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Project Management Practices and Performance of Pig Value Chain Projects: A Case of Duhamic Adri in Gakenke District, Rwanda

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Abstract: *The general objective of the research is to find out the effect of project management practices on performance of pig value chain projects in Gakenke District, Rwanda. The population of this study was 315 people including pig values chain project staff, Duhamic Adri staff and women beneficiaries' representatives in Gakenke District. The study used simple random sampling method to select 176 using Slovin's formula. The researcher relied on document analysis, questionnaires, and interviews to collect data. Statistical Package for Social Sciences (SPSS) 25 used in the study as tools of data analysis. The correlation coefficient (R) is 0.796, indicating a strong positive relationship between these predictors and project performance. The R Square value of 0.634 indicates that approximately 63.4% of the variance in project performance can be explained by the independent variables included in the model. This high percentage shows that the selected factors are significantly relevant in influencing the performance of pig value chain projects in Gakenke District. P<0.05 for all independent variables show a statistically significant effect with project performance. Gakenke District should implement regular workshops for stakeholders to enhance the thoroughness of needs assessments for future projects, ensuring that all community needs are documented and prioritized.*

Keywords: *Project Management Practices, Project Planning, Project Implementation, Project Risk Management and Project Performance*

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1. Introduction

Numerous studies undertaken in Africa have proved the effectiveness of project practices approaches. Sudha and Timea (2018) investigated chronic management issues in Ghana's housing business. The study focused on how project managers may improve project quality in terms of efficiency and completion date. The study's findings revealed that there is a dearth of qualified management experts in the housing industry. Therefore, the study suggests that involving qualified and experienced management professionals can enhance the outcomes of building projects.

Project management plays a crucial role in Rwanda's development strategy, improving performance and efficiency through efficient planning, execution, and assessment procedures. This has a substantial impact on industries including construction and agriculture. Particularly in the building and agricultural industries, project management has become a crucial component of Rwanda's economic path. There is a favorable association between project success and effective management techniques in agriculture, as seen by the major impact that these practices have had on the performance of agricultural initiatives, like those in Ngororero District (Murangwabugabo *et al.*, 2021).

Many projects in Rwanda have failed due to inadequate planning, unfilled needs, resource limitations, and mistaken cost estimates. The main causes are attributed to ineffective project initiation, planning, communication, and scheduling techniques. Some strategies utilized may not be appropriate for specific project types, resulting in their failure. For example, a 2021 audit report identified at least 37 contracts totaling Rwf 201 billion across 28 public institutions that were delayed by up to six years, highlighting the issues of project management effectiveness (MINECOFIN, 2021).

Though several studies have explored project management practices and project performance in the region, there remains a substantial gap in the literature concerning effect of project management practices on performance of livestock projects in Rwanda. For example, the study conducted by Mukeshimana (2021) found that initiatives in Rwanda face a variety of challenges that lead to failure, including insufficient risk management, resource constraints, and poor communication. This study stressed that project success is dependent on careful assessment of important performance metrics such as stakeholder participation, monitoring, and decision-making. The study emphasizes the need for developing tools and procedures to prevent project failures. Likewise, according to Nyakarengo and Wanjiku (2023), inadequate resource management and a lack of community engagement greatly impair project outcomes, restricting farmers' ability to attain food security and economic progress in Kayonza and other places. According to research conducted across eight sites in Rwanda, including Kayonza region, only 18% of projects are completed within budget, 50% exceed costs, and 30% are abandoned (Gasana & Njenga, 2024).

According to Ogbe (2023), inadequate project planning practices account for 42.8% of the performance variance among CDPs; this is particularly the case for the Vision 2020 Umurenge Program (VUP) in Musanze District, which has challenges with risk management and cost planning. In order to improve project performance and, eventually, social protection outcomes, this shortfall emphasizes the vital requirement thorough project management practices.

Therefore, the current study seeks to address these information gaps and contribute to a better understanding of how these specific project management practices affect the performance of pig values chain project implemented by Duhamic Adri in Gakenke District, Rwanda.

1.1. Objectives of the study

The general objective of this research is to find out the effect of project management practices on performance of pig value chain projects in Gakenke District, Rwanda.

The study was guided by the following objectives:

1. To assess the effect of project planning on performance of pig values chain projects in Gakenke District, Rwanda.
2. To determine the effect of project implementation on performance of pig values chain projects in Gakenke District, Rwanda.
3. To analyse the effect of project risk management on performance of pig values chain projects in Gakenke District, Rwanda.
4. To assess the effect of project monitoring and evaluation on performance of pig values chain projects in Gakenke District, Rwanda.

2. Literature Review

An empirical review refers to a study, analysis, or assessment that relies on empirical evidence derived from observation. It involves collecting and analyzing data or information gathered through direct observation or experience, rather than relying solely on theory.

2.1 Project planning practice and project performance

Dufitumukiza (2022) used a case study from the Rwanda Education Assistance Project to evaluate the impact of project planning on the long-term viability of educational programs in Rwanda. There were 151 people in the sample. The quantitative data was analyzed using descriptive and inferential statistics from the Statistical Package for Social Sciences. The study obtained the data it required from a range of primary and secondary sources. The data analysis and discussion show convincingly that the study's research question and purpose were successfully addressed. The F-test's positive result of 44.622 is statistically significant at the 5% level, as the significance criterion is 0.000a. As a result, the researcher proposed that all efforts prioritize planning in order to assess their immediate, intermediate, and long-term impacts on sustainability.

Eric (2021) investigated the Huguka Dukore Akazi Kanoze Project in Nyabihu District to determine how enhanced planning could raise the project's chances of success. 123 people were predicted to read this. There was no need to be concerned about sample size because the population was easily manageable. Primary and secondary data were gathered using documentary research, in-depth interviews, and questionnaires. SPSS 20 was used to categorize and organize data for analysis, and Pearson to calculate the degrees of connection between our various variables of interest. The study's results were presented in the form of tables and figures. R-square (correlation coefficient) values of 82.4%, 81.9%, and 78.3% show a statistically significant association between project scope planning, cost planning, and human resource planning and project

performance, respectively. The study discovered that in order to keep the project running smoothly, project workers should emphasize the necessity of beneficiaries learning to take responsibility for their own health.

2.2 Project implementation and project performance

Benegahutu *et al* (2020) investigated the effects of project management approaches on the GIRINKA program, and the findings revealed a clear link between management strategy implementation and program effectiveness. The success of agriculture, which has a substantial impact on the growth of other economic sectors, is the primary driver of Rwanda's economy. However, many agricultural projects in Rwanda continue to operate at a mediocre level, as evidenced by the fact that some initiatives are impeded while others are completed late and yield poor outcomes. It claims that different management approaches used in tandem can have a negative impact on a project's performance, and that several studies have failed to provide a thorough review of all project management techniques used in tandem to affect the performance of agricultural projects.

Samuel (2018) researched project management practices and the outcomes of non-governmental organisation (NGO) projects in Nairobi, Kenya. The descriptive method was used in this investigation. The focus group in Nairobi County, where the research was performed, consisted of 201 non-governmental organizations (NGOs). To obtain this figure, we used a combination of stratified and basic random selection to select half of the target population, or 100 NGOs in Nairobi County. Results demonstrated that effective project management tactics such as communication, planning, stakeholder participation, monitoring, and evaluation improved project performance. Clearly, developing and monitoring project communication structures should be on the agenda of team leaders and management at the start of any project, as the study discovered that poor communication had a significant impact on project outcomes. Planning, stakeholder participation, monitoring, and evaluation were found to have a positive and statistically significant impact on project outcomes.

2.3 Project risk management and Project Performance

Fikadu and Kant (2023) investigated how project risk management strategies affect project performance in several west Guji zone projects in Ethiopia. The researcher used both quantitative and qualitative research methodologies, including descriptive and explanatory designs. Data was gathered by targeted sampling from individuals with relevant experience and connections to the activities. Purposive sampling. IBM SPSSv20 and STATA14/SE software were used to conduct descriptive and inferential analyses on the data. Data research found that project risk management approaches boost project performance in the west Guji zone. Qualitative and quantitative risk assessments are poor and rarely used. Project risk monitoring has a positive impact, but qualitative risk analysis has a lower impact, followed by quantitative risk response. Based on the findings and conclusions, the researcher advised stakeholders and interested parties.

Algremazy *et al*. (2023) investigated risk management in Libya's construction industry to determine how effective risk management approaches influence project performance in a sector with significant investments and projects. The quantitative study used cluster-sampled structured questionnaires to deliver to business managers at over 300 construction companies in Tripoli and Benghazi, yielding 250 responses for analysis. Smart-PLS employed Structured Equation Modeling (SEM) to demonstrate how risk management approaches increase project performance. The study discovered a strong link between quality management risk awareness and project execution success, suggesting that improving this knowledge may increase performance. This study contributes to the available literature on risk management in Libyan construction businesses, providing valuable insights for academics and practitioners seeking to improve project management frameworks.

Igihozo and Irechukwu (2022) looked at project risk management and performance. Sloven's formula stratified sampling selected 118 respondents from a target population of 168 for descriptive study that used both qualitative and quantitative methods. SPSS was used to calculate descriptive statistics such as mean and standard deviation. Project risk identification was favorably connected with Mpazi channel building project performance, with a coefficient of correlation of 0.970 and sig=.000, both less than 0.05. The project risk management approach and Mpazi channel building project performance was favorably and substantially associated ($r=0.979$ and $sig=0.00$, both $p < 0.05$). There was a high positive correlation between project risk plan responsiveness and Mpazi Channel construction project performance ($r =0.985$, $sig=0.00$). The study discovered that risk assessment, management, and response resulted in 97.5 percent ($R2= 0.975$) Mpazi Channel building project success. The study found that project risk management influences Mpazi Channel development.

But *et al.* (2021) evaluated the effectiveness of a structured risk management strategy during the planning stages of building projects, with an emphasis on the responsibilities of construction professionals, end users, and engineers in this process. This quantitative study aimed to determine which risk management measures should be incorporated in building project blueprints using descriptive and inferential methodologies. The results validated all four hypotheses, demonstrating that

identifying risks and selecting engineers or architects improves project performance significantly. While site selection, preliminary scheduling, and budget management had a lesser impact on project success, risk identification and engineer/architect selection had a strong positive correlation. The researcher suggests that in order to improve a project's overall performance, it is critical to prioritize risk identification and carefully choose technical and architectural experts throughout the planning process.

2.4 Project monitoring & evaluation and project performance

Rosine and Khan (2021) used a case study of GHH in Rwanda's Karongi District to investigate how monitoring and assessment influence how a program is implemented. The desired number of participants was 1,000. There were 286 randomly selected individuals. The research team collected data through questionnaires, an interview guide, and a desk review. The data revealed a favorable association between the monitoring and evaluation plan and the following: strategy alignment (r.158, p.015); process alignment (r.413, p.037); and resource allocation (r.158, p.037) (r.714, p.024). To ensure the project's success, the paper recommends appointing a full-time M&E officer to oversee daily operations and engage with target recipients. Because some GHH Project recipients believe that help will be supplied indefinitely, project administrators should strengthen communication with them.

Harriet (2021) studied the impact of Monitoring and Evaluation (M&E) on project performance in Uganda. The author conducted a case study on ten development projects, examining the M&E planning process and project performance data. The study found that a solid M&E planning process improves project efficiency, effectiveness, and sustainability. On the other hand, a poor M&E planning process results in poor project performance, such as delays, cost overruns, and inability to meet project objectives. The author underlines the need of incorporating M&E into project management methods and allocating sufficient resources for M&E activities to ensure project success. The study adds to our understanding of the importance of monitoring and evaluation in development projects and makes practical recommendations for project managers, donors, and politicians.

The study by Idowu and Ajibola (2020) sought to investigate the Monitoring and Evaluation (M&E) process and its impact on project success. The authors conducted a literature review and a qualitative study in Nigeria, interviewing 15 project managers and M&E officers. The findings demonstrated that monitoring and evaluation (M&E) was critical to project performance by ensuring that goals and objectives were completed, risks were recognized and managed, and stakeholders were involved throughout the project lifetime. However, the study identified several obstacles in the M&E process, including insufficient funds, a lack of technical capacity, and opposition to change. The authors suggested that organizations invest in professional development, prioritize M&E financing, and ensure that project teams and stakeholders understand the relevance of M&E for project success.

3. Methodology

3.1 Research Design

This study used a descriptive and correlational design. Descriptive analysis simplifies and shows significant characteristics of a dataset, making it easier to recognize patterns and interpret data trends. Correlation analysis is a statistical approach for investigating the relationship between two or more variables. It determines the extent to which changes in one variable are related with changes in another. Descriptive survey research used to collect information on a variety of issues and correlational studies research design examined at the links that exist between variables under the study.

3.2 Study Population

The researcher defined population as a source of cases from which to make conclusions, and the phrase has since evolved to refer to the total number of objects in a certain area of study. The population of this study was 315 people including pig values chain project staff, Duhamic Adri and women beneficiaries' representatives in Gakenke District.

3.3 Sample Size

Sample size is the number of observations or repetitions employed in a statistical investigation. When making conclusions about a bigger population based on a smaller portion of the population, as is often the case in empirical studies, the representative sample is critical. The cost of data collection and the need for acceptable statistical power eventually determined the sample size to be employed in research.

Slovin's formula enabled the researcher to sample the community with the appropriate degree of precision, while studying the complete population is impossible owing to lack of resources and time. Using Slovin's formula, researchers estimate how big a sample they need to get reliable findings.

$$n = \frac{N}{1 + (Ne^2)}$$

n= Number of samples or sample size
N= Total population
e = Error tolerance

$n = \frac{315}{1+(315x0.05^2)} = \frac{315}{1+(315x0.0025)} = \frac{315}{1+0.7875} = \frac{315}{1.7875} = 176.22 \cong 176$

The study used stratified sampling; this method involves dividing the population into distinct strata based on certain characteristics helping ensure that the sample accurately reflects the population's diversity.

3.4 Research Instruments

Questionnaire enables individuals to articulate their thoughts, experiences, or expertise on diverse subjects autonomously, free from the influence of a questioner. Questionnaires contained questions with 5 Likert scale answers for this research. With response options, the responders were presented with several options from which to choose an answer. For this study, participants were given questionnaires and expected to fill it out independently, before returning it to the researcher through the same method and in the specified time frame.

Documentation is a comprehensive analysis and evaluation of published documents, reports, magazines, journals, and policy papers pertinent to the subject matter.

For this study, Documents included reports, letters, memos, articles, or any written or recorded material. Documentary technique used to obtain secondary information about a phenomenon that wishes to study; and the documents targeted were the available reports (secondary data).

3.5 Reliability

In this study, the researcher applied the Cronbach alpha approach to assess dependability. Cronbach's alpha (α or coefficient alpha) values vary from 0 to 1, with higher values indicating greater reliability. A rating of 0.7 or higher is appropriate.

Table 1: Reliability Results

Variables	N of Items	Cronbach's Alpha
Project planning	4	.812
Project implementation	4	.831
Project monitoring and evaluation	4	.822
Project risk management	4	.815
Project performance	4	.824

Source: Research Findings, 2024

The reliability results in Table 1 demonstrate that all Cronbach's Alpha values above the 0.7 threshold. Project implementation achieves the highest score at .831, followed by project performance at .824, while project monitoring and evaluation, project risk management, and project planning also show strong reliability with scores of .822, .815, and .812, respectively.

3.6 Data Analysis

The researcher presented the findings in the form of numbers and statistics, providing the reader with a more comprehensive comprehension of the findings. The study employed the Statistical Package for Social Sciences (SPSS) version 25.

Correlation and regression analysis were employed for analysis of interviewees' perspectives on each variable, and correlation were performed to examine the nature of the relationships between factors.

The model used in the study took the form below:

$Y= \alpha+\beta_1X_1+ \beta_2X_2+ \beta_3X_3 + \beta_4X_4 +ę$

Where: Y= Project performance

$X_{1=}$ project planning

$X_{2=}$ project implementation

$X_{3\ =}$project monitoring and evaluation

$X_{4=}$project risk management

α= Constant Term

β= Beta Coefficient –These measures how many standard deviations a dependent variable change per standard deviation increases in the independent variable.

3.7 Ethical Considerations

The researcher adhered to free expression while respecting the respondents' rights and privacy. Ethical behavior was required of all individuals participating in the study. Respondents were chosen freely and fairly, with no discrimination based on religion, gender, color, etc.

4. Results and Discussion

This section provided the findings based on data gathered via field questionnaires. The researcher next used SPSS to evaluate the numerical data for patterns and trends. The results comprised percentages, frequencies, mean and standard deviation of replies on a 5-point Likert scale, with 5 representing strongly agree and 1 representing strongly disagree. To investigate the connections between variables, regression analysis and Pearson correlation were used, resulting in a more complete knowledge of the data.

4.1 Response Rate

The response rate is the percentage of completed surveys compared to the total number of eligible participants,

calculated by dividing completed surveys by eligible participants.

Table 2: Response rate

	Frequency	Percent
Returned questionnaire	154	87.5
Unreturned questionnaire	22	12.5
Total	176	100

Source: Research Findings, 2024

Table 2 shows a response rate of 87.5% for the questionnaires, with 154 out of 176 distributed surveys returned. Meanwhile, 12.5% of the questionnaires, totaling 22, were not returned. This high response rate indicates good engagement with the survey, indicating the data collected is likely representative of the target population.

4.2 Inferential Statistics

This section analyzed inferential statistics, which include correlation and regression analysis for exploring the relationships between variables and making decisions on hypotheses.

4.2.1 Correlation Analysis

Correlation analysis measures the strength and direction of the linear relationship between two variables, with values typically ranging from -1 to +1. A correlation coefficient near +1 indicates a strong positive relationship, suggesting that as one variable increases, the other tends to increase as well. Conversely, a value close to -1 signifies a strong negative relationship, where an increase in one variable is associated with a decrease in the other.

Table 3: Correlations

		Project planning	Project implementation	Project monitoring and evaluation	Project risk management	Project performance
Project planning	Pearson Correlation	1	.800**	.725**	.698**	.755**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	154	154	154	154	154
Project implementation	Pearson Correlation	.800**	1	.725**	.537**	.706**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	154	154	154	154	154
Project risk management	Pearson Correlation	.698**	.537**	.607**	1	.621**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	154	154	154	154	154
Project monitoring and evaluation	Pearson Correlation	.725**	.725**	1	.607**	.688**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	154	154	154	154	154
Project performance	Pearson Correlation	.755**	.706**	.688**	.621**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	154	154	154	154	154

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

Source: Research Findings, 2024

The correlation analysis presented in Table 3 offers valuable insights into the relationships between project planning, implementation, monitoring and evaluation, risk management, and performance of pig value chain projects in Gakenke District, Rwanda. The findings are significant at the 0.05 level, indicating a high level of statistical confidence in the relationships observed.

Firstly, regarding the objective to assess the effect of project planning on the performance of pig value chain projects in Gakenke District, the correlation coefficient between project planning and project performance is 0.755, $p<0.05$. This positive significant relationship indicates that effective project planning is closely associated with improved project performance. Eric (2021) investigated the Huguka Dukore Akazi Kanoze Project in Nyabihu District to determine how enhanced planning could raise the project's chances of success. The study's results were presented in the form of tables and figures. R-square (correlation coefficient) values of 82.4%, 81.9%, and 78.3% show a statistically significant association between project scope planning, cost planning, and human resource planning and project performance, respectively. The study discovered that in order to keep the project running smoothly, project

workers should emphasize the necessity of beneficiaries to learn to take responsibility for their own health.

Moving to the second objective, which is to determine the effect of project implementation on performance of pig value chain projects in Gakenke District, there exists a notable correlation of 0.706 between project implementation and project performance, $p<0.05$. This significant correlation indicates that successful implementation practices are linked to higher performance levels in such projects. Benegahutu *et al* (2020) investigated the effects of project management approaches on the GIRINKA program, and the findings revealed a clear link between management strategy implementation and program effectiveness. The success of agriculture, which has a substantial impact on the growth of other economic sectors, is the primary driver of Rwanda's economy.

The third objective focuses on analyzing the effect of project risk management on performance of pig value chain projects in Gakenke District. The correlation coefficient between project risk management and project performance is 0.621, $p<0.05$ demonstrating a significant relationship. This finding indicates that effective risk management significantly enhances overall project performance. Igihozo and Irechukwu (2022) looked at project risk management and performance. Project risk identification was favorably connected with Mpazi channel building project performance, with a coefficient of correlation of 0.970 and sig=.000, both less than 0.05. The project risk management approach and Mpazi channel building project performance was favorably and substantially associated (r=0.979 and sig=0.00, both $p < 0.05$). There is a high positive correlation between project risk plan responsiveness and Mpazi Channel construction project performance (r =0.985, sig=0.00). The study discovered that risk assessment, management, and response resulted in 97.5 percent (R2= 0.975) Mpazi Channel building project success. The study found that project risk management influences Mpazi Channel development.

Lastly, concerning the objective to assess the effect of project monitoring and evaluation on performance of pig value chain projects in Gakenke District, there is a correlation of 0.688 between project monitoring and evaluation and project performance, $p<0.05$. This strong positive relationship indicates that rigorous monitoring and evaluation efforts are closely tied to improved performance. Rosine and Khan (2021) used a case study of GHH in Rwanda's Karongi District to investigate how monitoring and assessment influence how a program is implemented. The data revealed a favorable association between the monitoring and evaluation plan and the following: strategy alignment (r.158, p.015); process alignment (r.413, p.037); and resource allocation (r.158, p.037) (r.714, p.024).

The coefficients among project planning, implementation, monitoring and evaluation, and risk management are all significant and robust, reinforcing the interconnections of these elements. It is strong evidence that project planning, implementation, monitoring and evaluation, and risk management significantly influence the performance of pig value chain projects in Gakenke District, Rwanda.

4.2.2 Regression analysis

Regression analysis takes the analysis a step further, this allows researchers to evaluate how variations in the independent variables affect the dependent variable. By employing regression, researchers formulated an equation that predicts the dependent variable based on the values of the independent variables.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796[a]	.634	.624	.31220

a. Predictors: (Constant), Project risk management, Project implementation, Project monitoring and evaluation, Project planning

Source: Research Findings, 2024

The Model Summary in Table 4 indicates that the regression model used to predict project performance based on several independent variables: project planning, implementation, monitoring and evaluation, and risk management. The correlation coefficient (R) is 0.796, indicating a strong positive relationship between these predictors and project performance. The R Square value of 0.634 indicates that approximately 63.4% of the variance in project performance can be explained by the independent variables included in the model. This high percentage shows that the selected factors are significantly relevant in influencing the performance of pig value chain projects in Gakenke District. Owuori (2020) mentioned that efficient project management methods are crucial for achieving successful project results, as they facilitate optimal resource utilization, risk management, stakeholder satisfaction, and timely, cost-effective project completion.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.148	4	6.287	64.814	.000[b]
	Residual	14.523	149	.097		
	Total	39.671	153			

a. Dependent Variable: Project performance

b. Predictors: (Constant), Project risk management, Project implementation, Project monitoring and evaluation, Project planning

Source: Research Findings, 2024

Table 5 presents the Analysis of Variance (ANOVA) results, which are crucial for assessing the overall significance of the regression model. The F-statistics are reported as 64.814 with a corresponding Sig. (p-value) of 0.000. Given that this p-value is far less than the significance level of 0.05, it strongly indicates that the regression model is statistically significant. Thus, the findings corroborate the study's objective of demonstrating the relevance of these factors in enhancing the performance of pig value chain projects in Gakenke District. Dufitumukiza (2022) used a case study from the Rwanda Education Assistance Project to evaluate the impact of project planning on the long-term viability of educational programs in Rwanda. The F-test's positive result of 44.622 is statistically significant at the 5% level, as the significance criterion is 0.000a. As a result, the researcher proposed that all efforts prioritize planning in order to assess their immediate, intermediate, and long-term impacts on sustainability.

Table 6: Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.483	.211		2.289	.023
	Project planning	.334	.099	.335	3.374	.001
	Project implementation	.206	.087	.211	2.368	.019
	Project risk management	.142	.067	.153	2.119	.034
	Project monitoring and evaluation	.186	.074	.199	2.514	.013

a. Dependent Variable: Project performance

Source: Research Findings, 2024

The coefficients in Table 6 further explain the individual effect of each predictor variable to the overall project performance. The Constant term of 0.483 represents the expected project performance value when all independent variables are zero.

Starting with Project Planning, it has an unstandardized coefficient of 0.334, t=3.374 and a p-value of 0.001, indicating significant and strong effect; each unit increase in project planning is associated with a 0.334-unit increase in performance of pig value chain projects in Gakenke District. Similarly, Project Implementation has an unstandardized coefficient of 0.206, t=2.368 (p-value 0.019) and a standardized beta of 0.211, indicating that project implementation contributes positively to performance of pig value chain projects in Gakenke District. In terms of Project Risk Management, it has an unstandardized coefficient of 0.142, t= 2.119 with a p-value of 0.034, indicating it also has a positive and statistically significant effect on performance of pig value chain projects in Gakenke District.

Lastly, Project Monitoring and Evaluation, the unstandardized coefficient is 0.186, t=2.514 (p-value 0.013), demonstrating a significant effect in enhancing performance of pig value chain projects in Gakenke District. P<0.05 for all independent variables show statistically significant effect with project performance, supporting the study's objectives. Harriet (2021) found that a solid M&E planning process improves project efficiency, effectiveness, and sustainability. The author underlines the need to incorporate M&E into project management methods and allocating sufficient resources for M&E activities to ensure project success. The study adds to our understanding of the importance of monitoring and evaluation in development projects and makes practical recommendations for project managers, donors, and politicians.

5. Conclusions and Recommendations

5.1 Conclusions

The findings highlight the effect of project planning in enhancing the performance of pig value chain projects in Gakenke District. Respondents expressed strong agreement on the effectiveness of planning elements, indicating that systematic planning processes contribute significantly to successful project outcomes. The analysis underlines the importance of effective project implementation, as respondents recognized its critical influence on performance. The results indicate that

successful implementation practices are fundamental to achieving higher performance levels within pig value chain projects in Gakenke District. The study highlights the substantial effect of risk management on project performance. Respondents confirmed the importance of effective risk management practices, which appear to be crucial in enhancing the overall outcomes of pig value chain projects in Gakenke District.

The findings illustrate that strong monitoring and evaluation procedures are essential for improving project performance. The consensus among respondents indicates that effective monitoring and evaluation efforts significantly support the performance of pig value chain projects in Gakenke District.

5.2 Recommendations

1. Gakenke District should implement regular workshops for stakeholders to enhance the thoroughness of needs assessments for future projects, ensuring that all community needs are documented and prioritized.

2. Management of Pig Value Chain Projects should create detailed templates and guidelines for cost planning that encompass all necessary financial aspects, ensuring accuracy in budgeting and financial forecasting.

3. Gakenke District needs to organize community forums to encourage local participation in project implementation, ensuring that the projects meet local needs and that community members are well-informed about processes.

4. Management of Pig Value Chain Projects should regularly evaluate team performance and adaptability to changes, providing feedback that can inform future project adjustments and strategies.

5.3 Suggestions for Future Research

Here are suggestions for future research topics in the field of pig value chain projects: effect of Training and Capacity Building on performance Pig Value Chain Projects and evaluating the Role of Community Participation on performance Pig Value Chain Projects.

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