

EFFECT OF RESOURCES MANAGEMENT PRACTICES ON PERFORMANCE OF SECOND GENERATION HEALTH POSTS PROJECT IN RUSIZI DISTRICT, RWANDA

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Abstract: The general objective of this study is to assess the effect of project resource management practices on performance of second generation health posts project in Rusizi District, Rwanda, specifically focusing on second generation health posts project in Rusizi District. The study utilized Stakeholder Theory, Resource-Based View Theory, Human Capital Theory and Diffusion of Innovation Theory as its theoretical frameworks. The research design integrated both descriptive and correlational research design. Statistical Package for Social Sciences (SPSS) 29 was employed to analyze collected data, applying descriptive, correlation and regression techniques to provide meaningful insights into the research findings. Coefficients show the individual contribution of each variable to the model and the results of the hypothesis testing. Regarding Human Resource Management, the B-coefficient is 0.147 with a t-value of 3.278 and a significance of 0.001. Since the p-value (0.001) is less than 0.05 shows that human resource management has a significant positive effect on project performance. For Financial Resource Management, the B-coefficient is 0.389 with a t-value of 6.524 and a significance of 0.000 indicates that this variable is the strongest significant predictor of performance in the model. Regarding Material Resource Management, the B-coefficient is 0.167 with a t-value of 3.513 and a significance of 0.001 shows a significant positive effect on the dependent variable, as the p-value is less than 0.05. For Technology Resource Management, the B-coefficient is 0.237 with a t-value of 3.669 and a significance of 0.000 confirms that technology is a significant positive contributor to the project's success. The study concludes that project resource management practices specifically human, financial, material, and technology resources collectively account for a significant portion of the performance of second-generation health posts in Rusizi District. Local stakeholders and beneficiaries should be encouraged to participate in the oversight of health post resources to foster a sense of community ownership and sustainability.

Keywords: Project resource management practices, human resource management, financial resource management, material resource management, technology resource management, project performance.

1. INTRODUCTION

Project resource management is critical in service-oriented organizations, with resources such as capital, personnel, land, equipment, skills, and time representing their most significant assets. The aim of resource management is to select indispensable resources that best contribute toward achieving project objectives. Project resource management encompasses the initiation, planning, execution, monitoring, and closure of defined work in pursuit of specified goals within a given timeframe. Given that resources are inherently limited, their careful oversight is essential, making resource management both demanding and indispensable for project success (Kyalo, 2023).

On a global scale, project resource management has become increasingly vital as countries strive for sustainable use of natural assets and operational efficiency. These efforts not only confront environmental challenges but also foster economic advancement and societal well-being. In Germany, resource management is characterized by rigorous efficiency and sustainability standards backed by robust legal and regulatory systems. The Resource Efficiency Program (ProgRes) focuses on reducing resource consumption, boosting productivity, and encouraging recycling. It seeks to decouple economic growth from resource use and environmental impact, aligning with the European Union's Circular Economy Action Plan (Kirikkaleli & Ali, 2024).

Resource management is a pressing concern in South Africa due to its diverse ecosystems and uneven resource distribution. The country's construction sector promotes sustainability, supported by the Green Building Council of South Africa, which advocates eco-conscious methods. Projects like the Cape Town Stadium and Nelson Mandela Children's Hospital exemplify the adoption of sustainable materials and energy-efficient design. The Construction Industry Development Board (CIDB) provides regulatory guidance for resource-efficient practices, addressing urbanization and resource scarcity while stimulating local economic growth. Nevertheless, social inequality and infrastructural constraints continue to impede widespread adoption of effective resource management approaches (Agbajor & Mewomo, 2024).

In Nigeria, resource management presents significant challenges due to abundant natural assets and rapid population growth. Sustainability-focused policies and efficient utilization strategies inform Nigeria's construction sector. The National Building Code enforces environmentally responsible construction standards and materials to address waste generation and energy consumption. Efforts to raise building quality and use locally sourced materials aim to advance sustainability. Additionally, integrating renewable energy solutions and waste-management systems helps reduce the carbon footprint of construction projects. Still, systemic issues such as corruption, limited financing, and socio-political instability hinder fully effective resource management (Abdullah et al., 2021).

Previously mentioned researches did not assess effect of project resource management practices on performance of second generation health posts project in Rwanda. This research project closed a knowledge gap by studying how resource management practices affect performance of second generation health posts project in Rusizi District.

The specific objectives were to determine the effect of human resource management, evaluate the effect of financial resource management, analyze the effect of material resource management, and assess the effect of technology resource management on performance of second generation health posts project in Rusizi District.

2. LITERATURE REVIEW

This section reviews the theoretical and empirical literature that supported the study variables and guided interpretation of project resource management practices and project performance.

2.1 Theoretical Review

The study was anchored on four theories that explain how human, financial, material, and technology resources contribute to project performance.

2.1.1 Human Capital Theory

Human Capital Theory, developed by economists Gary Becker and Theodore Schultz in the mid-twentieth century, examines the economic value of investing in education, training, and health. The theory posits that human capital comprising skills, knowledge, and experiences drives productivity and economic growth. Investments in human capital, similar to those made by firms aiming to boost profits, yield long-term economic benefits (Ihedigbo & Jimoh, 2022).

According to this theory, education and training expand job opportunities, increase income, and enhance employability. Individuals with higher education levels tend to earn more and face lower unemployment risks. Additionally, investments in health improve productivity, as healthier workers are more engaged and efficient (Acido & Kilongkilong, 2022).

Despite its widespread relevance, Human Capital Theory faces criticism for oversimplifying the complex interplay between education and economic success. Critics argue that it neglects social, cultural, and institutional factors influencing outcomes. Nonetheless, the theory continues to guide governments and organizations in prioritizing education and skill development to foster economic growth and social mobility. Developing human capital equips organizations and communities with a skilled workforce capable of adapting to evolving economic demands and sustaining prosperity (Wolhuter & Niemczyk, 2023).

2.1.2 Resource-Based View Theory

Wernerfelt's 1984 Resource-Based View (RBV), later expanded by Barney in 1991, provides a framework for understanding how internal resources contribute to an organization's competitive advantage. Unlike traditional models that prioritize external factors such as market dynamics or competition, RBV focuses on the internal strengths of a firm. It argues that a company's ability to outperform rivals stems from its unique set of resources both tangible and intangible such as physical infrastructure, brand equity, and intellectual property (Putra et al., 2021).

These resources can be grouped into categories such as physical assets (e.g., machinery and facilities) and human capital (e.g., employee skills, organizational culture, and internal processes). For a resource to provide a lasting competitive edge, it must satisfy the VRIO criteria: it must be Valuable, Rare, Inimitable, and well-Organized. Resources that meet these conditions allow organizations to seize opportunities or mitigate threats more effectively than their competitors (Andersson & Haque, 2024).

By using RBV in strategic planning, firms can evaluate their internal strengths and align them with broader business objectives. This enables improved operational performance and market competitiveness. Although RBV is sometimes critiqued for its limited responsiveness to external changes, advocates argue that strong internal capabilities can still equip firms to navigate uncertain environments. As such, RBV continues to serve as a valuable tool in strategic management for achieving long-term success through resource optimization (Yıldız et al., 2024).

2.1.3 Stakeholder Theory

Stakeholder Theory, originally introduced by Edward Freeman in 1984, emphasizes that organizations should account for the interests and well-being of all stakeholders, rather than focusing solely on shareholders. Stakeholders encompass any individuals or groups affected by a company's actions, including employees, customers, suppliers, government bodies, and the broader community. This theory challenges the traditional view of shareholder dominance by proposing that organizations achieve long-term sustainability and ethical success by addressing the needs of all stakeholders. Companies that actively engage and satisfy stakeholders tend to generate greater value and achieve lasting success (Kirikkaleli & Ali, 2024).

Under Stakeholder Theory, organizations are encouraged to maintain open, ongoing communication with their stakeholders. This involves identifying and understanding stakeholders' expectations, needs, and concerns, and incorporating this feedback into decision-making processes. Such inclusive engagement fosters a sense of respect and appreciation, often resulting in increased stakeholder trust and support. Particularly in the workplace, involving employees in key decisions can enhance job satisfaction, motivation, and overall productivity, thereby boosting organizational performance (Abdullah et al., 2021).

The theory also promotes the integration of ethical practices and social responsibility into organizational strategies. Companies are expected to go beyond profitability and consider their social and environmental impact. This broader perspective on value creation ensures long-term societal and ecological well-being. Ethical behavior not only supports sustainability but also enhances a company's reputation. Businesses that act responsibly are more likely to gain public trust, attract loyal customers, and retain top talent, all of which contribute to a competitive edge in the marketplace. Stakeholder Theory also supports stakeholder-focused corporate governance, where systems and policies are designed to encourage fairness, accountability, and transparency. Such governance structures strengthen trust and cooperation among stakeholders, helping to create resilient organizations. By balancing the diverse interests of stakeholders, companies can foster sustainable growth and long-term value (Mahajan et al., 2023).

2.1.4 Diffusion of Innovation Theory

The Diffusion of Innovation Theory was developed by Everett M. Rogers in 1962. Rogers, a communication scholar and sociologist, introduced the theory in his book *Diffusion of Innovations*, which explained how new ideas, practices, and technologies spread within a social system over time. His work built upon earlier rural sociology studies that examined how farmers adopted new agricultural techniques. Over the years, the theory has been widely applied in various fields such as public health, education, communication, and organizational development. It remains one of the most influential frameworks for understanding how innovations are accepted and implemented in society (Kyalo, 2023).

The theory describes diffusion as the process through which an innovation is communicated over time among members of a social system. It identifies five key stages of adoption: knowledge, persuasion, decision, implementation, and confirmation. According to Rogers, individuals pass through these stages before deciding whether to adopt or reject an innovation. The rate of adoption depends on factors such as the perceived benefits, compatibility with existing values, simplicity, trialability, and observability of the innovation. These elements determine how quickly or slowly new ideas are embraced within a community or organization (Prasad & Smol, 2023).

2.2 Empirical Review

The empirical review presents previous studies related to the four independent variables and project performance.

2.2.1 Human Resource Management and Project Performance

Khan *et al.* (2023) studied the impact of human resource management (HRM) practices on organizational performance, focusing on employees across various organizations. A structured questionnaire was used to collect data from a sample of 300 respondents, selected through nonprobability sampling, with random sampling as the primary technique. The research adhered to ethical guidelines throughout the data collection process. The aim was to explore HRM strategies and assess their influence on organizational performance, with employee insights playing a critical role in addressing the research questions. The study analyzed the relationship between various HRM practices and organizational outcomes, providing meaningful findings for organizations. The results contribute to the existing literature by highlighting the importance of HRM practices in improving performance. The research offers practical recommendations for enhancing HRM strategies, emphasizing their role in achieving better organizational outcomes. These insights support organizations in aligning their HRM practices with performance goals for sustainable growth and improved efficiency.

Ghattas *et al.* (2022) investigated the influence of human resource management (HRM) on project performance in Egypt. It assessed ten key HRM factors: objectives and goals, job descriptions, staffing and recruitment, training, communication, leadership, team relationships, employee retention, trust and values, and appraisal and motivation. The research involved 105 respondents evaluating how these HRM practices were implemented and their effect on project teams. Descriptive analysis and correlation tests revealed that eight HRM factors significantly impacted cost performance, while four factors influenced time performance. Although HRM practices positively affected project outcomes, they were not the sole determinants of success. The study highlights the importance of HRM in enhancing both cost and time performance in projects but suggests that other factors also contribute to overall project performance.

2.2.2 Financial Resource Management and Project Performance

Aradukunda and Sikubwabo (2024) investigated the impact of financial resource management on project performance in Kigali City. Poor implementation of projects, due to misappropriation of public funds and inadequate performance measurement, particularly in subdivisions and surrounding villages, motivated the research. The study aimed to assess the influence of financial resource planning and control on project performance. Using financial literacy and resource dependency theories, the researchers reviewed relevant literature and targeted 312 employees, selecting a sample size of 175 through stratified sampling. Data were collected using questionnaires, interviews, and document reviews, and analyzed through descriptive statistics and regression analysis. Results revealed that financial resource management significantly impacts project performance, with an estimated performance level of 30.6% when financial management is absent. A unit increase in financial resource planning leads to a 0.731% improvement ($t = 6.008$, $p < 0.001$), while a 1% increase in financial resource control enhances performance by 0.500% ($t = 2.550$, $p = 0.025$). Both variables were statistically significant, affirming the importance of robust financial management in improving project outcomes in Kigali City.

Kamau *et al.* (2023) examined the influence of financial planning on the performance of floricultural projects in Kenya, focusing on Nakuru County. Guided by control theory, the investigation addressed concerns about project performance, highlighting the role of financial planning in mitigating socio-economic and political challenges faced by floricultural farmers. Data collection relied on questionnaires, and both descriptive and inferential statistics were applied for analysis. The findings revealed that financial planning significantly impacts project success, with descriptive results indicating that 35.4% of the variance in project performance was explained by financial planning practices. This suggests that improved financial planning can enhance the stability and outcomes of floricultural projects. The study underscores the importance of integrating financial planning into floricultural management to improve project efficiency and sustainability.

2.2.3 Material Resource Management and Project Performance

Yıldız *et al.* (2024) investigated the impact of material management activities, planning, supply, logistics, transport, stock, and waste control, on project performance within the construction industry, where materials significantly influence performance metrics such as cost, time, quality, and efficiency. Material management practices were evaluated using 15 criteria categorized under five headings, while project performance was assessed using 13 criteria across three categories, based on surveys conducted with industry personnel at various construction sites. Multiple regression analyses were performed to analyze the collected data, focusing on the impacts of material management practices on project time, cost, efficiency, waste performance, and overall project performance. The results indicated that material supply, handling, and stock and waste control positively impacted overall project performance. Conversely, material planning and logistics did not show statistically significant effects. This study's findings enhance understanding of the relationship between material management and project performance, providing valuable insights for stakeholders to improve their material management practices.

Acido and Kilongkilong (2022) investigated the resource management practices of a public higher institution in the Philippines amidst the challenges posed by the ongoing epidemic. The study focused on four key dimensions: planning, budgeting, allocation, and control. Using a descriptive research design, data was collected from 253 randomly selected administrators, teaching, and non-teaching staff through a validated questionnaire. The findings indicated that budgeting and allocation practices were more consistent, while planning and control procedures were used less frequently. The study recommended the implementation of projects involving information and communication technologies to enhance resource management. Additionally, the standardization of policies and procedures was highlighted as a way to improve overall resource management. The study also stressed the importance of adequate financial allocation for the success of the planned development programs. Ultimately, the research offers insight into how strategic financial management can address the ongoing funding issues that impact the quality of education in the Philippines.

2.2.4 Technology Resource Management and Project Performance

Joshi (2021) conducted a study in India examining the influence of technology on project management, emphasizing how technological tools enhance efficiency across different phases of the project life cycle. The study revealed that technology strengthens collaboration, communication, scheduling, budgeting, and risk management processes. Although technological adoption improved operational efficiency and productivity, many organizations were found to be underutilizing available tools. The researcher recommended adopting advanced technologies to facilitate smoother workflows and strengthen decision-making among project teams. The findings further indicated that the proper integration of technology aligns project activities with organizational objectives, promoting more effective resource utilization. Overall, the study concluded that technology serves as a key enabler of improved performance and operational effectiveness in project management within the Indian context.

Kumari (2023) carried out research in the United Kingdom, exploring the growing influence of advanced technologies on project management, with particular attention to emerging trends and implementation challenges. The study highlighted innovations such as cloud-based project platforms, artificial intelligence (AI), machine learning, and virtual reality as transformative tools for project planning and execution. However, issues such as organizational resistance, cybersecurity vulnerabilities, and system integration difficulties were identified as major obstacles. Using case studies from UK-based technology firms, the research illustrated practical approaches organizations can adopt to successfully integrate these technologies. Recommendations included strengthening change management strategies and enhancing cybersecurity frameworks to safeguard digital transitions. The study concluded that balancing technological innovation with organizational preparedness is essential for optimizing project performance and sustaining competitiveness.

3. RESEARCH METHODOLOGY

This section summarizes the procedures used to collect, process, and analyze data for the study.

3.1 Research Design

This study used both descriptive and correlational research designs within a cross-sectional study. Data were collected quantitatively using questionnaires, and descriptive analytical techniques were applied to interpret the results. The combination of quantitative and qualitative approaches allowed for a comprehensive understanding of the variables under investigation and their interrelationships.

3.2 Study Population and Sample Size

The population of the study was 297 including Project managers, team leaders, implementers, finance and administration staff, Monitoring and Evaluation Personnel, and Subcontractors of second generation health posts project in Rusizi District. The sample size was 170 respondents calculated using Slovin's formula.

3.3 Sampling Technique

The study employed a combination of stratified sampling and simple random sampling techniques. Stratified sampling was used to first divide the target population into distinct strata based on job categories. Within each stratum, simple random sampling was then applied to select participants.

3.4 Data Collection Instruments

The research relied on questionnaire and interview techniques. The questionnaire gathered quantitative data on resource management effectiveness in second generation health posts project in Rusizi District, while interviews collected qualitative data from staff administrators of the project.

3.5 Validity and Reliability

The research supervisor checked the questionnaires and interview questions before field data collection. The Content Validity Index was 0.83, indicating good content validity. The pilot study was conducted with 17 respondents representing 10% of the sample size.

Reliability was tested using Cronbach's Alpha. Human resource management scored 0.842, financial resource management 0.851, material resource management 0.840, technology resource management 0.823, and project performance 0.818, confirming that the instrument was reliable for analysis.

3.6 Data Analysis

The study employed descriptive statistics and inferential statistics. Descriptive statistics summarized respondents' views using means and standard deviations, while correlation and multiple regression analyses assessed the effect of human, financial, material, and technology resource management on project performance.

The adopted model for analysis was structured as follows: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$. Y represents performance of project, X_1 represents human resource management, X_2 represents financial resource management, X_3 represents material resource management, and X_4 represents technology resource management.

3.7 Ethical Considerations

To ensure a smooth and ethically sound data collection process, several ethical measures were followed throughout the study. Informed consent was obtained from all participants. Formal authorization was also requested from the management of relevant institutions through an official letter to allow their members to participate.

Confidentiality and privacy were maintained by protecting the identities and responses of participants. All collected data were used strictly for research purposes, and respondents completed the questionnaire voluntarily without pressure or coercion.

4. FINDINGS AND DISCUSSION

This section presents the field findings on project resource management practices and the performance of second-generation health posts in Rusizi District. The study targeted 170 respondents, out of which 157 successfully filled and returned the questionnaires, representing a response rate of 92.4%. Incomplete or unreturned questionnaires were 13, representing 7.6%, and this response rate provided a strong basis for data analysis.

4.1 Response Rate

The response rate findings show the participation level of sampled respondents in the study.

Table 1: Response Rate

	Frequency	Percent
Filled questionnaire	157	92.4
Incomplete	13	7.6
Total	170	100.0

The results in Table 1 show that 157 out of 170 sampled respondents completed the study instruments, representing 92.4%. This indicates strong participation among stakeholders of the second generation health posts project in Rusizi District.

4.2 Correlation Analysis

Correlation analysis was conducted to determine the direction and strength of the relationship between the independent and dependent variables.

Table 2: Correlations analysis

		Human resource management	Financial resource management	Material resource management	Technology resource management	Project Performance
Human resource management	Pearson Correlation	1	.538**	.627**	.623**	.668**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	157	157	157	157	157
Financial resource management	Pearson Correlation	.538**	1	.588**	.773**	.801**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	157	157	157	157	157
Material resource management	Pearson Correlation	.627**	.588**	1	.766**	.744**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	157	157	157	157	157
Technology resource management	Pearson Correlation	.623**	.773**	.766**	1	.827**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	157	157	157	157	157
Project Performance	Pearson Correlation	.668**	.801**	.744**	.827**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	157	157	157	157	157

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

Source: Field data, 2025

As shown in Table 2, the correlation between human resource management and project performance is $r = 0.668$ with a p-value of 0.000. Since the p-value is less than the 0.05 significance level indicates a significant and strong positive relationship. This suggests that as human resource management improves, the performance of health posts project also significantly improves.

The correlation between financial resource management and project performance is $r = 0.801$ with a p-value of 0.000 shows a very strong positive correlation that is statistically significant at the 0.05 level. This indicates that financial management is a critical driver of project performance in Rusizi District.

The findings show that material resource management has a correlation of $r = 0.744$ with project performance, with a p-value of 0.000. This represents a significant and strong positive relationship between the variables. These findings imply that efficient material handling is closely linked to the successful execution of the project. The correlation between technology resource management and project performance is $r = 0.827$ with a p-value of 0.000 highlights this as the strongest relationship among the variables, being significant at the 0.05 level. This suggests that technological tools play a paramount role in enhancing the performance of health posts in Rusizi.

The significant positive correlations between all resource management practices and project performance suggest a synergistic relationship where the improvement of one area bolsters the others. This supports the empirical findings of

Ghattas *et al.* (2022), who noted that while individual HRM factors are important, they work alongside other resource elements to optimize cost and time outcomes. The strong link between financial management and performance specifically reinforces the work of Aradukunda and Sikubwabo (2024), confirming that financial planning and control are non-negotiable pillars for project success.

4.3 Regression Analysis

Multiple regression analysis was used to test the combined effect of the independent variables on the dependent variable.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.891 ^a	.794	.789	.17973	1.592

a. Predictors: (Constant), Technology resource management, Human resource management, Financial resource management, Material resource management

b. Dependent Variable: Project Performance

Source: Field data, 2025

The model summary in Table 3 provides the R-value of 0.891 indicates a very strong degree of correlation between the combined resource management practices and project performance. The R Square value of 0.794 means that 79.4% of the variance in the performance of second-generation health posts in Rusizi District is explained by the four resource management variables. The Durbin-Watson statistic of 1.592 is within the acceptable range, suggesting no significant autocorrelation in the residuals. The model shows a high predictive power for project performance. The results also validate the conclusions of Joshi (2021) and Kumari (2023), that technological integration and resource optimization are mandatory for sustaining competitiveness and achieving sustainable project growth in modern dynamic environments.

Table 4: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.978	4	4.745	146.872	.000 ^b
	Residual	4.910	152	.032		
	Total	23.889	156			

a. Dependent Variable: Project Performance

b. Predictors: (Constant), Technology resource management, Human resource management, Financial resource management, Material resource management

Source: Field data, 2025

The ANOVA results in Table 4 assess the overall significance of the regression model. The F-statistic is 146.872, and the significance value (Sig.) is 0.000, which is well below the 0.05 threshold. This indicates that the regression model is a significant fit for the data. It confirms that the independent variables (Human, Financial, Material, and Technology management) collectively have a statistically significant effect on project performance. Therefore, the model is valid for making predictions regarding the health posts in Rusizi District.

Table 5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
		B	Std. Error	Beta	t		Tolerance	VIF
1	(Constant)	.263	.175		1.506	.134		
	Human resource management	.147	.045	.163	3.278	.001	.549	1.821
	Financial resource management	.389	.060	.381	6.524	.000	.397	2.520
	Material resource management	.167	.048	.211	3.513	.001	.376	2.658
	Technology resource management	.237	.065	.271	3.669	.000	.249	4.024

a. Dependent Variable: Project Performance

Source: Field data, 2025

Table 5 shows the individual contribution of each variable to the model and the results of the hypothesis testing. Regarding Human Resource Management, the B-coefficient is 0.147 with a t-value of 3.278 and a significance of 0.001. Since the p-value (0.001) is less than 0.05 shows that human resource management has a significant positive effect on project performance. The VIF of 1.821 indicates no multicollinearity issues for this variable. Based on this, the study rejects the null hypothesis H_{01} and concludes there is a significant effect of human resource management on performance.

For Financial Resource Management, the B-coefficient is 0.389 with a t-value of 6.524 and a significance of 0.000 indicates that this variable is the strongest significant predictor of performance in the model. The VIF of 2.520 is well within the acceptable limit, indicating no multicollinearity. Consequently, the study rejects the null hypothesis H_{02} , confirming that financial resource management significantly affects the performance of health posts project.

Regarding Material Resource Management, the B-coefficient is 0.167 with a t-value of 3.513 and a significance of 0.001 shows a significant positive effect on the dependent variable, as the p-value is less than 0.05. The Collinearity Statistics (VIF = 2.658) show no issues with redundant variables in the model. Therefore, the null hypothesis H_{03} is rejected, indicating that material resource management significantly impacts project performance.

For Technology Resource Management, the B-coefficient is 0.237 with a t-value of 3.669 and a significance of 0.000 confirms that technology is a significant positive contributor to the project's success. The VIF value of 4.024, while higher than others, is still within the acceptable range below 10. Thus, the study rejects the null hypothesis H_{04} and concludes that technology resource management has a significant effect on the performance of second-generation health posts project. This comprehensive impact is supported by the multi-regression findings of Asefa (2021), where planning and logistics were shown to be significant predictors of construction project outcomes

Table 6: Hypotheses Results

Null Hypothesis	P value	Decision
H_{01} : There is no significant effect of human resource management on performance of second-generation health posts project in Rusizi District.	p = 0.001	Rejected
H_{02} : There is no significant effect of financial resource management on performance of second-generation health posts project in Rusizi District.	p = 0.000	Rejected
H_{03} : There is no significant effect of material resource management on performance of second-generation health posts project in Rusizi District.	p = 0.001	Rejected
H_{04} : There is no significant effect of technology resource management on performance of second-generation health posts project in Rusizi District.	p = 0.000	Rejected

The hypotheses results indicate that all four null hypotheses were rejected because each p-value was less than 0.05. This confirms that human, financial, material, and technology resource management practices significantly affected project performance.

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This section summarizes the major findings and presents the conclusion and recommendations based on the study results.

5.1 Conclusion

The study concludes that project resource management practices specifically human, financial, material, and technology resources collectively account for a significant portion of the performance of second-generation health posts in Rusizi District. The high R-square value confirms that these four areas are the primary determinants of project success. All null hypotheses were rejected, proving that each resource category has a statistically significant positive effect. While financial and technology management stood out as the strongest predictors, the synergy between all four resources is what drives operational excellence. The study finalizes that for any health project to succeed in a similar context, a holistic approach to resource management must be adopted.

5.2 Recommendations

Based on the study findings, the following recommendations are proposed to strengthen resource management and improve the performance and sustainability of second-generation health post projects in Rusizi District.

1. Ministry of Health should increase investments in continuous professional development for health post staff to keep their technical skills updated with modern medical standards and support improved service delivery.
2. Rusizi District administration should strengthen financial planning, budgeting, and expenditure control mechanisms to ensure that funds allocated to health post projects are properly utilized.
3. Project managers should establish long-term contracts with reliable material suppliers and improve inventory control procedures to prevent delays, reduce waste, and maintain accountability for physical resources.
4. Rusizi District administration should implement automated financial monitoring systems and digital inventory tracking tools to improve transparency, timely reporting, and accountability in resource management.

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