska & Dostatni, 2017). According to Rand (2000), it is important to address risks once they have been identified, preferably in the early stages to prevent them from causing significant harm to the project. The next action, according to Goldratt (1990), is maximizing the use of the constraints. The table of contents shows that while certain constraints can be extremely damaging to projects, others can have a beneficial impact when used and taken advantage of. This step requires deciding on the actions to take in response to the risks that have been identified.

The next task is to focus on reducing and managing the risks. Cox et al. and Sarkar, Jha, and Patel (2021) characterize the third stage as the subordination stage, where the focus shifts towards addressing the identified constraint. The next step in the TOC process is to raise the constraint (risk). This requires taking measures to prevent a similar risk from happening again in the project and if it does happen, making sure it doesn't jeopardize the project's success (Blackstone Jr, Cox III, & Schleier Jr, 2009).

Critics have pointed out that the theory does not adequately classify risks or suggest various methods organizations can employ to reduce those risks (Mabin & Balderstone, 2020). Rand (2000) also mentions that the limitations described in the theory are broad and do not clearly explain their impact on organizational/project performance. Henderson (1997) stated that the theory posits that all organizations will face constraints (risks) that can be predicted in advance, which may not be feasible in certain sectors with unpredictable risks. Nevertheless, in spite of the critiques, proponents of the theory such as Tulasi and Rao (2012) have suggested that limitations are not fully characterized by identification, yet the organization aims to reduce the effects of noticeable constraints and those that are recognizable.

It is the responsibility of project managers funded by the donor to analyze and mitigate risks effectively, and to implement measures to reduce the occurrence of these risks. The theory of constraints demonstrates how risks can affect projects significantly, and how managing them can improve project outcomes. This theory is employed in the research to evaluate how project risk identification impacts the sustainability of donor funded projects in Nairobi County.

Empirical Literature Review

Identifying risks in a project involves searching for potential risks to determine their probability of happening and when they might occur. Multiple researches have examined the impact of risk identification on project success and longevity. A research conducted by Chapman and Cuang (2021) aimed to assess how the identification of project risks impacts the outcomes of construction projects in Indonesia. Finding potential risks in a project includes looking for possible risks to assess their likelihood and timing of occurrence. Numerous studies have explored how identifying risks affects the success and longevity of a project. Chapman and Cuang (2021) conducted a study to evaluate the effects of identifying project risks on the results of construction projects in Indonesia.

Jiwani and Gupta (2019) examined how project risk identification affects the execution of government projects in Ghana. The research employed a descriptive methodology and examined 93 projects. The results showed that identifying project risks had a notable impact on completing the project. In order to ensure that risks in a project are properly documented and managed, Jiwani and Gupta (2019) recommend identifying potential risks and establishing a method for the project team to effectively communicate about them. Silvius (2018) emphasizes that recognizing project risks can help to document them and ensure they are well managed to improve project performance. Silvius (2018) also states that it is crucial for the project's

management team to be committed to identifying all risks in order to steer the project in the right direction and reduce the negative consequences of risk events.

Magagan and Ngugi (2021) examined how project risk management impacts project performance in Kenya. The study aimed to evaluate how risk identification, among other factors, contributes to promoting project success. The research employed a descriptive research method and included a sample of 272 participants selected from educational initiatives in Nairobi County, Kenya. The research showed that the success of a project relied heavily on identifying risks as a crucial part of managing project risks. George (2020) stated that the process of identifying project risks involved documenting all potential risks to ensure a systematic and effective control and mitigation strategy, leading to improved outcomes. Mutua and Ibembe (2020) suggest that through risk identification, the project team, including project managers, become informed about potential risks, allowing them to plan for mitigation strategies in advance.

4. RESEARCH METHODOLOGY

A descriptive research approach was used in this study. The study concentrated on project managers from the 379 donor-funded projects in Nairobi County, which targeted the population of the county. A total of 142 projects were selected for a sample using a stratified random sampling method, with the strata being the different categories of donor-funded projects. The study gathered primary data from project managers using a organized questionnaire. The survey was conducted via a drop-and-pick method. The data collected was examined utilizing both descriptive and inferential statistical analysis techniques.

5. FINDINGS.

Table 1: Level of Agreement with Statements on Project Risks Identification

Statements	SD	D	N	A	SA	Mean	Std. Dev.
Regular scans and analysis of the project are conducted to identify potential risks that may arise.	32.7%	22.1%	9.7%	22.1%	13.3%	2.57	0.98
Risk scanning is an ongoing activity throughout the entire project cycle	30.1%	23.9%	16.8%	11.5%	17.7%	2.49	0.92
The risks that have been identified are shared with the appropriate project stakeholders.	23.9%	28.3%	4.4%	25.7%	17.7%	2.84	1.48
The project team can access the information regarding important potential risks for review.	29.1%	23.0%	6.2%	22.2%	19.5%	2.79	0.98
All identified risks are recorded in a risk register.	32.7%	18.6%	12.4%	10.6%	25.7%	2.77	1.61
Stakeholders have the option to review the risks by accessing the risks register.	35.4%	23.0%	6.2%	13.3%	22.1%	2.63	1.59
The project management is dedicated to guaranteeing a thorough identification of risks.	28.3%	23.9%	19.5%	9.7%	18.6%	2.66	1.45

Results from Table 1 show that a significant portion of participants disagreed with the frequency of scans and analysis done on projects to identify potential risks (Strongly Disagree = 32.7%; Disagree = 22.1%; Mean = 2.57; Standard Deviation = 0.98). Participants also had differing opinions on whether risk scanning was an ongoing occurrence throughout the project cycle (Strongly Disagree = 30.1%; Disagree = 23.9%; Mean = 2.49; Standard Deviation = 0.92); and that the risks were discussed with project stakeholders as follows: (Strongly Disagree = 23.9%; Disagree = 28.3%; Mean = 2.84; Standard Deviation = 1.48). As per Suárez et al. (2021), poor communication of identified project risks to the team hinders overall risk awareness, increasing vulnerability to known risks.

The study found that many participants disagreed that crucial risk information was provided for the project team to review (Strongly Disagree = 29.1%; Disagree = 23.0%; Mean = 2.79; Standard Deviation = 0.98); and that there was a risk register for all identified risks (Strongly Disagree = 32.7%; Disagree = 18.6%; Mean = 2.77; Standard Deviation = 1.61). George (2020) emphasizes the importance of a risk register in improving risk management by providing easy and effective reference to identified risks. According to the results, 58.4% of respondents expressed disagreement regarding the accessibility of the

risks register to stakeholders for review (Mean = 2.63; Standard Deviation = 1.59). Additionally, 52.2% disagreed with the commitment of project management in effectively identifying risks (Mean = 2.66; Standard Deviation = 1.45). The results suggest that the majority of projects supported by donors have failed to properly assess the risks they may encounter, which could leave the projects vulnerable to unforeseen events jeopardizing their long-term viability. Chapman and Cuang (2021) suggest that in order for a project to be sustainable, it is crucial to manage risks effectively, which involves identifying all potential risks and documenting them for proper response. Additionally, Jiwani and Gupta (2019) suggested that recognizing project risks is a vital method to keep the project team informed about risks, which in turn improves the effectiveness of efforts to mitigate risks and be prepared to face them.

Results of Inferential Analysis

Table 2: Correlation Analysis

Project Sustainability		
Project Sustainability	Pearson Correlation	1
	Sig.	
	N	113
Project Risk Identification	Pearson Correlation	.730**
	Sig.	.000
	N	113

According to the results obtained, the correlation coefficient between project risk identification and project sustainability was 0.730, suggesting a strong 73% relationship between identifying project risks and sustaining donor-funded projects.

Regression Analysis Results

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847 ^a	.718	.708	.48803

a. Predictors: (Constant), Project Risk Monitoring, Project Risk Assessment, Project Risk Identification, Project Risk Mitigation

The summary results displayed in Table 3 indicated that the model's R-Square (R²) was 0.718. This suggests that project Risk Identification accounted for 71.8% of the variability in sustainability of donor-funded projects in Nairobi County, Kenya.

Table 4: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	65.547	1	65.547	282.849	.000 ^b
Residual	25.723	111	.232		
Total	91.270	112			

The findings suggest that the regression model utilized was statistically significant, validated by an F-statistic of 282.849 and a p-value of 0.000, lower than the critical P-value of 0.05. This implies that identifying project risks is a strong predictor of donor-funded project sustainability in Nairobi County, Kenya.

Table 5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.024	.178		.136	.892
	Project Risk Identification	.223	.081	.220	2.768	.007

The findings indicate a strong correlation between the identification of project risks and the sustainability of donor-funded projects in Nairobi County, Kenya, with unstandardized Beta coefficients (β) of 0.223 supporting this relationship. It was further backed by the t values, showing that the calculated t value of 12.768 was higher than the critical t value of 1.962 at a 95% confidence level, indicating that identifying project risks had a notable impact on the sustainability of donor-funded projects in Nairobi County, Kenya. Hence, the acknowledgment of project risks greatly impacted the sustainability of donor-supported projects in Nairobi County.

6. CONCLUSIONS

The research concludes that recognizing project risks is a crucial aspect of project risk management which impacts the success of donor-funded projects. By effectively identifying, communicating, and recording risks, project teams can improve their ability to address potential problems and take appropriate actions. The research found that the failure to adequately maintain project risk identification significantly contributed to the unsustainable nature of the donor-funded projects examined.

7. RECOMMENDATIONS

The management is responsible for evaluating the identified risks through proper measurement and analysis to determine their severity and probability of happening. This will allow the projects' teams to prioritize risks, determine which risks to address, and choose the appropriate method or approach.

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