



Effect of Project Leadership on the Performance of Kinazi Dairy Project, Rwanda

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Abstract: The general objective of this study was to examine the effect of project leadership on the performance of Kinazi Dairy Project in Rwanda. The study specifically assessed the influence of participative leadership, transformational leadership, situational leadership, and transactional leadership on project performance. A descriptive and correlational research design was adopted to describe existing leadership practices and to determine relationships between leadership styles and project performance. A census technique was applied to include the entire population. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 29. The regression findings revealed that participative leadership had a positive and significant effect on performance of Kinazi Dairy Project in Rwanda with $B = 0.221$, $t = 4.233$, and $p = 0.000$. Transformational leadership also had a positive and significant effect on performance of Kinazi Dairy Project with $B = 0.324$, $t = 6.977$, and $p = 0.000$. Situational leadership had a positive and significant effect on performance of Kinazi Dairy Project with $B = 0.309$, $t = 7.043$, and $p = 0.000$. Transactional leadership also had a positive and significant effect on performance of Kinazi Dairy Project with $B = 0.107$, $t = 2.139$, and $p = 0.034$. The study concluded that participative leadership, transformational leadership, situational leadership, and transactional leadership significantly improve performance of Kinazi Dairy Project in Rwanda. Therefore, Kinazi Dairy Project should strengthen leadership practices through staff participation, motivation, flexible leadership, clear expectations, and recognition of achievement to improve project performance.

Keywords: Project Leadership, Participative Leadership, Transformational Leadership, Situational Leadership, Transactional Leadership, Project Performance

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1. Introduction

Project leadership defines the strategic application of management competencies to coordinate complex activities within the livestock production sector globally. Success of these initiatives depends on the capacity of managers to harmonize available resources and team capabilities to achieve high productivity levels in milk production. Theoretical models emphasize the transition from purely technical oversight to strategic guidance to satisfy the rising global demand for nutritious food products. Conceptualizing leadership in this sector requires an appreciation for the integration of human capital management and operational efficiency standards at the farm level. Effective coordination of these

management elements determines the trajectory of modern agricultural projects across diverse national contexts through the implementation of structured leadership frameworks (Kiende, 2024).

Smallholder dairy productivity in Kenya is closely linked to effective project coordination and strong internal controls. Leadership styles that prioritize the efficient allocation of resources and consistent monitoring lead to higher milk output levels in Migori County. Managers face the continuous task of integrating traditional farming practices with modern global efficiency and quality standards. Performance of these rural initiatives improves significantly when the project heads demonstrate a clear and documented strategic direction.

Strengthening management capacities forms the basis for the sustainable growth of the national dairy industry and poverty reduction (Achar, 2025).

Project leadership within Rwanda's dairy sector faces hurdles in strategic planning. Success stays elusive as managers fail to align objectives with rural constraints. Failure to integrate community engagement with resource management undermines sustainability. High professional commitment remains a requirement to translate planning into measurable growth (Simbarikure & Gachiri, 2025).

Administrative failures in scope and risk management destabilize performance in highland regions. Leaders struggle with changing requirements causing operational disruptions. Planning practices account for 63.1% of performance variance yet success depends on real-time decisions rather than strict adherence to monitoring protocols (Hatumimana & Dushimimana, 2024).

National setbacks in digitalization and schedule management exacerbate these issues. Coordination gaps resulted in 0% significant progress for digital monitoring systems. Livestock distribution reached only 68% of its target through weak synchronization between central authorities and local managers (International Fund for Agricultural Development [IFAD], 2025).

Technical guidance failures lead to poor quality control. Analysis shows 34.2% of milk samples show high somatic cell counts and 12.9% contain antibiotic residues through weak oversight of biosecurity. This breakdown reduces the marketability of dairy products produced within development projects (Mpatswenumugabo, 2024).

Lack of leadership experience in cooperatives limits stakeholder coordination. Management fails to mitigate failures inherent in partnership models. Organizations continue under individuals lacking training causing operational stagnation. This leadership vacuum prevents the achievement of collective bargaining and financial inclusion goals (Karinganire et al., 2024).

Leaders neglect professionalized market integration despite dairy contributing 10.5% to agricultural GDP. A knowledge gap persists regarding how specific leadership styles bridge the divide between rural production and professional value chains. This study investigates project leadership to fill this critical management knowledge gap (Kayondo & Gachiri, 2025).

Previous studies such as Simbarikure and Gachiri (2025), Hatumimana and Dushimimana (2024), Ndayisenga and Irechukwu (2025), and IFAD (2025) focus on administrative frameworks and national dairy supervision. Research by Mpatswenumugabo (2024), Karinganire et al. (2024), and Kayondo and Gachiri

(2025) addresses biosecurity and cooperative leadership. While these provide valuable evidence, they do not address the specific influence of project leadership competencies on operational success within specialized industrial dairy processing entities. This study addresses this knowledge gap by examining the effect of project leadership on performance within specialized dairy projects, using Kinazi Dairy Project as the case study.

1.1 Objectives of the Study

The general objective of this study was to examine the effect of project leadership on performance of Kinazi Dairy Project in Rwanda.

1. To investigate the effect of participative leadership on performance of Kinazi Dairy Project.
2. To assess the effect of transformational leadership on performance of Kinazi Dairy Project.
3. To evaluate the effect of situational leadership on performance of Kinazi Dairy Project.
4. To analyze the effect of transactional leadership on performance of Kinazi Dairy Project.

2. Literature Review

It provides an analytical discussion of key theories and models linked to the study and identifies research gaps that establish the justification for the current investigation.

2.1 Theoretical Review

The study was informed by Social Exchange Theory, Theory of Change, Contingency Theory, and Goal-Setting Theory.

2.1.1 Social Exchange Theory (SET)

Social Exchange Theory (SET), first developed by George Homans in 1958, has been recently reinterpreted to suit modern organizational and digital contexts. It is now viewed as a flexible framework rather than a single theory, focusing on how individuals and organizations engage in exchanges where perceived benefits outweigh costs (Wallenburg & Handfield, 2022).

The study applied Social Exchange Theory to explain how participative leadership in Kinazi Dairy Project encouraged trust, mutual respect, and cooperation. When leaders involved employees in decisions, it built reciprocal relationships. These exchanges improved job satisfaction, strengthened commitment, and enhanced overall performance in the Kinazi Dairy Project context.

2.1.1 Theory of Change

The Theory of Change was introduced in 1995 by Carol

Weiss to describe how specific actions lead to intended outcomes through a clear sequence of steps. It outlines the connections between inputs, activities, outputs, and longer-term goals, while making the underlying assumptions visible. This structure helps organize planning, test logic, and improve accountability (Mackey et al., 2023).

The study used the Theory of Change to assess how transformational leadership in Kinazi Dairy Project influenced performance through structured planning. By linking vision, actions, and expected outcomes, this theory helped explain how leaders inspired employees, aligned processes, and achieved measurable results across the Kinazi Dairy Project operations.

2.1.3 Contingency Theory

Contingency Theory was introduced by Fred Fiedler in 1964 to explain that there is no single best way to lead or make decisions. Instead, effective leadership and management depend on aligning actions with situational factors such as organizational size, structure, and the relationship between leaders and their teams. This theory emphasizes flexibility and the importance of choosing strategies that suit specific contexts, rather than following fixed rules (Mark & Erude, 2023).

The study applied Contingency Theory to evaluate how situational leadership improved performance in Kinazi Dairy Project. The theory explained that leaders adapted strategies based on team needs and environmental demands. In Kinazi Dairy's dynamic setting, flexible leadership enabled effective decision-making and better alignment with operational challenges.

2.1.4 Goal-Setting Theory

Goal-Setting Theory, developed by Edwin Locke in 1990, explains that people perform better when they pursue specific and challenging goals. Clear goals direct attention, increase effort, support persistence, and help people find effective ways to reach targets. When goals are too vague or too easy, motivation drops, and progress slows (Cheng, 2023).

The study used Goal-Setting Theory to analyze how transactional leadership impacted performance in Kinazi Dairy Project through clearly defined goals. When leaders set specific and challenging targets tied to rewards, employees stayed focused and motivated. This structure enhanced productivity and supported accountability within Kinazi Dairy Project teams.

2.2 Empirical Review

This section focuses on examining published studies, peer-reviewed articles, and related scholarly work to gather and synthesize existing empirical evidence on the topic under investigation.

2.2.1 Participative Leadership and Performance of Project

Ochieng et al. (2023) investigated the influence of participative leadership on the performance of manufacturing small and medium enterprises in Nairobi County. A descriptive correlational design was applied, targeting a sample of 369 managers selected through stratified random sampling. Binary logistic regression showed that participative leadership accounted for 6.9% of the variance in organizational performance, with a significant result ($\beta = 2.901$, $p = .000$). The null hypothesis was rejected, confirming a positive relationship between participative leadership and performance. The study recommended broader geographic coverage and the inclusion of demographic variables for extended analysis.

Ingabire (2025) assessed the effect of leadership styles on project performance within Rwanda's Urban Economic Development Initiative Project using a mixed-methods design. Data were obtained from managers, employees, and stakeholders through surveys, interviews, and document reviews. The findings showed that transformational leadership improved motivation, creativity, and team output, leading to enhanced project performance. Transactional leadership supported accountability through structured procedures and reward systems. Autocratic leadership contributed to low morale and implementation delays. The study recommended adopting a hybrid leadership model that applies the benefits of transformational and transactional styles while reducing the drawbacks of autocratic leadership.

2.2.2 Transformational Leadership and Performance of Project

Fareed et al. (2023) examined the impact of transformational leadership on project success through the mediating role of psychological empowerment. A structured questionnaire was distributed among 356 project managers, team members, and stakeholders. The results confirmed that psychological empowerment and transformational leadership both had a direct positive effect on project success. Additionally, psychological empowerment partially mediated this relationship. The study applied social cognitive theory to explain how empowerment functions as a critical mechanism. The findings confirmed that leadership behaviors aligned with empowerment processes can enhance the effectiveness of project teams and overall success outcomes.

Altaher et al. (2024) evaluated the effect of leadership styles on project success through the mediating role of team collaboration. The sample included 202 respondents across Jordan, Saudi Arabia, China, Australia, and the United Arab Emirates. Partial least squares structural equation modeling confirmed that both transformational and transactional leadership had a

positive effect on project success. Laissez-faire leadership negatively influenced team collaboration and showed no direct link to project success. Team collaboration was identified as a mediator for both transformational and transactional styles. The findings validated the importance of leadership style in shaping collaborative processes that influence outcomes.

2.2.3 Situational Leadership and Performance of Project

Princes and Said (2022) examined the influence of project complexity, trust in leader, performance readiness, and situational leadership on financial sustainability in project environments. Using a quantitative design, data were gathered from 91 valid responses among Project Management Institute members in Indonesia. PLS-SEM was employed to test eight hypotheses. The findings confirmed that performance readiness, situational leadership, and trust in leaders each had a positive and significant effect on financial sustainability. These variables collectively improved the ability to manage complexity. The results aligned with complexity theory, confirming that adaptive leadership approaches enhance project financial outcomes under complex conditions.

Murayire (2024) evaluated leadership factors influencing employee performance at Rwanda Revenue Authority through a quantitative design. Data were collected from 265 respondents using structured questionnaires. Among participants, 67.5% agreed that leaders were result-oriented, while 64.5% agreed that leadership expertise enhanced employee ability to meet deadlines. Additionally, 62.3% confirmed the application of transformational leadership, and 86.8% affirmed the use of transactional leadership to ensure work quality. The study applied SPSS version 23 for analysis. Leadership personality, style, competence, and commitment were each found to significantly affect employee outcomes, reinforcing the importance of strong leadership in public service performance.

2.2.4 Transactional Leadership and Performance of Project

Donkor et al. (2022) investigated the influence of transformational and transactional leadership on employee performance in Ghana's public sector using employee stewardship theory and social exchange theory. Data were collected from 330 full-time employees across 16 organizations. Findings showed that transformational leadership, when combined with high organizational commitment, improved employee performance. Conversely, transactional leadership weakened commitment and had a lower effect on performance. The study highlighted that commitment plays a key moderating role. Leaders who apply transformational practices in public service organizations contributed more to performance

outcomes than those who relied solely on transactional approaches.

Uwingeneye and Amolo (2025) evaluated the impact of leadership styles on agro-processing project performance in Musanze District, Rwanda. The study used descriptive and correlational research methods with data from 208 participants. Regression analysis showed that laissez-faire ($p = 0.000$), transformational ($p = 0.000$), and transactional ($p = 0.000$) leadership styles each had a significant effect on project performance. The research was guided using resource-based view theory. Leadership behaviors were assessed using structured questionnaires, and data were analyzed using Stata 13.0. The study confirmed that applying multiple leadership styles supported project sustainability and improved outcomes in agricultural initiatives.

2.3 Research Gap

While several studies have examined the influence of participative leadership on organizational outcomes, there is limited research specifically addressing how participative leadership affects project performance in Rwanda's agricultural sector, particularly in the Kinazi Dairy Project. Wang et al. (2022) and Riza et al. (2025) explored participative leadership's role in decision-making and innovation within universities and corporate settings, but their findings did not focus on agriculture-based projects or rural development programs in Rwanda. Ochieng et al. (2023) provided statistical support for participative leadership in SMEs yet did not link these practices to project-based performance indicators such as schedule compliance or stakeholder satisfaction. While Ingabire (2025) explored leadership styles in Rwandan public projects, participative leadership was not analyzed independently in a dairy project context. This gap indicates the need to examine how participative practices influence performance outcomes within agricultural projects like Kinazi Dairy.

Although numerous studies discuss transformational leadership in enhancing team motivation and performance, there remains limited empirical evidence connecting this leadership style to performance in Rwanda's dairy sector. Fareed et al. (2023) and Han et al. (2025) addressed how psychological empowerment and team resilience mediate transformational leadership in global project settings, but their studies lack contextual relevance to rural Rwandan projects. Similarly, Altaher et al. (2024) assessed leadership across multinational environments, offering little insight into localized development projects. Kaneza (2024) confirmed transformational leadership benefits in Rwandan project teams but did not focus on agricultural or dairy-specific outcomes. This highlights a research gap on how visionary and motivational leadership affects quality, scope, and satisfaction within Kinazi Dairy Project.

While situational leadership has been studied in relation to project adaptability and complexity, little research exists on its specific application within Rwanda's dairy sector. Princes and Said (2022) and Podgórska and Detko (2023) confirmed that adaptive leadership improves sustainability and task alignment in complex projects, yet neither study addressed agriculture or dairy-focused initiatives in Rwanda. Elegba et al. (2025) examined leadership styles in construction, and Murayire (2024) explored employee performance in public institutions, but both neglected the dynamic leadership demands of rural, cooperative-based dairy projects. This gap suggests the need for further investigation into how flexible leadership styles, such as task-based direction and delegation, contribute to the performance of the Kinazi Dairy Project under changing operational conditions.

Although transactional leadership has been linked to accountability and structured goal achievement, there is inadequate research on how this leadership style supports project performance within Rwanda's dairy industry. Passakonjaras and Hartijasti (2020) and Donkor et al. (2022) analyzed transactional practices in Indonesia and Ghana, respectively, but did not focus on project-specific outcomes such as budget adherence or quality control in agricultural sectors. Uwingeneye and Amolo (2025) studied agro-processing leadership in Rwanda, yet their findings grouped transactional leadership with other styles, limiting insight into its unique role. Altaher et al. (2024) highlighted transactional leadership's effect on collaboration, but did not apply these findings to dairy-based development initiatives. This indicates a gap in understanding how structured reward systems and performance monitoring influence project success in the Kinazi Dairy Project.

3. Methodology

This section presents the research methodology adopted for the study. It outlines the systematic approach applied to address the study objective and guide the entire research process.

3.1 Research Design

A descriptive and correlational research design was adopted to describe existing leadership practices and to determine relationships between leadership styles and project performance.

3.2 Study Population

The total population consisted of 167 respondents, including 9 project leadership staff, 16 technical staff, 108 farmers, 21 operational staff, and 13 local leaders. This composition ensured representation of leadership, implementers, and beneficiaries of the Kinazi Dairy Project, which was necessary for examining the effect of

project leadership on project performance.

3.3 Sample Size and Sampling

This study adopted a census approach, whereby all 167 individuals involved in the Kinazi Dairy Project were targeted for data collection. The census approach ensured comprehensive coverage of all respondent categories associated with project leadership and project performance. Inclusion of the entire population enhanced the reliability of the findings and allowed direct interpretation of results within the project context. The approach also enabled meaningful comparison of perceptions across leadership, technical, operational, and beneficiary groups.

3.4 Data Collection Methods and Instruments

In this study, documentation included project reports, progress reports, supervision records, monitoring reports, and other official documents related to the Kinazi Dairy Project. These documents were reviewed to obtain supplementary information on leadership structures, decision-making processes, and performance outcomes.

This study used closed-ended questionnaires administered to respondents involved in the Kinazi Dairy Project. The questionnaire consisted of Likert-scale items measuring participative leadership, transformational leadership, situational leadership, transactional leadership, and project performance. Respondents completed the questionnaires independently. The data collected were suitable for statistical analysis using SPSS.

3.5 Pilot Test, Validity and Reliability

In this study, a pilot test was conducted using 17 respondents (10%) drawn from the Mukamira Dairy Project, which operates within the same dairy development sector as the Kinazi Dairy Project. Feedback obtained from the pilot test was used to revise and refine the questionnaire items. This process enhanced clarity, consistency, and reliability of the research instrument before the main data collection exercise.

The Content Validity Index (CVI) was computed by dividing the total number of relevant items in the instrument by the total number of items. A CVI value greater than 0.70 confirmed the validity of the questionnaire.

Since the questionnaire contained 28 items under the main study variables and 24 were considered relevant after review, the overall CVI was computed.

Each variable recorded a CVI of 0.857, which is above the acceptable threshold of 0.70.

Reliability refers to the degree to which a measurement instrument consistently produces stable results under similar conditions over time. High reliability indicates dependable data generation and supports confidence in the consistency and trustworthiness of the collected information (Donkor et al., 2022).

To ensure reliability, the research instrument was tested and retested during the pilot study conducted in a different but relevant dairy development firm. Reliability was determined by examining the consistency between the test and retest results obtained from the same respondents. After one week, the questionnaire was re-administered to the same participants. Results above 0.70 indicated that the questionnaire was reliable and suitable for the main study.

Table 1: Reliability Statistics

Variable	Number of Items	Cronbach's Alpha
Participative Leadership	5	0.781
Transformational Leadership	5	0.832
Situational Leadership	5	0.890
Transactional Leadership	5	0.813
Performance of Project	4	0.829

The results in Table 1 indicate reliability statistics for the research instrument used to measure project leadership and performance of Kinazi Dairy Project in Rwanda. Participative leadership recorded Cronbach's Alpha of 0.781 across 5 items, showing acceptable internal consistency. Transformational leadership recorded a Cronbach's Alpha of 0.832 across 5 items, indicating good reliability of the items used to measure the variable. Situational leadership recorded the highest Cronbach's Alpha of 0.890 across 5 items, showing very good internal consistency.

Transactional leadership recorded Cronbach's Alpha of 0.813 across 5 items, meaning that the items were reliable for measuring transactional leadership. Performance of Project recorded Cronbach's Alpha of 0.829 across 4 items, showing that the items used to measure project performance were internally consistent. Since all Cronbach's Alpha values were above the acceptable threshold of 0.70, the questionnaire was considered reliable for data collection. Therefore, the instrument was suitable for assessing the effect of project leadership on performance of Kinazi Dairy Project in Rwanda.

3.6 Data Analysis

After data collection, the responses were entered, organized, and processed in accordance with the study objectives. The data were summarized and presented using appropriate statistical techniques, including frequencies, percentages, and tables. Descriptive statistics were used to summarize and interpret the data, while inferential statistical techniques such as correlation and regression analysis were applied to address the research objectives. Data analysis was conducted using SPSS version 29.0.

Inferential analysis was conducted for each variable related to project leadership and project performance. Correlation analysis was used to determine the strength and direction of the relationship between leadership styles and project performance. Regression analysis was employed to examine the extent to which participative leadership, transformational leadership, situational leadership, and transactional leadership influenced the performance of Kinazi Dairy Project.

The linear regression model for the study is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

3.7 Ethical Considerations

Prior to data collection, respondents were informed about the objectives and scope of the study. No sensitive or personal information was requested, and participants were free to withdraw from the study at any stage without any negative consequences. An official introductory letter from the University of Kigali, issued through the School of Graduate Studies, was presented to authorize the research for academic purposes. In addition, permission was obtained from the management of the Kinazi Dairy Project, confirming approval to conduct the study within the project setting. The identities of respondents did not appear on the questionnaires or in the final research report, thereby ensuring protection of privacy and adherence to ethical research requirements.

4. Results and Discussions

This section presents the analysis and interpretation of data collected from respondents on the effect of project leadership on performance of Kinazi Dairy Project in Rwanda.

4.1 Response Rate

Response rate is important because it helps to determine whether the collected data is enough to represent the views of respondents in the current study.

Table 2: Response Rate

Questionnaire	Frequency	Percentage (%)
Complete	155	92.81
Incomplete	12	7.19
Total	167	100.0

Source: Field data, 2026

The results in Table 2 indicate response rate of respondents who participated in the study on project leadership and performance of Kinazi Dairy Project. The findings show that 155 questionnaires, representing 92.81%, were complete and used for data analysis. Incomplete questionnaires were 12, representing 7.19%, which means that a small number of respondents did not provide full information required for the study. This high response rate shows that the collected data was adequate for analyzing the effect of project leadership on performance of Kinazi Dairy Project. The large proportion of completed questionnaires increased the representativeness of the sample and provided a strong basis for generating dependable findings regarding

project leadership and project performance.

4.2 Correlation Analysis

Correlation analysis was conducted to determine the relationship between project leadership practices and performance of Kinazi Dairy Project. The Pearson correlation coefficient was used to measure the strength and direction of the relationship between each independent variable and the dependent variable. The significance level was tested using a p value of 0.05. A relationship was considered statistically significant when the Sig. value was less than 0.05.

Table 3: Correlations

		Participative Leadership	Transformational Leadership	Situational Leadership	Transactional Leadership	Performance of Project
Participative Leadership	Pearson	1	.534**	.614**	.718**	.734**
	Correlation					
	Sig. (2-tailed)		.000	.000	.000	.000
Transformational Leadership	N	155	155	155	155	155
	Pearson	.534**	1	.513**	.568**	.721**
	Correlation					
Situational Leadership	Sig. (2-tailed)	.000		.000	.000	.000
	N	155	155	155	155	155
	Pearson	.614**	.513**	1	.645**	.767**
Transactional Leadership	Correlation					
	Sig. (2-tailed)	.000	.000		.000	.000
	N	155	155	155	155	155
Performance of Project	Pearson	.718**	.568**	.645**	1	.725**
	Correlation					
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	155	155	155	155	155
	Pearson	.734**	.721**	.767**	.725**	1
	Correlation					
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	155	155	155	155	155

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

Source: Field data, 2026

The results in Table 3 indicate Correlations between project leadership practices and performance of Kinazi Dairy Project. Participative leadership had a Pearson correlation coefficient of 0.734 with performance of project, showing a strong positive relationship. The Sig.

value was 0.000, which is less than 0.05, meaning that the relationship was statistically significant. This implies that improvement in participative leadership was associated with improved performance of Kinazi Dairy Project.

Transformational leadership had a Pearson correlation coefficient of 0.721 with performance of project. This shows a strong positive relationship between transformational leadership and project performance. The Sig. value was 0.000, which is less than 0.05, meaning that the relationship was statistically significant. This indicates that visionary inspiration, intellectual stimulation, individualized consideration, charismatic influence, and motivational coaching were positively related to performance of Kinazi Dairy Project.

Situational leadership had a Pearson correlation coefficient of 0.767 with performance of project. This represents a strong positive relationship and shows that situational leadership had the strongest relationship with project performance among the leadership variables. The Sig. value was 0.000, which is less than 0.05, meaning that the relationship was statistically significant. This means that task flexibility, adaptive directing, contextual coaching, leadership style switching, and developmental delegation were closely related to performance of Kinazi Dairy Project.

Transactional leadership had a Pearson correlation coefficient of 0.725 with performance of project. This shows a strong positive relationship between transactional leadership and project performance. The Sig. value was 0.000, which is less than 0.05, meaning that the relationship was statistically significant. This indicates that rewards, clear expectations, recognition, acknowledgement of achievement, and corrective action were positively related to performance of Kinazi Dairy Project.

The correlation findings show that all project leadership practices had strong positive and statistically significant relationships with performance of Kinazi Dairy Project. Situational leadership had the strongest relationship with performance, followed by participative leadership, transactional leadership, and transformational leadership. Since all Sig. values were below 0.05, the relationships were statistically significant. This means that project leadership practices were important in explaining performance of Kinazi Dairy Project.

The correlation analysis table shows the relationship between participative leadership, transformational leadership, situational leadership, transactional leadership, and performance of Kinazi Dairy Project. The positive relationship between participative leadership and performance is supported by Ochieng et

al. (2023), who found that participative leadership improves organizational performance through involvement and shared decision-making. Riza et al. (2025) also supported this relationship by explaining that participative leadership strengthens commitment, innovation, and organizational effectiveness. This discussion shows that participation and shared responsibility are important for improving performance of Kinazi Dairy Project.

The relationship between transformational leadership and performance of Kinazi Dairy Project is supported by Fareed et al. (2023), who found that transformational leadership improves project success through empowerment and motivation. Han et al. (2025) also confirmed that transformational leadership improves project success through team reflexivity and resilience. The relationship between situational leadership and performance is supported by Princes and Said (2022), who linked situational leadership with better project sustainability under complex project conditions. The relationship between transactional leadership and performance is also supported by Uwingeneye and Amolo (2025), who found that transactional leadership significantly contributes to agro-processing project performance in Rwanda.

The findings show that project leadership practices were strongly linked to the performance of Kinazi Dairy Project. The strong positive and significant relationships indicate that improvement in participative, transformational, situational, and transactional leadership practices was associated with better project performance. Since situational leadership had the strongest correlation, it shows that leadership flexibility, adaptive direction, coaching, and delegation were especially important in supporting performance of Kinazi Dairy Project.

4.3 Regression Analysis

Regression analysis was conducted to examine the effect of participative leadership, transformational leadership, situational leadership, and transactional leadership on performance of Kinazi Dairy Project. The model summary was used to show the strength of the combined relationship between the independent variables and the dependent variable. The ANOVA table was used to test whether the regression model was statistically significant. The coefficients table was used to determine the individual effect of each leadership practice on project performance.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.888 ^a	.789	.784	.17708

a. Predictors: (Constant), Transactional Leadership, Transformational Leadership, Situational Leadership, Participative Leadership

The findings in Table 4 indicate Model Summary for the effect of project leadership on performance of Kinazi Dairy Project. The R value of 0.888 shows a strong positive combined relationship between participative leadership, transformational leadership, situational leadership, transactional leadership, and project performance. The R Square value of 0.789 means that the four leadership practices explained 78.9% of the variation in performance of Kinazi Dairy Project. This also means that the remaining 21.1% may be explained by other factors not included in the model. Based on R and R Square, the model had strong explanatory power in predicting project performance.

The model summary table shows the combined contribution of participative leadership, transformational leadership, situational leadership, and transactional leadership to performance of Kinazi Dairy Project. This is supported by Altaher et al. (2024), who explained that leadership styles influence project success through coordination, collaboration, and team alignment. Achar

(2025) also described project leadership as structured guidance that combines planning discipline, trust, and adaptive decision-making to improve performance. These views show that project performance is not shaped by one leadership practice only, but by the combined strength of different leadership approaches used in Kinazi Dairy Project.

The model summary findings show that project leadership practices had a strong combined contribution to the performance of Kinazi Dairy Project. The high R Square value indicates that participative leadership, transformational leadership, situational leadership, and transactional leadership jointly explained a large proportion of project performance, meaning that strengthening these leadership practices can improve budget adherence, schedule compliance, quality standards, and scope management in the project.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.616	4	4.404	142.065	.000 ^b
	Residual	4.704	150	.031		
	Total	22.320	154			

a. Dependent Variable: Performance of Project

b. Predictors: (Constant), Transactional Leadership, Transformational Leadership, Situational Leadership, Participative Leadership

The results in Table 5 indicate ANOVA for the regression model on project leadership and performance of Kinazi Dairy Project. The F value of 142.065 shows that the regression model was strong in explaining the effect of leadership practices on project performance. The Sig. value was 0.000, which is less than the significance level of 0.05. This means that the regression model was statistically significant. The findings indicate that participative leadership, transformational leadership, situational leadership, and transactional leadership jointly had a significant effect on performance of Kinazi Dairy Project. Therefore, the model was suitable for explaining the effect of project leadership on project performance.

The ANOVA table shows the overall suitability of the regression model in explaining the effect of project leadership on performance of Kinazi Dairy Project. This is supported by Altaher et al. (2024), who found that leadership styles are important predictors of project

success because they shape collaboration and implementation processes. Fareed et al. (2023) also supported the relevance of leadership in project success by showing that transformational leadership and empowerment improve project outcomes. These studies support the idea that leadership practices provide a meaningful explanation of project performance in Kinazi Dairy Project.

The ANOVA findings show that the combined leadership practices formed a valid and significant model for explaining performance of Kinazi Dairy Project. The significant F value indicates that participative leadership, transformational leadership, situational leadership, and transactional leadership should be considered together when improving project performance, because their joint effect supports better implementation, coordination, accountability, and achievement of project objectives.

Table 6: Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.175	.178		.984	.327
	Participative Leadership	.221	.052	.241	4.233	.000
	Transformational Leadership	.324	.047	.331	6.977	.000
	Situational Leadership	.309	.044	.366	7.043	.000
	Transactional Leadership	.107	.050	.128	2.139	.034

a. Dependent Variable: Performance of Project

The adopted regression model for the current study was structured as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Based on the coefficients, the fitted model was:

$$Y = 0.175 + 0.221X_1 + 0.324X_2 + 0.309X_3 + 0.107X_4 + \epsilon$$

The findings in Table 6 indicate Coefficients for the individual effect of project leadership practices on performance of Kinazi Dairy Project. The constant value was 0.175, meaning that when participative leadership, transformational leadership, situational leadership, and transactional leadership are held constant, performance of Kinazi Dairy Project would remain at 0.175. The t value of 0.984 shows that the constant had a weak statistical contribution to the model. The Sig. value was 0.327, which is greater than 0.05, meaning that the constant was not statistically significant. Tolerance and VIF values were not reported in the provided table, so multicollinearity cannot be interpreted using collinearity statistics.

Participative leadership had an unstandardized coefficient B of 0.221. This means that a one-unit increase in participative leadership would increase performance of Kinazi Dairy Project by 0.221 units, when other leadership practices are held constant. The t value of 4.233 shows that participative leadership made a meaningful contribution to the regression model. The Sig. value was 0.000, which is less than 0.05, meaning that participative leadership had a statistically significant effect on project performance. Since Tolerance and VIF values were not reported, collinearity statistics for participative leadership cannot be interpreted from the provided output.

Transformational leadership had an unstandardized coefficient B of 0.324. This means that a one-unit increase in transformational leadership would increase performance of Kinazi Dairy Project by 0.324 units, when other leadership practices are held constant. The t value of 6.977 shows that transformational leadership made a strong contribution to the regression model. The Sig. value was 0.000, which is less than 0.05, meaning that transformational leadership had a statistically

significant effect on project performance. Since Tolerance and VIF values were not reported, collinearity statistics for transformational leadership cannot be interpreted from the provided output.

Situational leadership had an unstandardized coefficient B of 0.309. This means that a one-unit increase in situational leadership would increase performance of Kinazi Dairy Project by 0.309 units, when other leadership practices are held constant. The t value of 7.043 shows that situational leadership made the strongest statistical contribution among the leadership practices. The Sig. value was 0.000, which is less than 0.05, meaning that situational leadership had a statistically significant effect on project performance. Since Tolerance and VIF values were not reported, collinearity statistics for situational leadership cannot be interpreted from the provided output.

Transactional leadership had an unstandardized coefficient B of 0.107. This means that a one-unit increase in transactional leadership would increase performance of Kinazi Dairy Project by 0.107 units, when other leadership practices are held constant. The t value of 2.139 shows that transactional leadership contributed to the regression model, although its contribution was lower than the other leadership practices. The Sig. value was 0.034, which is less than 0.05, meaning that transactional leadership had a statistically significant effect on project performance. Since Tolerance and VIF values were not reported, collinearity statistics for transactional leadership cannot be interpreted from the provided output.

The coefficient summary shows that all four project leadership practices had a positive and statistically significant effect on performance of Kinazi Dairy Project. Transformational leadership had the highest unstandardized coefficient, followed by situational leadership, participative leadership, and transactional leadership. Based on the standardized Beta values, situational leadership had the strongest relative effect on project performance. All Sig. values for the independent variables were below 0.05, meaning that all null hypotheses were rejected.

The coefficients table shows the individual effect of participative leadership, transformational leadership,

situational leadership, and transactional leadership on performance of Kinazi Dairy Project. The effect of participative leadership is supported by Wang et al. (2022), who stated that shared authority and collective contribution strengthen commitment and accountability. Ochieng et al. (2023) also confirmed that participative leadership improves performance through consultation and shared decision-making. Social Exchange Theory supports this objective because it explains that participation creates trust, cooperation, and reciprocal commitment among people involved in Kinazi Dairy Project.

The coefficient findings show that each project leadership practice made a positive and significant individual contribution to the performance of Kinazi Dairy Project. The fitted regression model indicates that strengthening transformational, situational, participative, and transactional leadership can improve project performance, especially through better motivation, flexible guidance, shared decision-making, clear expectations, and accountability. Since situational leadership had the strongest relative effect, adaptive leadership practices should receive special attention in improving project implementation and performance outcomes.

Table 7: Hypotheses Decision

Null Hypothesis	Sig.	Decision
H ₀ 1: There is no significant effect of participative leadership on performance of Kinazi Dairy Project in Rwanda.	0.000	Rejected
H ₀ 2: There is no significant effect of transformational leadership on performance of Kinazi Dairy Project in Rwanda.	0.000	Rejected
H ₀ 3: There is no significant effect of situational leadership on performance of Kinazi Dairy Project in Rwanda.	0.000	Rejected
H ₀ 4: There is no significant effect of transactional leadership on performance of Kinazi Dairy Project in Rwanda.	0.034	Rejected

The hypotheses decision shows that all four null hypotheses were rejected because their Sig. values were less than 0.05. This means that participative leadership, transformational leadership, situational leadership, and transactional leadership each had a statistically significant effect on performance of Kinazi Dairy Project in Rwanda. The findings confirm that project leadership practices are important factors influencing project performance. Therefore, the study established that leadership practices contributed positively to performance of Kinazi Dairy Project.

5. Conclusions and Recommendations

This section presents the conclusions drawn from the study findings and provides recommendations based on the key results and objectives of the study.

5.1 Conclusion

The study concluded that participative leadership had a positive and significant effect on performance of Kinazi Dairy Project. This means that involving staff and farmers in decision-making, consultation, idea sharing, and shared responsibility improves project performance. The findings confirmed that participative leadership supports better planning, teamwork, and commitment in Kinazi Dairy Project. Therefore, participative leadership remains important for improving the performance of Kinazi Dairy Project in Rwanda.

The study concluded that transformational leadership had a positive and significant effect on performance of Kinazi Dairy Project. This means that visionary inspiration, innovative thinking, staff support, charismatic influence, and motivational coaching improve project performance. The findings confirmed that transformational leadership strengthens morale, commitment, and shared direction in Kinazi Dairy Project. Therefore, transformational leadership is an important leadership practice for improving performance of Kinazi Dairy Project in Rwanda.

The study concluded that situational leadership had a positive and significant effect on performance of Kinazi Dairy Project. This means that flexible leadership, adaptive direction, contextual coaching, and delegation improve project performance. The findings confirmed that adjusting leadership style according to task demands and staff readiness supports better implementation in Kinazi Dairy Project. Therefore, situational leadership is essential for improving performance of Kinazi Dairy Project in Rwanda.

The study concluded that transactional leadership had a positive and significant effect on performance of Kinazi Dairy Project. This means that rewards, clear expectations, achievement recognition, and corrective action improve project performance. The findings confirmed that transactional leadership supports discipline, accountability, and compliance with project standards in Kinazi Dairy Project. Therefore, transactional leadership contributes to improved

performance of Kinazi Dairy Project in Rwanda.

The study generally concluded that project leadership has a positive and significant effect on performance of Kinazi Dairy Project in Rwanda. Participative leadership, transformational leadership, situational leadership, and transactional leadership all contributed to better performance of the project. The findings showed that strong leadership practices improve teamwork, motivation, flexibility, accountability, and implementation quality. Therefore, improving project leadership is necessary for strengthening performance of Kinazi Dairy Project.

5.2 Recommendations

This section presents the recommendations derived from the study findings and conclusions, with emphasis on practical actions that can improve the areas examined in the study.

1. The management of Kinazi Dairy Project should continue strengthening participative leadership through regular consultation with staff, farmers, and implementation teams. This would improve shared decision-making, ownership, and commitment to project activities.
2. Kinazi Dairy Project should strengthen transformational leadership through clear vision communication and motivational coaching. This would help staff and participating farmers remain committed to project goals.
3. Project leaders at Kinazi Dairy Project should support staff development through training, mentoring, and performance guidance. This would improve staff capacity and support better implementation of project activities.
4. Kinazi Dairy Project should maintain situational leadership practices through flexible leadership approaches based on staff skills and work conditions. This would help leaders respond well to changing production and operational needs.
5. Kinazi Dairy Project should continue using transactional leadership through clear communication of roles, responsibilities, and performance standards. This would help staff and farmers understand what is expected from them in project implementation.

5.3 Areas for Further Research

Future researchers may conduct a study on the effect of communication leadership on performance of dairy projects in Rwanda. Another study may examine the effect of employee motivation on performance of dairy projects in Rwanda. Future researchers may also assess the effect of stakeholder participation on performance of

dairy projects in Rwanda. Another possible topic is the effect of monitoring practices on performance of dairy projects in Rwanda.

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