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Assessing the Effect of Project Implementation Practices on Project Performance. A Case Study of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District

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***Abstract**: The general objective of the study is to assess the effect of project implementation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Rwanda. The target population was 310 individuals of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District. To compute the sample size for this research, the Slovin's formula used as it provides a straightforward method for determining the appropriate sample size. When applied to the provided sample, this formula yields a sample size of 175. The study used simple random sampling and it was effective as a target population in terms of the characteristics. The research relied on questionnaire, documentation technique, and interview technique. The coefficient for resource management practices is 0.504, indicating that a one-unit increase in resource management practices results in a 0.504-unit increase in project performance (β = 0.504, t = 5.818, p = 0.000). The coefficient for risk mitigation practices is 0.141, indicating that a one-unit increase in risk mitigation practices results in a 0.141-unit increase in project performance (β = 0.141, t = 1.725, p = 0.086). The coefficient for project monitoring practices is 0.163, indicating that a one-unit increase in project monitoring practices results in a 0.163-unit increase in project performance (β = 0.163, t = 2.371, p = 0.019). The study recommended that project managerial staff, field officers, local leaders, and consultants collaboratively enhance project performance by strengthening resource management, improving risk identification and establishing robust monitoring frameworks.*

***Keywords:** Project implementation practices, Resource management practices, Risk mitigation practices, Project monitoring and control practices, Project performance*

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1. Introduction

In Rwanda, the landscape of project implementation reflects the nation's commitment to rapid economic development and transformation (Niyomugabo *et al*., 2023). Effective resource management practices are crucial, especially in a country that emphasizes efficient utilization of its limited resources (Uwera & Mukama, 2022). Recent studies show that risk mitigation strategies are increasingly integrated into national project management frameworks, contributing to improved project success rates (Munyaneza et al., 2024). The government's focus on strong monitoring and evaluation practices has facilitated accountability and enhanced stakeholder confidence (Kabera & Nduwayezu, 2021). Furthermore, the promotion of public-private partnerships has proven beneficial in addressing infrastructural deficits (Mugabo, 2022). These initiatives underscore Rwanda's proactive approach to overcoming challenges and diversifying its economic base.

Understanding the dynamics of these implementation practices will provide deeper insights into the country's development trajectory and project performance.

Despite Rwanda's significant strides in development and project management practices, challenges persist regarding the effectiveness of project implementation practices. While the country has embraced a range of development projects across various sectors, statistics reveal that up to 35% of these initiatives fail to meet their objectives (Niyomugabo *et al*., 2023). This high rate of project failure is often attributed to inadequate resource management, ineffective risk mitigation strategies, and a lack of robust monitoring and evaluation (M&E) practices (Uwera & Mukama, 2022). For instance, a recent analysis of public sector projects indicates that poor M&E accounted for a 40% variance in project outcomes, underscoring the need for improved oversight. Furthermore, the lack of clear frameworks for stakeholder engagement and capacity building exacerbates these challenges, limiting the potential for successful project completion (Munyaneza *et al*., 2024).

Despite numerous studies addressing project implementation practices in various regions, no research has specifically examined Kayonza Irrigation and Integrated Watershed Management Project. This study on effect of project implementation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Rwanda.

1.1 Objectives

The general objective of the study is to assess the effect of project implementation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District, Rwanda.

Specific objectives:

1. To determine the effect of resource management practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District.
2. To evaluate the effect of risk mitigation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District.
3. To analyze the effect of project monitoring and control practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District.

2. Literature Review

This section presents the theoretical and empirical literature that guided the study variables and supported the interpretation of project implementation practices and project performance.

2.1 Theoretical Review

The theoretical review explains the theories used to connect resource management practices, risk mitigation practices, and project monitoring practices with the performance of Kayonza Irrigation and Integrated Watershed Management Project.

2.2.1 Goal setting theory

The Goal Setting Theory, developed by psychologist Edwin Locke in the late 1968 and management researcher Gary Latham, contends that setting specific and challenging goals can improve individual and team performance and motivation. Their argument is based on the idea that precise, measurable, achievable, relevant, and time-bound (SMART) goals can effectively motivate people to do their best (Latham & Locke, 2019).

Goal Setting Theory was appropriate for effect of resource management practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District as it emphasizes the importance of clear, specific, and challenging goals in driving performance. Effective resource management supports the achievement of set goals within a project. In the case of the Kayonza project, aligning resource use with clearly defined objectives enhanced project efficiency and outcomes, thereby improving overall performance.

2.2.2 Prospect theory

Prospect theory, a groundbreaking concept in behavioral economics, was developed by psychologists Daniel Kahneman and Amos Tversky in 1979. As pioneers in the field of decision-making under uncertainty, Kahneman and Tversky introduced this theory to challenge traditional economic models that assumed rational decision-making based on expected utility theory. Prospect theory posits that individuals do not always make decisions based on maximizing utility but are influenced by cognitive biases and subjective perceptions of potential gains and losses. Kahneman and Tversky's research on prospect theory earned Kahneman a Nobel Prize in Economics in 2002, recognizing the profound impact of their work on understanding human decision-making processes (Meer *et al.*, 2020).

Prospect Theory well-suited for effect of risk mitigation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District as it explained how people make decisions under risk and uncertainty. In project management, risk mitigation practices aim to minimize potential losses. Applying Prospect Theory helps to understand how project managers and stakeholders evaluate risks and make choices to avoid negative outcomes. This theory supported the idea that effective risk mitigation can lead to better decision-making and, ultimately, improved project performance.

2.2.4 Theory of change

The Theory of Change (ToC) is a conceptual framework that explains the stages required to accomplish a desired outcome. It has been created and modified since the 1995, mostly in the disciplines of social change and program assessment. The Theory of Change provides a comprehensive overview and explanation of how and why a desired change is expected to occur. This is why ToC must be included in project management methods because when you plan, you specify the changes you want to make or identify what you want to achieve, how it will be accomplished, and when it will be completed. The project's performance is measured using the indicators of change that you have planned (Adema, Malietso, & Anyanje, 2020).

Theory of Change was highly relevant to the performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District because it provided a clear framework for understanding how and why a project achieves its intended outcomes. It outlines the step-by-step logic from inputs and activities to outputs, outcomes, and long-term impact. By applying this theory, the performance of Kayonza project was analyzed based on whether the planned interventions are leading to the desired results, helping stakeholders identify what is working, what isn't, and why thereby informing better decision-making and improvements.

2.2 Empirical Review

The empirical review summarizes previous studies related to the three specific objectives of the study and shows how earlier findings connect with the present research.

2.3.1 Effect of resource management practices on performance of project

Makokha and Ngugi (2022) examined how the allocation of resources affects the execution of health care initiatives in Busia County, Kenya. Researchers employed descriptive methods. Busia County, Kenya, and its six health initiatives served as the analytical unit. The sample size was 95 people, including both team members and project managers. A survey was carried out with 95 participants. A questionnaire served as a research tool. Descriptive statistics based on means and standard deviations were used to examine quantitative data. Tables and figures were used to display the data. We used inferential statistics, which included regression analysis and correlation, to find out how one variable affected the other. Research demonstrated that resource allocation positively and significantly impacted project execution in Busia County, Kenya. The research found that effective resource allocation helps project managers discover issues, minimize over allocation, and react to change. According to the report, project managers should maintain adequate team size and minimize overstaffing and understaffing.

Ugboko and Ehugbo (2021) looks at how several Nigerian telecommunications companies fared in relation to how well they used their resources. Resource-Based Theory was used in the research. A survey study design was used by the researchers. The hypothesis was tested using multiple regressions. The hypothesis testing findings show that among the chosen Nigerian telecommunications companies, there is a positive correlation between resource planning and firm competitiveness (0.572) and a negative correlation between resource allocation and firm competitiveness (-0.118). Results show that resource utilization is a method for preventing resources from sitting idle by properly allocating and coordinating human and material resources across different tasks and projects. A work breakdown structure that identifies each employee's strengths and areas of expertise will help managers at the chosen telecommunications companies better allocate resources, according to the research.

Mugorewase and Kwena (2024) looked at the Food and Education Project in Rwanda as an example of how resource planning practices affect the success of donor-funded education initiatives. Finding out how HRP helps the Food and Education Project succeed was the primary goal of the research. Descriptive study approaches and inferential statistics were utilized. Using universal sampling procedures, the study's sample size was 106 workers. Survey and interview data were examined via the use of multiple linear regressions, correlation, and descriptive statistics. The findings of the data analysis were presented using descriptive and inferential statistics, which were implemented using SPSS version 20. Research in Rwanda found that donor-funded education programs fared better when its planners took many factors into account (r=654, p-value=0.000). Only human resource planning out of all the parameters examined significantly improved project success. This research indicates that the Food and Education Project should invest in ongoing training programs to increase the effectiveness of its human resources in agricultural initiatives. Financial resource planning is crucial for optimum resource usage in project planning and execution. It is critical to monitor the overall and specific expenses of each project work package.

2.3.2 Effect of Project risk mitigation practices and performance of projects

Maina and Mungai (2023) evaluated risk management strategies and performance of infrastructure projects in Nakuru County, Kenya. Researchers used a cross-sectional survey approach for this investigation. One hundred and twenty-one project managers in charge of infrastructure projects made up the sample. The research surveyed 134 project managers using the Yamane

sampling technique. Data was collected via questionnaires. In the pilot research, researcher included 13 project managers, or 10% of the whole sample. Researchers used content and construct validity in their investigation. Both risk mitigation and control have high and statistically significant correlations with respect to project performance (r = 0.457, p-value = 0.005) and 0.525, p-value = 0.000, respectively. The research concluded that risk diversification is an effective tool for project managers to use in the fight against uncertainty. Furthermore, under the assumption of effective use of resources, project managers had to employ an extensive array of strategies and procedures to effectively mitigate the danger of depleting project funds.

Karera (2022) examined the Indoor Residual Spraying (IRS) Project in Rwanda as an example of how risk management affects project implementation. This investigation made use of both descriptive and analytical research methods. The research surveyed 83 people working on the Indoor Residual Spraying (IRS) Project. The results showed that there were strong positive relationships between the different parts of risk management and the actual execution of the project. To begin, there was a somewhat favorable association and a significantly beneficial influence of project risk identification on implementation. Secondly, there was a notable favorable impact of project risk analysis on implementation, along with a modest positive connection. Lastly, there was a strong positive association and a notable impact on implementation from project risk response planning. The need of thorough risk management in guaranteeing the IRS Project's successful execution was highlighted by these outcomes. Therefore, the project management group should get stakeholders more oriented on this and look for methods to make the risk analysis tools work better.

Mugenga and Bugingo (2024) investigated how risk management affects the performance of building projects in Musanze District, Rwanda. The INES-Busogo project is located on GS Kampanga Road. Six hundred workers were the intended audience for NPD Ltd. The study's sample size was set at 86 participants.Using SPSS 25.0, the researchers conducted descriptive and inferential statistical analyses on the collected data. The objective was to evaluate how NPD LTD's risk planning affected the success of their concentration initiatives in Musanze District. Project INES-Busogo and the GS Kampanga Road development projects both showed a favorable relationship between risk management and project performance, according to the results. In particular, 0.661, 0.855, 0.867, and 0.934 were the regression coefficients for risk response, risk mitigation, risk avoidance, and risk planning, respectively. The findings show that risk management was the variable under investigation. There was no statistically significant relationship between risk planning and the variables studied (p = 0.197b). Risk avoidance, risk response, and mitigation were all shown to be statistically significant (p = 0.007b, p = 0.000b, and p = 0.000b, respectively). Results showed a strong relationship between effective risk management and successful project completion. According to the research, MININFRA should provide opportunities for Rwandan citizens to work on building projects so that they may earn a living wage.

2.3.3 The effect of Project Monitoring on performance of project

Harrison and Thorne (2021) established the outcome of M&E control mechanisms on infrastructure project performance in Nigeria. As the type of the research, quantitative research design was used for the study and a survey was conducted among 150 project managers. To analyse the data collected, the SPSS software was utilized, with a special attention paid to the correlation/ regression analysis. The results portrayed a significant positive relationship ($r = 0.78$, $p < 0.05$) between the effectiveness of M & E controls with selected project success factors. Respondents that provided reports on projects with stringent M&E controls indicated success levels of 4.5 out of 5 (SD = 0.4) in contrast to 3.1 for projects without such controls. The application of proper M & E controls plays a crucial role in improving results of infrastructure development projects. This is good advice because M&E controls, which project managers should use to ensure their projects succeed, can be strict.

More specifically, Kim and Park (2022) analyzed the link between M&E control practices and actual project performance in health sector of South Korea. This study employed both survey and interview methodologies, though quantitative and qualitative respectively. Descriptive statistics derived from SPSS revealed a general increasing/ highest trend of the response toward the M&E control. Studies showed that when projects had proper controls for M&E, the health outcomes improved by 40 percent. The mean success score was 4.2 (SD = 0.5) in the condition monitoring practices in comparisons with 2.9 in the absence of the same. The outcome of this study pointed a number of facts that indicates that effective M&E controls are important to the realization of the defined and desired health project impacts. Concerning M&E control, health organizations should integrate improvements to the system that can facilitate project improvement.

Nguyen and Tran (2023) thus examined the impact of M&E control on project performance in community development in Vietnam. In the present study, the researchers used cross-sectional data collection that involved data from different community projects realized for three years. Descriptive statistics were performed using Statistical Package for Social Sciences (SPSS) and inferential statistics. Out of total results, it was also emphasized that projects which established certain kinds of M&E controls have increased the effectiveness of interrelated community engagements for 55%. The effectiveness scores average raise from 3.2 pre-implementation of the controls to 4.6 (SD = 0.6) post-

implementation of the controls. Therefore, the kinds of M&E control systems described above as well as other proper M&E techniques are very effective at improving encouragement and project success in community development. Subsequently, in order to increase the effectiveness of community project, it become pertinent for projects to establish systematic M&E control mechanism.

3. Methodology

This section summarizes the research design, population, sampling procedures, data collection instruments, validity and reliability procedures, and data analysis methods used in the study.

3.1 Research Design

This study integrated both descriptive and correlational research design. Data were collected quantitatively using questionnaires, and descriptive analytical techniques were applied to interpret the results. These methods align with the research goals, ensuring that the data gathered is relevant and provides meaningful insights. Correlational research design was comprehensive understanding of the variables under study and their interrelationships.

3.2 Study Population

The target population was 310 individuals divided into key categories: project managerial staff, Project field officers, local leaders and Project consultants of Kayonza Irrigation and Integrated Watershed Management Project.

3.3 Sample Size and Sampling Technique

To compute the sample size for this research, the Slovin's formula was used as it provides a straightforward method for determining the appropriate sample size. The researcher employed the following formula:

When applied to the provided sample, this formula yielded a sample size of 175

The study used simple random sampling, which was appropriate given the characteristics of the target population. Since every member of the population had an equal chance of being selected, this method helped reduce selection bias.

3.4 Data Collection Instruments

The research relied on questionnaire, documentation technique, and interview technique. The questionnaire gathered quantitative data on project implementation practices and performance. Questionnaires were distributed to project managerial staff, Project field officers, local leaders and Project consultants for comprehensive insights.

Documents, studies, publications, journals, and policy reports pertaining to the subject have been thoroughly studied and reviewed. In order to collect qualitative data and insights, researcher used interview. In order to conduct this research, it was necessary to collect data from Kayonza Irrigation and Integrated Watershed Management Project.

3.5 Validity and Reliability

The Content Validity Index (CVI) for this study was calculated by dividing the number of relevant items (16) by the total number of items in the questionnaire (19), resulting in a CVI of 0.84. Since this value exceeds the commonly accepted threshold of 0.70, it indicates that the questionnaire has good content validity and is considered a legitimate and appropriate tool for measuring the intended constructs in the study.

The reliability analysis conducted on the study's four main variables showed that the Cronbach's Alpha for Resource Management Practices is 0.841, indicating good reliability. Similarly, Risk Mitigation Practices recorded a Cronbach's Alpha of 0.830, Project Monitoring Practices achieved a reliability coefficient of 0.817, and Project Performance yielded a Cronbach's Alpha of 0.828, indicating a reliable measurement scale with strong internal consistency.

Overall, all the variables in this study have Cronbach's Alpha values above the 0.8 threshold, placing them within the "good" reliability range. This demonstrates that the instrument used to collect data is dependable, and the results derived from these variables can be interpreted with confidence. Such consistency across all measured constructs strengthens the credibility and robustness of the research findings.

3.6 Data Analysis

This study employed both descriptive statistics and inferential statistics to interpret the data. Descriptive analysis used frequencies, proportions, and percentages to summarize variables, while inferential statistics assessed the strength and relevance of relationships between independent and dependent variables through Statistical Package for Social Sciences version 25.

The mean and the standard deviation were employed to quantify the degree of variability. Inferential statistics, including correlation analysis, explored the relationships between project implementation practices variables resource management practices, risk mitigation practices, project monitoring practices and project performance. The adopted multiple regression for analysis was structured as follows:

$$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3 +\epsilon$$

Where:

Y = Project Performance

X_1= Resource Management Practices

X_2= Risk Mitigation Practices

X_3= Project Monitoring Practices

β_0= Constant

β = Coefficients of the model, indicating the extent of influence of each independent variable on dependent variable.

3.7 Ethical Considerations

Confidentiality and privacy were maintained throughout the research process. The identities and responses of respondents were protected, and the collected data were used only for academic research purposes. Respondents were also given the freedom to express their opinions openly and to complete the questionnaire without any form of pressure or coercion.

4. Results and Discussion

This part presents the predictive influence of implementation practices on overall project performance using correlation, regression, ANOVA, and coefficient outputs.

Table 1: Correlations

		Resource Management Practices	Risk Mitigation Practices	Project Monitoring Practices	Project performance
Resource Management Practices	Pearson Correlation	1	.773**	.709**	.746**
	Sig. (2-tailed)		.000	.000	.000
	N	164	164	164	164
Risk Mitigation Practices	Pearson Correlation	.773**	1	.676**	.657**
	Sig. (2-tailed)	.000		.000	.000
	N	164	164	164	164
Project Monitoring Practices	Pearson Correlation	.709**	.676**	1	.636**
	Sig. (2-tailed)	.000	.000		.000
	N	164	164	164	164
Project performance	Pearson Correlation	.746**	.657**	.636**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	164	164	164	164

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2025

Table 1 presents the correlation matrix showing the relationships among the variables under study. The Pearson correlation coefficient between resource management practices and project performance is 0.746 with a significance value of 0.000, indicating a strong positive relationship that is statistically significant. The findings are consistent with Ugboko and Ehugbo (2021), who emphasized that effective resource allocation and utilization improve organizational competitiveness. Their study in Nigerian telecommunications companies supports this correlation study on Kayonza Irrigation and Integrated Watershed Management Project, indicating that proper resource management enhances project performance and efficiency. Both studies highlight resource coordination benefits.

The relationship between risk mitigation practices and project performance is 0.657, with a significance value of 0.000, showing a moderate and statistically significant positive relationship. The findings resonate with Karera (2022), who emphasized that thorough risk identification, analysis, and response planning positively affect project implementation. Their study on Rwanda's IRS Project supports this correlation study on Kayonza Irrigation and Integrated Watershed Management Project, indicating that effective risk mitigation practices enhance project success and reduce uncertainties.

The relationship between project monitoring practices and project performance is 0.636, also with a significance value of 0.000, demonstrating a moderate positive and statistically significant relationship. The

findings align with Kim and Park (2022), who emphasized that effective monitoring and evaluation (M&E) controls improve project outcomes. Their study in South Korea's health sector supports this correlation study on Kayonza Irrigation and Integrated Watershed Management Project, indicating that consistent monitoring practices contribute significantly to project performance and goal achievement.

These findings confirm that all three project implementation practices are positively and significantly related to project performance in the Kayonza Irrigation and Integrated Watershed Management Project.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.766[a]	.587	.579	.32918	1.963

a. Predictors: (Constant), Project Monitoring Practices, Risk Mitigation Practices, Resource Management Practices

b. Dependent Variable: Project performance

Source: Field data, 2025

Table 2 presents the model summary. The multiple correlation coefficient (R) is 0.766, indicating a strong linear relationship between the independent variables and project performance. These findings resonate with Mugenga and Bugingo (2024), who highlighted that thorough risk mitigation positively influences project outcomes, confirming the importance of risk practices in the Kayonza project.

The R Square value is 0.587, meaning that approximately 58.7% of the variance in project performance is explained by the combined effect of resource management practices, risk mitigation practices, and project monitoring practices. These findings are supported by Mugorewase and Kwena (2024), who emphasized that effective human resource planning significantly improves project success, aligning with the Kayonza Irrigation and Integrated Watershed Management Project results.

The Durbin-Watson statistic is 1.963, indicating that there is no significant autocorrelation in the residuals, supporting the model's appropriateness. Furthermore, these findings align with Nguyen and Tran (2023), who showed that strong monitoring and evaluation controls increase project effectiveness, reinforcing the significance of project monitoring and control practices in achieving desired performance in the Kayonza project.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.632	3	8.211	75.772	.000[b]
	Residual	17.338	160	.108		
	Total	41.970	163			

a. Dependent Variable: Project performance

b. Predictors: (Constant), Project Monitoring Practices, Risk Mitigation Practices, Resource Management Practices

Source: Field data, 2025

Table 3 shows the ANOVA results, which assess the statistical significance of the regression model. The F-statistic is 75.772, and the significance level is 0.000, which is below the 0.05 threshold. This indicates that the regression model is statistically significant and that the combination of the three independent variables significantly explains the variation in project performance. These findings are consistent with Byanibamwe (2023), who emphasized that human resource planning improved team cohesiveness and project delivery speed in Rwandan non-profits, highlighting the critical role of resource management practices. Additionally, the results align with Gateka (2023), who found a strong correlation between risk management and project success in Rwanda, indicating the importance of risk mitigation practices. Moreover, Boko and Nzouanvi (2024) underscored the value of monitoring and evaluation controls in enhancing agricultural project productivity in Cameroon, reinforcing the significance of project monitoring practices in the model.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.693	.209		3.310	.001		
	Resource Management Practices	.504	.087	.508	5.818	.000	.339	2.954
	Risk Mitigation Practices	.141	.082	.144	1.725	.008	.370	2.702
	Project Monitoring Practices	.163	.069	.178	2.371	.019	.457	2.189

a. Dependent Variable: Project performance

Source: Field data, 2025

The adopted model for analysis was structured as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$

Hence,

Project performance = 0.693 + 0.504(Resource Management Practices) + 0.141(Risk Mitigation Practices) + 0.163(Project Monitoring Practices) + ϵ

Table 4 presents the coefficients for the regression model analyzing the effect of resource management practices, risk mitigation practices, and project monitoring practices on project performance in the Kayonza Irrigation and Integrated Watershed Management Project. The unstandardized coefficient for the constant is 0.693, indicating the baseline level of project performance when all the predictor variables are at zero. The unstandardized coefficient for resource management practices is 0.504, indicating that a one-unit increase in resource management practices results in a 0.504-unit increase in project performance ($\beta = 0.504$, $t = 5.818$, $p = 0.000$). This significant finding indicates that resource management practices positively affect project performance. This finding is supported by Hani (2022), who emphasized that HRM methods such as selection, training, and compensation significantly impact project success in Jordanian commercial banks, demonstrating how effective resource management enhances project outcomes. The unstandardized coefficient for risk mitigation practices is 0.141, indicating that a one-unit increase in risk mitigation practices results in a 0.141-unit increase in project performance ($\beta = 0.141$, $t = 1.725$, $p = 0.008$), though this relationship is statistically significant at the 0.05 level. However, Jha (2022) highlighted that risk management planning is crucial in construction projects in India, reducing problems during implementation and promoting project success, aligning with the positive direction seen here. The unstandardized coefficient for project monitoring practices is 0.163, indicating that a one-unit increase in project monitoring practices results in a 0.163-unit increase in project performance ($\beta = 0.163$, $t = 2.371$, $p = 0.019$). This significant result is consistent with Workneh and Aga (2023), who found that comprehensive monitoring and evaluation practices, including technical competence and stakeholder involvement, greatly improve development project outcomes in Ethiopian NGOs. The collinearity statistics indicate acceptable multicollinearity levels among predictors, with tolerance values above 0.1 and VIFs below 10, confirming the model's reliability.

Table 5: Hypotheses Results

Null Hypotheses	p value	Decision
H_{01}: There is no significant effect of resource management practices on performance of Kayonza Irrigation and Integrated Watershed Management Project.	$p<0.05$	Rejected
H_{02}: There is no significant effect of risk mitigation practices on performance of Kayonza Irrigation and Integrated Watershed Management Project.	$p<0.05$	Rejected
H_{03}: There is no significant effect of project monitoring and control practices on performance of Kayonza Irrigation and Integrated Watershed Management Project.	$p<0.05$	Rejected

5. Conclusion and Recommendations

This section presents the conclusion drawn from the findings and the recommendations proposed for improving project performance.

5.1 Conclusion

The primary aim of this study was to investigate the influence of implementation practices, specifically resource management, risk mitigation, and project monitoring, on the performance of the Kayonza Irrigation and Integrated Watershed Management Project. The study established that all three implementation practices have significant positive effects on project performance.

Resource management practices exert the strongest influence, contributing substantially to efficient resource use and successful project delivery. Risk mitigation practices also significantly affect project outcomes, although their impact is less strong relative to resource management. Project monitoring and control practices demonstrated a meaningful influence by enabling timely adjustments and ensuring project activities align with objectives.

The rejection of the null hypotheses for all three objectives confirms that resource management, risk mitigation, and project monitoring practices significantly affect the performance of the Kayonza Irrigation and Integrated Watershed Management Project. This affirms the necessity of integrating these practices in project implementation frameworks to enhance success.

5.2 Recommendations

1. Project Managerial Staff should strengthen resource management protocols to improve allocation accuracy and reduce delays that negatively impact project performance.
2. Project Managerial Staff need to enhance risk identification mechanisms to proactively address potential threats before they escalate and affect project outcomes.
3. Local leaders are encouraged to support transparent resource management by actively participating in oversight and feedback processes within the community.
4. Project consultants are advised to assist in developing robust monitoring and control frameworks that ensure continuous performance assessment and timely corrective interventions.

5.3 Suggestion for Further Research

Future research may explore the effect of financial management, leadership effectiveness, stakeholder engagement, and technology adoption on the performance of Kayonza Irrigation and Integrated Watershed Management Project in Kayonza District, Rwanda.

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