Assessment of the Effect of Project Management Practices on the Sustainability of the Poultry Farming Project: A Case of the Cooproriz Ntende Project in Gatsibo District, Rwanda

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ABSTRACT

The purpose of the present study was to assess the effect of project management practices on sustainability of poultry farming project. Specially, it examines the effect of project communication, project planning and project leadership on sustainability of poultry farming project. The study was guided by participatory communication theory, planning theory and leadership theory. It adopted descriptive and correlational research design. The target population of the present study were 2,497 people. A sample size of 96 respondents determined by Taro Yamane formula. The research utilized primary data collected through questionnaires, which was the most practical method due to its applicability and suitability to the research problem and population size. The data was analyzed through descriptive and inferential statistics. The study used simple random sampling to select respondents. The study findings showed that positive effect of (M=3.88) project communication on sustainability of poultry farming project, further there is effect of (M3.88) project planning on sustainability of poultry farming project, lastly, there is effect of (M=3.85) project leadership on sustainability of poultry farming project. Regarding to the predictors, there is a significant effect of (t=2.950, p=0.004<0.05) project communication on sustainability of poultry farming project, further, there is significant effect of project planning of (t=3.849, p=0.000<0.05) on sustainability of poultry farming project, lastly, there is significant effect of (t=5.756, p=0.000<0.05) project leadership on sustainability of poultry farming project. The study concludes that project communication, project planning and project leadership significantly contribute to predicting and positively influencing sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, Rwanda. The study recommends that managers should regular communicate with team members and stakeholders to address challenges and maintain momentum throughout the project lifecycle. Feedback mechanisms can enhance adaptability and improve outcomes, while a realistic timeline with milestones allows for better tracking and timely adjustments. Risk management should be integrated into the planning process, identifying potential challenges and developing strategies to mitigate them. Further, project managers should involve guidelines for achieving specific goals and manage resources effectively, demonstrating adaptability and navigating challenges and changes in project scope or direction.

Keywords: Cooproriz Ntende Project, Gatsibo District, Poultry Farming Project, Project Management Practices, Project Sustainability, Rwanda

I. INTRODUCTION

Horváth (2019) indicates that project is implemented in line with the project cycle's sequence. It includes the defining the objectives, structure, tasks, and deliverables of a project, as well as determining the definition of done. During these phases, project is influenced by various factors within the organization responsible for their management and execution. The project manager must understand the factors that influence the project from inception to final handover or disposal. Project management is the creating a plan and executing actions to achieve set objectives and goals. The project is managed using existing organizational structures and resources, utilizing tools and techniques without disrupting the company's routine operations (Haaskjold et al., 2023). Unegbu et al. (2022) argued that management practices are crucial in projects, as they define work requirements, ensure project sustainability, establish indicators and scope, allocate stakeholder resources, plan execution, monitor progress, and adjust initial plans during implementation to ensure smooth execution and effective planning.

Globally, project management practices are essential fundamental issues that must be maintained for the efficient and effective implementation of a project (Haaskjold et al., 2023). On the other hand, the best project management practices involve creating a project brief, creating a plan, maintaining clear communication, maintaining a schedule, planning for setbacks, taking corrective action, and closely monitoring for scope creep. This means the success of a project relies on clear goals, effective planning, leadership skills, stakeholder engagement with a good communication, and continuous monitoring and adaptation. The optimizing project management practices significantly improve the project sustainability in Brazil (Barbosa et al., 2021). According to Setiawan et al. (2021) communication

in project management plays a relevant critical role in project sustainability. Effective communication is crucial for project success, facilitating collaboration, aligning efforts, and achieving goals. It mitigates risks, encourages innovation, and ensures timely project completion. During implementation, it involves exchanging project information, ensuring stakeholders understand progress, and sharing ideas among professionals working on similar tasks. Khoshnodifar et al. (2016) added that information and communication impacts on the success of small and medium entrepreneur business in the agricultural sector. Project planning helps project managers with control, decision-making, and process management (Pellerin & Perrier, 2019).

In Africa, Rogito and Nyamota (2022) observe that the leadership styles in Africa like servant, charismatic, and transformational can lead to conflicts, especially in agricultural projects. In this regard, project managers are responsible for overseeing, constructing, and managing projects, including deciding on projects, hiring suitable individuals, managing budgets, and releasing the final product. In a project therefore, leadership is the systematic process of guiding a team towards a successful project completion, fostering a sense of unity and enabling the team to achieve more than they could individually. Nunes et al. (2021) posited that projects often involve collaboration between various departments, with diverse employees contributing to different aspects in Portugal. To reduce risks associated with team collaborative in a project. The measurement of project sustainability is essential as project sustainability encompasses the overall approach a project takes to help a company achieve strategic success. Certain sustainability criteria may be the primary factors that determine the success of a project. Tracking time, budget, and project scope is critical elements for assessing the project's success and determining if it will deliver the desired outcomes (Korhonen et al., 2023).

According to Nkukwana (2018), agrarian economy of Rwanda, which accounts for a third of the country's Gross Domestic Product [GDP], is a key contributor to nearly half of exports and employs two-thirds of the population. The sector accounted for 31% of Rwanda's GDP in 2017 and was worth 9,509 billion RWF in 2018. The Rwandan government plans to transition from a low to middle-income country and become a knowledge-based economy, focusing on increased agricultural productivity and employment. The Eastern African poultry sector is experiencing rapid growth due to urbanization, middle class growth, and increasing demand for animal protein. The Rwandan government has set a strategic goal to transform the poultry industry from a subsistence-based to a knowledge-intensive and market-oriented sector. The Livestock Master Plan aims to increase the number of hens from 5.2 million in 2016 to 7.1 million in 2026. The poultry sector in Rwanda offers significant opportunities for both foreign and local investors, particularly Dutch businesses operating in the sector. A cooperative has distributed 94024 chicks among 2,488 cooperative members, generating a total sales revenue of 1,122,803,760 Rwf from poultry products (meat and eggs).

1.1 Statement of the Problem

The evaluation of a project's achievement of its objectives and requirements in terms of scope, cost, and schedule, but project failure refers to a project that fails to fulfill its duties or expected actions, resulting in non-sustainable. For instance, project failure in Iraq due to lack of resources, complexity of project, poor communication, inaccurate (Albarzanji & Alsabawy, 2021); in Canada, poor business practices (Cooper, 2024); in Afghanistan the project's failure was attributed to various factors such as financial constraints, ineffective recruitment, external forces, and effective project leadership (Shafiei & Puttanna, 2021; in Kenya, project failed due to the lack of skills, solution design, project management (Munyare & Ochieng, 2022); in Tanzania, projects fail due to multiple design-reality gaps (Nyansiro et al., 2021).

In Rwanda, project failed due to various factors, for instance the Rwanda's poultry industry has experienced significant growth, with the number of farmers increasing from 15 in 2019 to 27 in 2021, and from 258 in 2022 to 265 in 2023. However, poultry farming is facing many challenges. Some of the constraints are specific to chicken reared under extensive production systems but others are common to both extensive and intensive chicken production systems. There are many challenges of rearing indigenous chicken, including, the low genetic potential of indigenous chicken, diseases, low input, feed scarcity, thieves, lack of trained personnel, poor housing (Mahoro et al., 2017). As result of this, project delays and budget overruns are caused by overlooking risks, inadequate information, and ineffective management, leading to cost overruns, completion delays, and termination before completion.

Few researches were studied on project management practices and project performance. Nkundimana and Dushimimana (2022) studied on project management practices and sustainability of an agricultural cooperative. The study revealed that agricultural cooperatives' performance was significantly influenced by various variables, monitoring and evaluation, stakeholder influence, and project leadership experience. Harerimana (2021) examined the contract management practices and performance of roads construction project. Those studies were limited because they are not assessing the project management practices on sustainability of poultry farming project, it is in this line, this study seeks to fill the research gap, therefore, this study sought to assess the project management practices on sustainability of poultry farming project.

1.2 Research objectives

i. To examine the effect of communication on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district;
ii. To investigate the effect of project planning on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district;
iii. To find out the effect of leadership on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district.

1.3 Research Hypotheses

H_{01} Project communication has no significant effect on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district;
H_{02} Project planning has no significant effect on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district;
H_{03} Project leadership styles have no significant effect on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district.

II. LITERATURE REVIEW

2.1 Theoretical Underpinning

The theoretical literature review helps identify existing theories, their relationships, investigation levels, and develop new hypotheses. This study focuses on the definition of theories, their usage, and research methods used to test these theories.

2.1.1 Participatory Communication Theory

Paulo Freire's Participatory Communication Theory, developed in 1970, promotes dialogue and consensus-building for sustainable development activities through two-way communication. It aims to empower the poor to formulate their own demands for a better life. The text defines 'participatory' as the opportunity for individual participation, and 'communication' as the process of conveying information from a sender to a receiver using a medium that ensures the message is understood by both parties.

According to Mefalopulos (2003) participatory communication is a theory and practice that involves people in decision-making in development processes. It originates from the Latin word communis, meaning common. The purpose of communication is to make something common or share meanings, perceptions, worldviews, or knowledge. Sharing implies an equitable division of what is being shared, promoting a balanced, two-way flow of information. Participatory communication theory is a model that involves all stakeholders in the development process from start to finish, aiming to promote social change.

Incio et al. (2021) the participatory communication is a crucial strategy for fostering citizenship. The author added that citizenship is constantly evolving, and it's essential to reconnect with participation for socio-cultural development. Communication plays a significant role in dynamizing social actors, and participatory communication approaches can help achieve social empowerment by dynamizing determining social behaviors. The participatory communication was used to explain the communication variable.

2.1.2 Planning Theory

The concept of applying scientific knowledge to improve society emerged in the 18th century. Over the past two centuries, planning theory in the United States has been shaped by intellectual influences from conservative ideology to utopianism and anarchism. The continuum of social values is divided into three parts (Alexander, 2022). On the extreme left, authors focus on confirming and reproducing existing power relationships, expressing technical concerns and claiming political neutrality. However, they actually serve the state and serve those in power, addressing their work to those in power.

Watson (2016) noted that Planning Theory is a theoretical framework that evaluates the relationship between planning practices, processes, and institutions, and the character of plans in urban and regional planning. Planning theory has evolved over time due to shifts in social and philosophical theory and the material world. Mukhopadhyay et al. (2021) noted that a recent'southern turn' in planning theory suggests a foundational shift towards theories acknowledging their situatedness in time and place, acknowledging the vast global difference in cities and regions. New southern theorizing in planning draws on ideas on societal conflict, informality, identity, and ethnicity. Postcolonialism and coloniality have provided a useful frame for situating places historically and geographically in relation to the rest of the

world. However, this shift is still considered a'southern theorizing project' in planning, rather than a new development of southern planning theory. The planning theory was used to explain the project planning variable.

2.1.3 Leadership Theory

Leadership theory explains the process and reasons behind leadership and the traits and behaviors that can enhance leadership abilities. Carlyle's "great man" theory, proposed in the mid-1800s, asserts that individuals are naturally gifted to lead and that extraordinary leaders significantly shape history. According to Benmira and Agboola (2021) healthcare organizations can benefit from contemporary leadership theories like collaborative, inclusive, and shared leadership, which blur the line between leader and follower, emphasizing the empowerment and development of followers. Compassionate leadership is relevant in-patient care, and complexity leadership theory can help the NHS navigate uncertain times by incorporating process-oriented, contextual, and interactive leadership at all levels. Healthcare professionals must recognize the most relevant leadership theory for their clinical practice and effectively apply these theories in the workplace (Salminen-Tuomaala & Seppälä, 2023).

Haslam et al. (2015) noted leadership is a constant topic of interest, debate, and speculation, with a widespread fascination with their intellectual and social development, defining psychological characteristics, and unique characteristics. These perspectives chart the historical development of thinking on leadership, with the classical perspective being "old," the contextual perspective being more "contemporary," and the identity perspective being relatively "new." It is crucial to understand the attraction of different approaches not only in relation to empirical data but also in relation to the prejudices and practices they support, such as those that seek to justify high executive salaries. Engaging with the political dimensions of leadership research is essential, as well as the psychological (Jago, 1982). The leadership theory aided the researcher to explain the project leadership variable.

2.2 Empirical Review

An empirical review is a thorough analysis of various aspects of a study, including project communication, project planning and project leadership on sustainability project.

2.2.1 Communication and Projet Sustainability

Barendsen et al. (2021) the study investigated the perceptions of team members regarding internal sustainability communication in sustainable project management. The study assessed the organization and perception of internal sustainability communication in sustainable project management. Based on a case study of a large infrastructure project in Sweden, data was collected through semi-structured interviews and internal project documents. The results show that there is no uniform understanding of sustainability among project team members and that different modes of sustainability communication are applied in a way that doesn't meet their needs, particularly regarding the frequency, used channels, and targeted audiences of sustainability communication measures. The research focused on team members regarding internal sustainability communication in sustainable project management.

Stumpf et al. (2019) discussed the concept of sustainable project management and the role of integrated communications (IC) in achieving this goal. The research and development projects often fail due to insufficient communication within and outside the organization. Integrated communications, a principle of sustainability communications, addresses these challenges by integrating contents, form, and timing within and between project and corporate communication. This contribution investigates whether these success factors can be applied to project communications and their influence on project success. Based on university projects, the conclusion offers recommended actions to facilitate sustainable project communications and recommends further research in this area. The goal is to ensure companies are on the same page and consistent in their communication about project contents. The study focused on communication and sustainable project management.

Owusu et al. (2020) examined the critical relationship between communication and sustainable development, asserting that effective communication is essential for community participation in development initiatives. It emphasizes that sustainable development projects must involve stakeholders who have a vested interest in the changes being implemented. The research, conducted in the Ejura Sekyedumase Municipality in Ghana, utilized an exploratory case study approach, focusing on four communities and three selected projects. Data were collected through surveys and focus group discussions with institutional and household heads. Findings indicate that development communication significantly enhances community engagement in projects, leading to increased resource commitment, including financial contributions, accommodation, information, and labor. Projects characterized by effective communication demonstrated superior operational and maintenance practices, resulting in better sustainability prospects compared to those lacking such communication. Furthermore, development communication plays a vital role in building local capacities through training and awareness initiatives, empowering communities to initiate, implement, and take ownership of local projects. The study concludes by recommending that communication should be prioritized in the planning, implementation, and monitoring phases of rural development projects to ensure their long-term sustainability.

Singirankabo and Wanjiku (2023) studied the impact of project communication practices on the sustainability of international non-governmental organizational projects in Rwanda. The research focuses on participatory communication, results-driven communication, and multi-channelled communication on the success of INGOs' projects. The study was guided by four theories: participatory communication theory, gratifications theory, goal-oriented communication theory, and implementation theory. The research targeted 170 workers involved in various projects in Rwanda, using stratified sampling and structured questionnaires and interviews. The results showed that participatory communication was significantly correlated with dialogue and consultation, project schedules, and project quality. Results-driven communication was associated with feedback on cost efficiency, project schedules, and project quality. Multi-channelled communication was significantly correlated with cohesiveness and consistency of multi-voiced messages and project schedules. The study focused on project communication and project sustainability.

2.2.2 Planning and Program Sustainability

Irfan et al. (2021) the study explored the impact of project planning and project manager competencies on the success of public sector projects in Pakistan. The study aimed to assess the role of planning and project manager competency in project success using the Project Management Institute's methodology. A survey of 260 project engineers from Balochistan's public sector organizations was conducted to understand the relationship between the constructs. Quantitative data was collected using the partial least squares structural equation modeling technique. The findings showed that planning and competency have a significant positive impact on the success of public sector projects. The failure of many public sector projects is often due to poor planning and project manager competency. The study focused on project planning and project managers.

Yang et al. (2020) studied on the influence of project planning on the integration of knowledge in construction projects in Japan. The study explores the role of knowledge management in construction organizations, focusing on the potential of unitizing project planning to enhance knowledge integration and project success. The research, based on survey data from 301 Chinese construction industry members, found that project planning can improve knowledge integration and facilitate project success. Knowledge integration plays a mediating role in this process. The study fills a gap in understanding how project planning contributes to construction project success and offers new theoretical guidance for enhancing knowledge integration in construction organizations, rather than establishing a complex knowledge management system. The study focused on project planning and construction project.

Ondiek (2020) influence of project planning on road construction projects performance in Kenya. The study involved 51 employees from 15 government road construction projects in Uasin Gishu County, with project managers participating as respondents. Primary data was collected through a questionnaire, with both qualitative and quantitative analysis. The study found a positive correlation between project planning and project success, with project time planning, project scope planning, and project cost planning, and project risk planning being the most significant factors. The four independent variables explained only 83.4% of the success of the road construction project. Project cost planning contributed the most to the success of the project, followed by project scope planning, project risk planning, and project time planning. The study focused on project planning and construction project performance.

Shenhar et al. (2023) studied on project planning unveiled, decoding its significance in shaping project success, a case of the skills development fund in Kigali, Rwanda. Projects have become essential tools for advancing societal and economic progress, especially in developing countries. Effective project planning is a cornerstone of project success, fostering comprehensive plans that serve as roadmaps during execution. The evolution of project planning principles and methodologies dates back to the 1960s and 1970s when governmental bodies, corporations, and educational institutions used project planning practices to manage complex, budget-bound, time-sensitive endeavors. The study focused on project planning and shaping project success.

2.2.3 Leadership and Project Sustainability

Fischer and Charef (2021) study discussed the concept of leadership in an agile project management environment in USA. The study explored leadership styles in agile project management teams and organizations, emphasizing the importance of selecting the right style for each contingency. Project managers play a crucial role in software development projects, where servant leadership is essential for creativity and agility. Traditional project management is structured, relying on planning and control. However, complex projects require more innovation, requiring leaders who can adapt their leadership style to meet the specific needs of the project. It emphasizes the need for managers to adapt their leadership styles to accommodate the amount of change and innovation expectations. Agile approaches are expanding due to their ability to respond quickly to the volatile, uncertain, complex, and ambiguous business environment. Hybrid project management solutions are emerging, requiring a combination of agile and traditional leadership approaches. The study focused on leadership in an agile project management environment.

Fokina et al. (2023) study investigated the role of leadership in project management in Russia. The study explored the significant role of leadership in project management, focusing on its impact on various stages of the process.

It uses various theoretical perspectives to understand leadership within project management, focusing on technical skills, interpersonal prowess, strategic thinking, and decision-making abilities. The review also examines the impact of different leadership styles (transformational, transactional, and situational) on project outcomes. Case studies are used to illustrate successful and unsuccessful leadership strategies. The review also discusses the challenges faced by project leaders and the best practices they can adopt to overcome these obstacles. It emphasizes the importance of nurturing future project leaders and the role of training and development programs in enhancing leadership skills. The study focused on leadership and project management.

Alade (2022) studied on development a leadership framework for improving construction business organization performance in South Africa. The study investigated the leadership traits, skills, role, style, and strategic decisions of construction leaders in South Africa, focusing on their impact on long-term performance and sustainability. A convergent mixed-method research design was used, with fifteen semi-structured interviews conducted with construction company leaders in the Western Cape. The survey instrument was pretested by construction company leaders before distribution to respondents, and the Cronbach Alpha test was used to test the reliability of the study responses. The data collected were analyzed using descriptive and inferential statistics, including Structural Equation Modeling (SEM), to validate the hypothesis that construction company leaders positively impact organizational performance through their strategic decisions on project management, change, innovation, and investment. The study also tested the hypothesis that strategic decisions mediate the relationship between construction companies' leadership components, characteristics, and organizational performance. The findings reveal that decisions on change and innovation have the most impact on preventing business failure and for construction organization performance. The study focused on leadership framework for improving construction business organization performance.

Theodora (2024) studied on exploring the impact of leadership on employee performance within the Rwanda Revenue Authority. A multiple linear regression model was used, with a descriptive research design providing first-hand primary data. The objectives were to establish the effect of leadership personality, leadership styles, leaders' competency, and leaders' commitment on employee performance. The target population consisted of 1248 staff members, selected through purposive sampling. Data was collected from both primary and secondary sources. 269 questionnaires were distributed to respondents, with 265 submitting responses. 56.2% of respondents strongly agreed that leaders at RRA are considerate when dealing with subordinates, motivating staff to work and meet deadlines. 25.7% of respondents believed leaders live a life of integrity, inspiring workers to provide quality work. 62.3% agreed that transformational leadership style assists employees in meeting deadlines, while 12.1% agreed that transactional leadership contributes to quality of work. 63.8% of respondents agreed that leaders at RRA exhibit work expertise, making employees excel in meeting deadlines. 32.5% of respondents strongly agreed that leaders at RRA are results-oriented, encouraging employees to strive for departmental goals. 67.5% of respondents agreed with these statements, and none were undecided or strongly disagreed with them. The study focused on leadership and employee performance.

III. METHODOLOGY

3.1 Research Design

The study adopted descriptive and correlational research design. Descriptive research is suitable for describing the characteristics of specific groups, estimating the extent of individuals possessing certain traits, and making predictions. It is a research method that accurately describes existing phenomena, distinguishing it from experiment research which observes phenomena after a certain period of treatment (Atmowardoyo, 2018). While, a correlational research design investigates the relationships between variables without manipulating them, aiming to identify variables with a relationship where a change in one variable leads to a change in the other (Seeram, 2019).

3.2 Population and Sampling

The target population of the present study was 2,497 people involved in sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. The targeted respondents were manager, veterinary, cashier, caretakers, promoters and members. The sample size is crucial for ensuring the representativeness of the sample for generalization. The study used simple random sampling to select respondents. The study employed sample size formula by Taro Yamane assuming an error term of 10%.

$n=N/((1+N(e)^2)$

n=2,497/((1+2,497*(0.1*0.1))

n=96.149= 96

The sample size was 96 respondents. They are categorized by 1 manager, 1 veterinary, 1 cashier, 1 caretaker, 1 promoter and 91 beneficiaries.

3.3 Research Instruments

The research utilized primary data collected through questionnaires, which was the most practical method due to its applicability and suitability to the research problem and population size. The questionnaire was structured into two sections whereby the Section A collected data from respondent regarding to demographic profile. While Section B collected from respondents regarding to effect of project management practices and project performance. This study used also Likert scale from 1-5 whereby 1=strongly disagree, 2=disagree, 3=neutral, 4= agree and 5= strongly agree.

3.4 Data Analysis Methods

This study involved critical examination of coded data and inferences, along with quantitative analysis. The data were presented using tables to establish the relationship between the independent and dependent variables. The quantitative data will be coded using Package for Social Sciences (SPSS 25.0) to categorize responses into groups.

Descriptive statistics like frequencies, percentages, mean and standard deviation were used to summarize data, with tables being used for successful interpretation of findings. The association among variables were established using inferential statistics through a multiple regression model and correlation analysis.

IV. FINDINGS & DISCUSSION

The general objective of the current study was to assess the project management practices on sustainability project. The study outlines three specific objectives related to the sustainability of the poultry farming project managed by COOPRORIZ NTENDE in Gatsibo district. Firstly, it aims to examine how communication influences the sustainability of the project. Secondly, the investigation focuses on the impact of project planning on sustainability. Lastly, it seeks to explore the effect of leadership on the sustainability of the poultry farming initiative.

4.1 Demographic Characteristics of the Respondents

The results provided tables to present descriptive information about study respondents, focusing on demographic factors like age, gender, education, and working experience. The analysis evaluates how these factors correlate with participants' knowledge and comprehension of the study's focus. This structured approach helps understand participants' backgrounds and potential influence on the study's findings, providing a clearer understanding of the participants' backgrounds.

Table 1

Response Rate

Response	Frequency	Percent
Returned and complete	96	100.0
Returned and incomplete	0	0.0
Unreturned	0	0.0
Total	**96**	**100.0**

Table 1 indicates the response rate of respondents. Out of 96 questionnaires distributed to the respondents, 96 questionnaires were filled, returned and complete. The response rate is indicated to be 100%. This suggests that every individual approached for a response has provided feedback. Such a high response rate is significant as it reflects complete engagement from the target audience. The researcher effectively communicated the study's significance and provided instructions on completing the questionnaire to respondents who were struggling with it.

Table 2

Gender of Respondents

Gender	Frequency	Percent
Male	49	51.0
Female	47	49.0
Total	**96**	**100.0**

Table 2 shows the findings of gender of respondents. Out of 96 respondents, 51.0% of respondents were male, while 49.0% of respondents were female. The majority is male in this study. Understanding gender diversity among participants is crucial as it can reveal potential variations in the perception and utilization of project managers' practices. Additionally, gender dynamics may shape the decision-making processes within projects. Understanding these gender-related factors is crucial for designing effective sustainability initiatives that engage all stakeholders and address specific needs.

Table 3
Age group of respondents

Age Group	Frequency	Percent
Between 18-30 years	18	18.8
Between 31-40 years	13	13.5
Between 41-50 years	45	46.9
51 years and above	20	20.8
Total	**96**	**100.0**

Table 3 shows the findings of age group of respondents. Out of 96 respondents, the majority (46.9%) of respondents is aged between 41-50 years, 20.8% of respondents were aged 51 years and above, 18.8% of respondents were aged between 18-30 years and 13.5% of respondents were aged between 31-40 years. The study highlights the importance of age in shaping individuals' preferences, knowledge, and behaviors. It emphasizes the transformation of interests as people progress through life stages, which is crucial for understanding human experience and decision-making.

Table 4
Educational Level of Respondents

	Frequency	Percent
Primary	56	58.3
Secondary	28	29.2
Bachelor	11	11.5
Master	1	1.0
Total	**96**	**100.0**

Table 4 outlines the educational level distribution of respondents. The study indicates that among 96 respondents, 58.3% have a primary school as educational level, 29.2% of respondents have secondary school as educational level, and 11.5% have bachelor's degree and 1.0% attained master's degree. The educational background of the individuals in question is predominantly limited to primary school education. This lack of advanced education may impede their ability to grasp the complex dynamics between the soft skills of project managers and the resulting outcomes of projects.

Table 5
Marital Status of Respondents

Marital Status	Frequency	Percent
Single	24	25.0
Married	65	67.7
Widow(er)	5	5.2
Divorced	2	2.1
Total	**96**	**100.0**

Table 5 shows the findings of marital status of respondents. The study designates that among 96 respondents, 67.7% of respondents were married, 25.0% of respondents were singles, 5.2% of respondents were widow(er), and 2.1% of respondents were divorced. The role of marital status in sustainability projects can significantly influence participation and engagement levels. Individuals who are married may exhibit different motivations and responsibilities compared to single individuals, impacting their involvement in sustainability initiatives. Married couples often collaborate on sustainability efforts, pooling resources and sharing responsibilities, which can enhance project outcomes. Additionally, marital status may affect the perception of sustainability issues, with married individuals potentially prioritizing long-term benefits for family stability. The marital status serves as an important factor in shaping attitudes and behaviors towards sustainability projects.

Table 6
Work Experience of Respondents

Work Experience	Frequency	Percent
Below 2 years	47	49.0
Between 2-5 years	27	28.1
6 years and above	22	22.9
Total	**96**	**100.0**

Table 6 presents the findings of work experience of respondents. Out of 96 respondents, 49.9% of respondents had work experience below 2 years, 28.1% of respondents had work experience between 2-5 years and 22.9% of respondents had work experience 6 years and above. Work experience is crucial in research studies as it provides practical context, enhances understanding of real-world applications, and enables researchers to identify industry-specific questions. It also informs studies based on established practices, increasing the relevance and applicability of findings.

4.2 Descriptive statistics

The mean and standard deviation were used to display the distribution of respondents' Likert scale ratings for different propositions. Respondents were asked to rate their level of agreement or disagreement using a 5-point scale, where 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5 for Strongly Agree. The mean values were then interpreted within specific ranges: from 0.01 to 1.00 as very low mean, 1.01 to 2.00 as low mean, 2.01 to 3.00 as neutral, 3.01 to 4.00 as high mean, and 4.01 to 5.00 as very high mean. The data's homogeneity or heterogeneity was determined by examining the standard deviation, with data categorized as homogenous if the standard deviation is less than or equal to 0.5, and heterogeneous if it exceeds 0.5.

Table 7

Communication and Sustainability of Poultry Farming Project Implemented by COOPRORIZ NTENDE in Gatsibo district

Statement	Mean	Std. Dev.
Project information is identified as needed	3.87	1.207
Project information is shared to all stakeholders	3.88	1.233
All stakeholders are provided feedback	3.81	1.117
Project managers are used adequate communication channels	3.98	1.214
Overall	**3.88**	**1.192**

Table 7 above outlines the descriptive findings on the effect of communication on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Respondents agreed with the statement that project information is identified as needed, as designated by high mean score of 3.87. This shows a strong positive agreement among the respondents. The response data show standard deviation of 1.207, signifying a significant degree of heterogeneity among participants. Similarly, respondents expressed agreement the statement that project information is shared to all stakeholders, with high mean score of 3.88. This mean score indicates strong positive agreement. The standard deviation of 1.233 signifies a heterogeneous response pattern.

Furthermore, the high mean score of 3.81 for the statement that all stakeholders are provided feedback designates a strong level of positive agreement among participants. The standard deviation of 1.117 indicates some heterogeneity in opinions among respondents. On the statement that the project managers are used adequate communication channels, the high mean score of 3.98 signifies strong positive agreement, but the standard deviation of 1.214 shows heterogeneity in responses.

The overall high mean score of 3.88 for the combined statements an overall strong positive perception that there is effect of communication on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, with a standard deviation of 1.192, indicating heterogeneity in opinions among the respondents. The findings are supported by Stumpf et al. (2019) showed the importance of sustainable project management and the role of integrated communication in achieving this goal. Incio et al. (2021) the participatory communication is a crucial strategy for fostering citizenship. The author added that citizenship is constantly evolving, and it's essential to reconnect with participation for socio-cultural development. Communication plays a significant role in dynamizing social actors, and participatory communication approaches can help achieve social empowerment by dynamizing determining social behaviors.

The findings confirm the Participatory Communication Theory as it involves people in decision-making in development processes. In the context of sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, project managers used information needs, sharing information and providing project feedback with all stakeholders.

Table 8

Project Planning and Sustainability of Poultry Farming Project Implemented by COOPRORIZ NTENDE in Gatsibo district

Statement	Mean	Std. Dev.
Risks are planned to ensure project performance	3.88	1.225
Scope is planned to ensure project performance	3.87	1.316
Resources are planned to ensure project performance	3.83	1.287
Budget is planned to ensure project performance	3.94	1.296
Overall	**3.88**	**1.281**

Table 8 presents the descriptive findings on effect of project planning on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Respondents agreed with the statement that risks are planned to ensure project performance, as designated by high mean score of 3.88. This shows a strong positive agreement among the respondents. The response data show standard deviation of 1.225, signifying a significant degree of heterogeneity among participants. Similarly, respondents expressed agreement the statement that scope is planned to ensure project performance, with high mean score of 3.87. This mean score indicates strong positive agreement. The standard deviation of 1.316 signifies a heterogeneous response pattern.

Furthermore, the high mean score of 3.83 for the statement that resources are planned to ensure project performance designates a strong level of positive agreement among participants. The standard deviation of 1.287 indicates some heterogeneity in opinions among respondents. On the statement that budget is planned to ensure project performance, the high mean score of 3.94 signifies strong positive agreement, but the standard deviation of 1.296 shows heterogeneity in responses.

The overall high mean score of 3.88 for the combined statements an overall strong positive perception that there is effect of project planning on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, with a standard deviation of 1.281, indicating heterogeneity in opinions among the respondents. The findings align with the emphasis of Fazly et al. (2024) posited that there is influence of project planning and risk management on project success in Afghanistan's construction sector, highlighting the moderating role of project managers' competencies.

According to the authors, the project planning is crucial as it forms the steps for successful project completion, preventing potential issues and roadblocks, and ensuring the project remains on track.

The findings confirm the Planning Theory as it is a theoretical framework that evaluates the relationship between planning practices, processes, and institutions, and the character of plans in urban and regional planning. In the context of sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, project managers used risk planning, scope planning and resources planning for sustainability of poultry farming project.

Table 9

Project leadership and sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district

Statement	Mean	Std. Dev.
Transformational leadership is used by the managers to ensure project performance	3.80	1.278
Autocratic leadership is used by managers to ensure project performance	3.83	1.167
Democratic leadership is used by managers to ensure project performance	3.96	1.230
Free-rein leadership is used by managers to ensure project performance	3.83	1.176
Overall	**3.85**	**1.212**

Table 9 above presents the descriptive findings on effect of project leadership on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Respondents agreed with the statement that transformational leadership is used by the managers to ensure project performance as indicated by the mean score of 3.80 (SD=1.278). The high mean indicates a strong positive agreement, and the standard deviation shows heterogeneity in responses. Additionally, the respondents pointed out an agreement that autocratic leadership is used by managers to ensure project performance, with a mean score of 3.83 (SD=1.167). The high mean indicates a strong positive agreement, and the standard deviation highlights heterogeneity in responses among participants.

Moreover, the high mean score of 3.96 (SD=1.230) for the statement that democratic leadership is used by managers to ensure project performance signifies a strong positive agreement among respondents, with a standard deviation showing some heterogeneity in opinions. Lastly, for the statement that free-rein leadership is used by managers to ensure project performance, the high mean score of 3.83 (SD=1.176) signifies a strong positive agreement and the standard deviation shows some heterogeneity in responses.

The overall high mean score of 3.85 for the combined statements an overall strong positive agreement that there is effect of project leadership on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, with a standard deviation of 1.212, indicating some heterogeneity in opinions among the respondents. The findings are supported by Rogito and Nyamota (2022) project leadership fosters teamwork and collaboration, enabling individuals to achieve a common goal, ensuring greater accomplishments than individual efforts. It establishes clear goals and assists employees in executing them, fostering a unified purpose and direction within the organization.

The findings confirm leadership theory as it provides collaboration, teamwork, inspiration in line between leader and follower, emphasizing the empowerment and development of followers. In the context of sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, project managers used this theory by inspires personal growth and exceeds expectations by sharing a clear vision, having complete control over decisions and makes them without input from others.

Table 10

Sustainability of Poultry Farming Project Implemented by COOPRORIZ NTENDE in Gatsibo District

Statement	Mean	Std. Dev.
Project tasks are performed as per goal set	3.90	1.192
Project tasks are performed as per time set	3.87	1.199
Project tasks are performed as per quality standard	3.71	1.264
Project tasks are performed as per quality standard	3.89	1.195
Overall	**3.84**	**1.212**

Table 10 presents the descriptive findings on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Respondents agreed with the statement that project tasks are performed as per goal set, as indicated by the mean score of 3.90 (SD=1.192). The high mean indicates a strong positive agreement, and the standard deviation shows heterogeneity in responses. Additionally, the respondents pointed out an agreement that project tasks are performed as per time set, with a mean score of 3.87 (SD=1.199). The high mean indicates a strong positive agreement, and the standard deviation highlights heterogeneity in responses among participants.

Moreover, the high mean score of 3.71 (SD=1.264) for the statement that project tasks are performed as per quality standard signifies a strong positive agreement among respondents, with a standard deviation showing some heterogeneity in opinions. Lastly, for the statement that project tasks are performed as per quality standard, the high mean score of 3.89 (SD=1.195) signifies a strong positive agreement and the standard deviation shows some heterogeneity in responses.

The overall high mean score of 3.84 for the combined statements an overall strong positive agreement that there is sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, with a standard deviation of 1.212, indicating some heterogeneity in opinions among the respondents. The findings align with the emphasis of Stevens (2016) noted that most significant impact on project sustainability is achieved when the cost budget is not met, technical quality standards are not met, customization is not achieved, safety is not met, and delivery is delayed. Nunes et al. (2021) added that successful project's sustainability is achieved when all parties involved achieve their targets together or individually.

4.3 Inferential Statistics

The inferential statistics like hypotheses testing, correlation and regression analysis were utilized to analyze data and determine the relationship level between independent and dependent variables. The study was guided by null hypotheses: H01 Communication has no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district; H02 Project planning has no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district; and H03 Leadership styles have no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district.

Table 11

Correlational Matrix

		Project Sustainability	Project Communication	Project Planning	Project Leadership
Project sustainability	Pearson Correlation	1	.764**	.808**	.840**
	Sig. (2-tailed)		.000	.000	.000
	N	96	96	96	96
Project communication	Pearson Correlation	.764**	1	.729**	.715**
	Sig. (2-tailed)	.000		.000	.000
	N	96	96	96	96
Project planning	Pearson Correlation	.808**	.729**	1	.761**
	Sig. (2-tailed)	.000	.000		.000
	N	96	96	96	96
Project leadership	Pearson Correlation	.840**	.715**	.761**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	96	96	96	96

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

Table 11 shows the correlation matrix. The results indicate positive relationships between each project management practices (project communication, project planning and project leadership) and sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district.

Specifically, project communication shows a positive relationship (r=0.764, p=0.000<0.01), designating that increased employing of project communication is associated with improved sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. In addition, project planning indicates a positive relationship (r=808, p=0.000<0.01), signifying that enhanced project planning is linked with higher level sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Lastly, project leadership displays strong positive association (r=840, p=0.000<0.01), indicating that greater project leadership corresponds to heightened sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. The findings are in agreement with a study Barbosa et al. (2021) asserted that the optimizing project management practices significantly improve the project sustainability in Brazil. Unegbu et al. (2022) added that management practices are important in projects as they define work requirements, project sustainability indicators, scope, stakeholder resource allocation, execution planning, monitor progress, and adjust initial plans during project implementation, ensuring smooth execution and effective planning.

Table 12

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891[a]	.794	.787	.50584

a. Predictors: (Constant), Project leadership, Project communication, Project planning

Table 12 shows the Model Summary for the regression analysis. The R value of 0.891 signifies a strong positive relationship between the predictors (project communication, project planning and project leadership) and dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district).

The R Square value of 0.764 indicates that approximately 76.4% of the variability in the dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district) can be explained by the independent variables in the model. The findings are supported by Lotfi et al. (2022) asserted that project management practices are important for ensuring project quality and performance, as they ensure deliverables meet expectations and processes are efficient.

Table 13

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.474	3	30.158	117.860	.000[b]
	Residual	23.541	93	.253		
	Total	**114.015**	**96**			

a. Dependent Variable: Project sustainability

b. Predictors: (Constant), Project leadership, Project communication, Project planning

Table 13 presents the findings of Analysis of variance (ANOVA). The results indicate a significant F-statistic of 117.860 (p=0.000). The F-statistic assesses the overall significance of the regression model, testing whether there is a significance difference between the model with predictors (project communication, project planning and project leadership) and dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district).

In this case, the small p-value (p=0.000<0.05) associated with the F-statistic signifies that the predictors (project communication, project planning and project leadership) jointly have a significant effect on explaining the variance in the dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district). The findings align with a study of Unegbu et al. (2022) asserted that management practices are important in projects as they define work requirements, project sustainability indicators, scope, stakeholder resource allocation, execution planning, monitor progress, and adjust initial plans during project implementation, ensuring smooth execution and effective planning.

Table 14

Coffecients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.092	.214		.429	.669
	Project communication	.239	.081	.220	2.950	.004
	Project planning	.281	.073	.305	3.849	.000
	Project leadership	.449	.078	.451	5.756	.000

a. Dependent Variable: Project sustainability

The study adopted following model:

Y=b0+b1X1+b2X2+b3X3+e

Therefore, the dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district) = 0.092 + 0.239 (project communication) + 0.281 (project planning) + 0.449 (project leadership) + 0.214.

Table 14 presents the coefficients for the regression model predicting dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district) based on the predictors such as project communication, project planning and project leadership. The constant term has an unstandardized coefficient (B) of 0.092 with a standard error of 0.214 (p=0.669>0.05).

Regarding to the predictors, all predictors show statistically significant relationships with dependent variable (sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district). Specifically, for every-one unit increase in the project communication, there is a 0.239 unit increase in the sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Further, there is significant effect (p=0.004<0.05) of project communication on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Moreover, the null hypothesis that H01 project communication has no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, therefore, this hypothesis is rejected.

Similarly, project planning demonstrates a positive effect, with a 0.281 unit increase in the sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district for every-one unit increase in project planning. Additionally, there is significant effect (p=0.000<0.05) of project planning on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Further, the null hypothesis that H02 Project planning has no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, therefore, this hypothesis is rejected.

Lastly, for every-one unit increase in the project leadership, there is a 0.449 unit increase in the sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Further, there is significant effect (p=0.000<0.05) of project leadership on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district. Moreover, the null hypothesis that H01 project leadership has no significant effect on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district, therefore, this hypothesis is rejected.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study aimed to evaluate project management practices in a sustainability project, specifically examining the impact of communication, project planning, and leadership on the sustainability of a poultry farming project

implemented by COOPRORIZ NTENDE in Gatsibo district. The research aims to provide insights into the effectiveness of these practices in effectiveness sustainability in poultry farming projects.

Firstly, the study examined the effect of communication on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district. In this regard, the study concludes that there is effect of communication on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district.

Secondly, the study investigated the effect of project planning on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district. In this wise, it concludes that there is also effect of project planning on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district.

Lastly, the study found out the effect of leadership on sustainability of poultry farming project of COOPRORIZ NTENDE at Gatsibo district. In this regard, it concludes that there is effect of project leadership on sustainability of poultry farming project implemented by COOPRORIZ NTENDE in Gatsibo district.

5.2 Recommendations

The study investigated the impact of communication on the sustainability of the poultry farming project managed by COOPRORIZ NTENDE in the Gatsibo district. It concluded that effective communication significantly influences the sustainability of this poultry farming initiative. In this wise the study recommends that managers should regular ask feedback communication among project managers, team members, and stakeholders to effectively address challenges and sustain project momentum.

The study examined the impact of project planning on the sustainability of the poultry farming project conducted by COOPRORIZ NTENDE in Gatsibo district. It concluded that effective project planning significantly influences the sustainability of the poultry farming initiative. This finding highlights the importance of strategic planning in enhancing the long-term viability of agricultural projects. In this regard, the study recommends that managers should establish a realistic timeline with milestones allows for better tracking of progress and facilitates timely adjustments as needed.

The study also examined the impact of leadership on the sustainability of the poultry farming project managed by COOPRORIZ NTENDE in Gatsibo district. It concluded that effective project leadership significantly influences the sustainability of the poultry farming initiative. In this wise, the study recommends project managers to involve guideline for a team towards achieving specific goals while managing resources effectively. In this regard, project leaders demonstrate adaptability, allowing them to navigate challenges and changes in project scope or direction.

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