



Influence of Project Team Management on Project Performance: A Case of Compassion International Projects in Ruhango District, Rwanda

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Abstract: Project performance has become a major concern for development organizations implementing projects across Rwanda. Development initiatives implemented in sectors such as education, health, and community development often encounter challenges related to delays in project completion, inefficient resource utilization, and limited sustainability of project outcomes. This study assessed the influence of project team management on the performance of Compassion International projects in Ruhango District, Rwanda. Human Capital Theory, Resource-Based View Theory, Social Exchange Theory and Theory of Change informed the investigation. A descriptive and correlational design was employed, with a target population of 457 and a selected sample of 210. Of 210 questionnaires distributed, 194 complete returns were analysed (92.4%). A pilot of 21 respondents was undertaken in Muhanga District; the content validity index was 0.86 and overall Cronbach's alpha was 0.831. Descriptive statistics, Pearson correlation and multiple regression were analysed using SPSS version 29. Correlations with project performance were positive for technical expertise ($r = 0.721$), communication ($r = 0.799$), conflict management ($r = 0.744$), and collaboration ($r = 0.800$). The model explained 80.1% of the observed variation ($R^2 = 0.801$). All four predictors were statistically significant: technical expertise management ($B = 0.180$), communication management ($B = 0.388$), conflict management ($B = 0.179$) and team collaboration ($B = 0.209$), each reported at $p < 0.05$. Communication management had the largest unique coefficient. The study recommends structured skills development, clear communication protocols, conflict-resolution mechanisms and coordinated team planning to improve project delivery.

Keywords: Project Team Management; Technical Expertise Management; Communication Management; Conflict Management; Team Collaboration; Project Performance; Compassion International.

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1. Introduction

Project team management combines professional capacity, communication, constructive conflict resolution and collaborative work to coordinate project tasks. Development organisations increasingly rely on multidisciplinary teams to deliver outputs within agreed

scope, schedules, budgets and quality standards. Larson and Gray (2023) emphasise the importance of coordinated managerial processes, while the Project Management Institute (2023) identifies interpersonal and team-based capabilities as significant components of project success.

In Rwanda, community development initiatives require interaction between project staff, local partners,

volunteers and beneficiaries. The effectiveness of such arrangements depends not only on available funding but also on the capacity of project teams to share information, apply technical skills and work constructively across different responsibilities. Evidence on project governance and performance underscores the operational significance of coordination, organisational capacity and stakeholder relationships (World Bank, 2022; Rwanda Governance Board, 2022).

Compassion International projects in Ruhango District, implemented with local partners, form the setting for examining these team-management relationships. Their performance is evaluated through scope achievement, adherence to cost and schedules, and quality of outputs. The original dissertation identifies project delivery delays, cost pressures, output quality and sustainability as concerns requiring improved management. National project reports and development evidence further situate project performance among the priorities of programme implementation (Government of Rwanda, 2023; Ministry of Finance and Economic Planning, 2022).

Although broader studies address team management and organisational performance, the dissertation identifies limited project-level evidence showing the separate and combined contributions of technical expertise management, communication management, conflict management and team collaboration within Compassion International projects in Ruhango District. The present analysis focuses on these four dimensions to inform specific operational recommendations.

1.1 General Objective

The general objective of this study was to assess the influence of project team management on the performance of Compassion International projects in Ruhango District.

1.2 Specific Objectives

The following were the specific objectives of the study:

1. To examine the effect of technical expertise management on the performance of Compassion International projects in Ruhango District.
2. To assess the effect of communication management on the performance of Compassion International projects in Ruhango District.
3. To determine the effect of conflict management on the performance of Compassion International projects in Ruhango District.
4. To evaluate the effect of team collaboration on the performance of Compassion International projects in Ruhango District.

1.3 Research Hypotheses

H01: Technical expertise management has no significant influence on the performance of Compassion International projects in Ruhango District.

H02: Communication management has no significant influence on the performance of Compassion International projects in Ruhango District.

H03: Conflict management has no significant influence on the performance of Compassion International projects in Ruhango District.

H04: Team collaboration has no significant influence on the performance of Compassion International projects in Ruhango District.

2. Literature Review

The review synthesises relevant theoretical and empirical literature for the four dimensions of project team management. It emphasises how those dimensions relate to the performance of community development projects rather than repeating conceptual definitions.

2.1 Theoretical Review

Four complementary perspectives explain how professional skills, internal organisational capability, reciprocal relationships and coordinated activities may influence project performance.

2.1.1 Human Capital Theory

Human Capital Theory, associated with Schultz and Becker, explains how education, experience and training become productive capabilities. Technical expertise management is important when team members are assigned responsibilities corresponding to their specialised knowledge and when development organisations support further professional learning. Investments in staff competence can improve problem solving, implementation accuracy and the quality of work (Aguinis & Burgi-Tian, 2023; Larson & Gray, 2023).

For Compassion International projects in Ruhango District, the theory links task proficiency, technical assignments and continuous skills development with the ability to achieve project performance requirements. It gives a direct explanation for the first research objective.

2.1.2 Resource-Based View Theory

Resource-Based View Theory holds that valuable organisational capabilities underpin performance differences. Beyond physical and financial inputs, organisations rely on routines for sharing information,

coordinating responsibilities and mobilising internal knowledge. Communication management can therefore be treated as a resource that supports effective coordination and timely problem resolution (Barney & Mackey, 2023; Walker & Lloyd-Walker, 2023).

Within Compassion International projects, clear instructions, accurate messages, active listening and routine feedback enable team members to align activities with intended outputs. This theory therefore supports the assessment of communication management as an operational project capability.

2.1.3 Social Exchange Theory

Social Exchange Theory interprets cooperation through perceived fairness, trust, respect and reciprocity. These principles help explain why unresolved disagreements weaken team commitment, whereas negotiation and constructive mediation help preserve working relationships. Positive professional exchanges encourage people to sustain their contributions to shared goals (Cropanzano & Mitchell, 2022; Blau, 2022).

The theory connects conflict management to project performance in Ruhango District by showing how trust-preserving responses to disagreement can reduce disruption and support continued collaboration during implementation.

2.1.4 Theory of Change

Theory of Change describes the logical progression through which programme inputs and activities produce outputs and longer-term outcomes. Collaborative planning, collective decisions and mutually supportive implementation connect individual project contributions to broader delivery goals. The approach is particularly useful for development programmes whose outputs depend on coordinated action among multiple actors (Project Management Institute, 2023).

In the Ruhango setting, team collaboration represents a practical mechanism through which coordinated responsibilities and joint problem solving can contribute to project scope, cost, timeliness and quality performance.

2.2 Empirical Review

Empirical studies across project sectors provide support for the relationship between team-management dimensions and implementation results, although their settings and measurement approaches differ from the Compassion International case.

2.2.1 Technical Expertise Management and Project Performance

Joshi and Sharma (2023) reported that professional competence improved delivery outcomes in Indian infrastructure projects. In Europe, Martínez and Pérez (2022) associated technical expertise with stronger performance in technology development initiatives. Mwangi and Wanyoike (2022) likewise linked staff competence to public project effectiveness in Kenya. These findings suggest that accurate assignment of skilled personnel and systematic problem solving contribute to reliable project implementation.

Rwandan NGO evidence further indicates that professionally capable teams demonstrate improved planning and project coordination (Uwizeyimana & Habimana, 2023). Nevertheless, findings from infrastructure and technology sectors cannot automatically establish the unique effect of expertise in Compassion International community programmes, where delivery conditions and staff roles differ.

2.2.2 Communication Management and Project Performance

Li and Chen (2023) found that clear information sharing improved coordination in Chinese infrastructure teams. García and Rodríguez (2022) also identified communication competence as important for the performance of innovation projects. Such findings highlight message accuracy, timely exchanges and stakeholder feedback as mechanisms that reduce misunderstanding and support implementation decisions.

Project-management literature associates transparent communication and strong interpersonal capability with more consistent work coordination (Larson & Gray, 2023; Walker & Lloyd-Walker, 2023). However, the relative strength of communication compared with other team practices required specific empirical examination in Ruhango District.

2.2.3 Conflict Management and Project Performance

Park and Lee (2023) examined conflict management in technology development teams and reported benefits for coordination and outcomes. Müller and Schneider (2022) linked constructive dispute-resolution arrangements to performance in construction projects. Kiprotich and Rotich (2022) similarly considered conflict-management practices in Kenyan development projects, where negotiation and early handling of disagreements can prevent interruptions.

2.2.4 Team Collaboration and Project Performance

Zhang and Huang (2023) associated teamwork with stronger performance in infrastructure projects, while

Rossi and Bianchi (2022) reported positive links between cooperation, knowledge sharing and innovation project outcomes. In Ghana, Mensah and Boateng (2023) investigated collaborative work in community development, a setting more comparable to donor-supported projects.

Niyonzima and Mukantwali (2023) further documented collaboration and performance within Rwandan NGO programmes. Although these studies generally support team-based coordination, it remained necessary to establish whether collaboration contributed independently after communication, conflict management and technical expertise were considered.

3. Methodology

This section presents the research design, study population and sample, methods of data collection, pilot testing, instrument quality, statistical procedures and ethical safeguards used for the investigation.

3.1 Research Design

A descriptive and correlational research design was adopted, incorporating quantitative and qualitative data collection in the dissertation. The descriptive component characterised the practices of technical expertise management, communication management, conflict management and team collaboration. The correlational component assessed statistical relationships between these practices and project performance. For this article, the quantitative survey results form the basis of the reported analysis.

3.2 Population and Sampling

The study population comprised 457 individuals connected to Compassion International projects in Ruhango District, including project managers, coordinators, field officers, community facilitators, volunteers and beneficiaries. Using the Krejcie and

Morgan sample-size table, 210 respondents were selected. Stratified sampling grouped individuals by project role, after which simple random sampling was used within strata to obtain representation across categories.

3.3 Data Collection and Measurement

Structured questionnaires supplied the quantitative evidence and were distributed among the selected project participants. Respondents rated statements on a five-point Likert scale covering 24 questionnaire items: five each for technical expertise management, communication management, conflict management and team collaboration, plus four project performance items. Documentary records helped establish implementation context; interview material from the original dissertation is not presented in this article.

Project performance was assessed through achievement of project scope, control of costs, compliance with schedules and quality of delivered outputs. Data were obtained from Compassion International project stakeholders during the 2026 fieldwork period. The study focused on project activities undertaken in Ruhango District from 2022 to 2025.

3.4 Pilot Study, Validity and Reliability

A pilot study was conducted with 21 participants, approximately 10% of the intended sample, in Muhanga District outside the study area. Items were reviewed for clarity and relevance before full administration. Content validity was assessed using the Content Validity Index (CVI); 24 of 28 assessed elements were reported as relevant, yielding a CVI of 0.86, above the dissertation's acceptance threshold of 0.70.

Internal consistency was assessed through Cronbach's alpha, using 0.70 as the acceptance threshold. The reliability statistics for the study constructs and the overall instrument are reproduced in Table 1.

Table 1: Reliability Statistics

Variable	Number of items	Cronbach's Alpha	Decision
Technical expertise management	5	.832	Reliable
Communication management	5	.845	Reliable
Conflict management	5	.817	Reliable
Team collaboration	5	.851	Reliable
Performance of projects	4	.808	Reliable
Overall questionnaire	24	.831	Reliable

Source: Pilot study, 2026.

Cronbach's Alpha coefficients ranged from 0.808 to 0.851, which were all above 0.70. The questionnaire therefore had good internal consistency and was reliable for the study.

3.5 Data Processing and Analysis

Completed questionnaires were checked for errors and missing information, coded numerically and entered for analysis using Statistical Package for the Social Sciences (SPSS), version 29. Descriptive statistics included frequency distributions, mean scores and standard deviations. On the five-point agreement scale, higher means indicated more favourable assessments, and a standard deviation at or below 0.50 was interpreted as homogeneous responses, consistent with the dissertation's decision rule.

Pearson correlation coefficients measured the direction and strength of bivariate relationships between each team-management dimension and project performance. Multiple linear regression estimated the unique effect of technical expertise management, communication management, conflict management and team collaboration in a single model. Null hypotheses were evaluated at a 0.05 significance threshold. The original dissertation additionally reported normality tests and

collinearity diagnostics, which informed interpretation of the fitted model.

3.6 Ethical Considerations

Permission was sought from the relevant academic and organisational authorities before fieldwork. Participation was voluntary and respondents were informed of the academic purpose of the research. Questionnaires did not require personal identification, the reported findings were presented in aggregate form, and access to responses was restricted to the study purposes. These measures supported privacy, consent and responsible handling of information from project staff and beneficiaries.

4. Results and Discussion

The results describe questionnaire completion, the overall assessment of project team practices and the statistical relationships between the four explanatory variables and project performance.

4.1 Response Rate

Questionnaire returns were assessed to establish the proportion of complete responses available for the descriptive and inferential analyses.

Table 2: Response Rate

Questionnaires	Frequency	Percentage (%)
Returned Complete	194	92.4
Returned Incomplete	7	3.3
Unreturned	9	4.3
Total	210	100.0

Source: Primary data, June 2026.

The results in Table 2 indicate that 194 questionnaires, representing 92.4%, were returned complete and used for the analysis. Seven questionnaires, representing 3.3%, were returned incomplete and could not provide sufficient information for the required analysis. Nine questionnaires, representing 4.3%, were not returned, some selected respondents were unavailable during collection. The completed response level was adequate for describing project team management and examining its influence on the performance of Compassion International projects in Ruhango District.

4.2 Descriptive Statistics

Technical expertise management achieved an overall mean of 4.23 and standard deviation of 0.420, indicating a very favourable and homogeneous assessment of

professional certification, skill application, technical knowledge, problem solving and task proficiency within Compassion International projects in Ruhango District. The close clustering of responses suggests shared recognition of the importance of staff capability.

Communication management recorded an overall mean of 4.26 (SD = 0.441). Participants gave positive ratings to clear messages, accuracy of information, continuous feedback, active listening and interaction with community stakeholders. Its high mean indicates that respondents generally recognised effective information exchange, while the standard deviation below 0.50 suggests consistent perceptions across the sample.

Conflict management produced an overall mean of 4.30 (SD = 0.461), reflecting favourable views of dispute resolution, negotiation, mediation, conflict prevention and respectful teamwork. Team collaboration received

an overall mean of 4.35 (SD = 0.477), the highest among the team-management dimensions. Respondents therefore particularly emphasised coordination, joint planning, task cooperation, collective decisions and mutual support in Compassion International projects in Ruhango District.

Project performance was assessed through planned scope, cost control, schedule adherence and output quality; the overall mean was 4.39 (SD = 0.488). This indicates positive perceptions of project delivery, although the study's questionnaire-based design means these mean scores represent respondents' assessments rather than independently verified causal changes in outcomes.

4.3 Inferential Statistics

Inferential analysis examined the bivariate strength of the relationships and the unique statistical contribution of each team-management practice within the combined regression model.

4.3.1 Pearson Correlation Analysis

The Pearson correlation matrix reports the direction, magnitude and significance of the bivariate relationships among the five study constructs.

Table 3: Pearson Correlation between Project Team Management and Project Performance

		Technical expertise management	Communication management	Conflict management	Team collaboration	Project performance
Technical expertise management	Pearson Correlation	1	.596**	.644**	.643**	.721**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	194	194	194	194	194
Communication management	Pearson Correlation	.596**	1	.585**	.721**	.799**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	194	194	194	194	194
Conflict management	Pearson Correlation	.644**	.585**	1	.726**	.744**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	194	194	194	194	194
Team collaboration	Pearson Correlation	.643**	.721**	.726**	1	.800**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	194	194	194	194	194
Project performance	Pearson Correlation	.721**	.799**	.744**	.800**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	194	194	194	194	194

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

Source: Primary data, June 2026.

The results in Table 3 indicate a strong positive relationship between technical expertise management and project performance ($r = 0.721$, $p < 0.05$). This result means that improved technical expertise management

was associated with improved performance of Compassion International projects in Ruhango District. The relationship was statistically significant at the 0.05 level, providing evidence against the first null hypothesis.

Communication management had a strong positive relationship with project performance ($r = 0.799$, $p < 0.05$). Clearer and better-managed communication was therefore associated with stronger project performance in the Compassion International projects under study. The significance value was below 0.05, confirming that the relationship was statistically significant.

Conflict management was strongly and positively related to project performance ($r = 0.744$, $p < 0.05$). This suggests that effective handling of disagreements was associated with better delivery of Compassion International projects in Ruhango District. The relationship was statistically significant at the 0.05 level.

Team collaboration showed a strong positive relationship with project performance ($r = 0.800$, $p < 0.05$). Higher collaboration among project team members was associated with stronger project performance in Compassion International projects in Ruhango District.

This relationship was statistically significant at the 0.05 level and was the strongest bivariate association reported among the four dimensions.

Therefore, all four dimensions of project team management had strong positive and statistically significant relationships with project performance. The correlation results supported further multiple regression analysis to assess the separate contribution of each dimension while the other dimensions were considered together.

4.3.2 Model Summary

The model summary reports the combined explanatory strength of the four project team management practices and the residual diagnostic statistic.

Table 4: Multiple Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.895 ^a	.801	.797	.170875	1.595

a. Predictors: (Constant), Team collaboration, Technical expertise management, Communication management, Conflict management

b. Dependent Variable: Project performance

Source: Primary data, June 2026.

The results in Table 4 indicate a multiple correlation coefficient of $R = 0.895$ between the four project team management dimensions and project performance. This represents a very strong positive combined relationship for Compassion International projects in Ruhango District. The R Square value of 0.801 shows that 80.1% of the variation in project performance was explained jointly by technical expertise management, communication management, conflict management, and team collaboration. The remaining 19.9% was associated

with factors not included in the model. The Durbin-Watson value of 1.595 was within the acceptable range of 1.5 to 2.5, indicating no serious autocorrelation concern in the regression residuals.

4.3.3 Analysis of Variance

The ANOVA results test whether the combined regression model explains a statistically significant proportion of variation in project performance.

Table 5: Regression ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.262	4	5.565	191.897	0.000 ^b
	Residual	5.519	189	.029		
	Total	27.780	193			

a. Dependent Variable: Project performance

b. Predictors: (Constant), Team collaboration, Technical expertise management, Communication management, Conflict management

Source: Primary data, June 2026.

The findings in Table 5 indicate that the regression model was statistically significant, $F = 191.897$, $p < 0.05$. The significance value was below the 0.05 decision level, showing that the four predictors jointly explained project

performance better than a model with no predictors. This confirms that project team management was relevant to the performance of Compassion International projects in Ruhango District. The large F statistic provides strong evidence that the observed combined influence was not

due to random variation. The model was therefore suitable for interpreting the individual regression coefficients.

4.3.4 Multiple Regression Coefficients

The coefficients table provides the unstandardised effects, standardised coefficients, test statistics and collinearity measures for the four independent variables.

Table 6: Coefficients of Project Team Management and Project Performance

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
(Constant)	.204	.153			1.333	.183		
1 Technical expertise management	.180	.042	.200	4.286	.000		.495	2.021
Communication management	.388	.049	.379	7.918	.000		.449	2.226
Conflict management	.179	.041	.220	4.366	.000		.418	2.393
Team collaboration	.209	.050	.239	4.180	.000		.328	3.047

a. Dependent Variable: Project performance

Source: Primary data, June 2026.

The results in Table 6 indicate that technical expertise management had a positive and significant influence on project performance ($B = 0.180$, $t = 4.286$, $p < 0.05$). A one-unit increase in technical expertise management was associated with a 0.180-unit increase in project performance when the other project team management dimensions were held constant. The t statistic showed that this contribution was statistically reliable at the 0.05 level. The tolerance value of 0.495 and VIF of 2.021 indicated no problematic multicollinearity. The first null hypothesis was therefore rejected.

Communication management had a positive and significant influence on project performance ($B = 0.388$, $t = 7.918$, $p < 0.05$). A one-unit improvement in communication management was associated with a 0.388-unit improvement in project performance, holding the other predictors constant. This was the largest unstandardised effect in the model, showing the particular importance of communication management for Compassion International projects in Ruhango District. The tolerance value of 0.449 and VIF of 2.226 were within acceptable limits, so multicollinearity was not a concern. The second null hypothesis was rejected.

Conflict management had a positive and significant influence on project performance ($B = 0.179$, $t = 4.366$, $p < 0.05$). A one-unit increase in conflict management was associated with a 0.179-unit increase in project performance while the other variables were held constant. The t statistic and significance value confirmed that the influence was statistically significant at the 0.05 level. The tolerance value of 0.418 and VIF of 2.393 showed an acceptable collinearity position. The third null hypothesis was consequently rejected.

Team collaboration had a positive and significant influence on project performance ($B = 0.209$, $t = 4.180$, $p < 0.05$). A one-unit increase in team collaboration was associated with a 0.209-unit increase in project performance after controlling for the other dimensions. The influence was statistically significant because its significance value was below 0.05. The tolerance value of 0.328 and VIF of 3.047 were acceptable and did not indicate harmful multicollinearity. The fourth null hypothesis was therefore rejected.

Hence, each project team management dimension made a positive and statistically significant contribution to project performance, while communication management made the strongest unique contribution. The collinearity statistics for all predictors were within acceptable limits, supporting confidence in the separate coefficient estimates.

The adopted model for analysis was structured as follows:

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

Where Y = Project performance; X_1 = Technical expertise management; X_2 = Communication management; X_3 = Conflict management; X_4 = Team collaboration; β_0 = Constant; β_1 - β_4 = Regression coefficients; and ε = Error term.

$$\text{Project performance} = 0.204 + 0.180(\text{Technical expertise management}) + 0.388(\text{Communication management}) + 0.179(\text{Conflict management}) + 0.209(\text{Team collaboration}) + \varepsilon$$

The reported variance inflation factors were 2.021 for technical expertise management, 2.226 for communication management, 2.393 for conflict management and 3.047 for team collaboration. These values were below 10, indicating no severe multicollinearity under the study's diagnostic criterion. The regression findings show conditional associations rather than proof of causation.

4.3.5 Decisions on Null Hypotheses

The study decisions were based on the individual regression significance tests against the 0.05 threshold.

Table 7: Decisions on Null Hypotheses

Null hypothesis	Basis for decision	Decision
H ₀₁ : Technical expertise management has no significant influence on the performance of Compassion International projects in Ruhango District.	$p < 0.05$	Rejected
H ₀₂ : Communication management has no significant influence on the performance of Compassion International projects in Ruhango District.	$p < 0.05$	Rejected
H ₀₃ : Conflict management has no significant influence on the performance of Compassion International projects in Ruhango District.	$p < 0.05$	Rejected
H ₀₄ : Team collaboration has no significant influence on the performance of Compassion International projects in Ruhango District.	$p < 0.05$	Rejected

Source: Primary data, June 2026.

The results in Table 7 indicate that all four null hypotheses were rejected because technical expertise management, communication management, conflict management, and team collaboration each had positive coefficients with significance values below 0.05. The decisions confirm that every dimension of project team management examined in this study significantly influenced the performance of Compassion International projects in Ruhango District. Communication management had the largest unique estimated influence, although the other three dimensions also remained important after controlling for one another. The findings support the view that project performance is strengthened through a balanced approach to managing technical capacity, information exchange, disagreements, and collaborative work.

4.4 Discussion of Research Findings

The discussion relates the statistical findings to prior scholarship and the theoretical perspectives guiding the analysis. It distinguishes overall respondent perceptions from inferential evidence about the contribution of each dimension.

4.4.1 Technical Expertise Management and Project Performance

Technical expertise management was positively associated with the performance of Compassion International projects in Ruhango District ($r = 0.721$), and its multiple regression coefficient was significant ($B = 0.180$, $t = 4.286$, $p < 0.05$). These results suggest that relevant staff qualifications, practical skills and technical problem solving were related to project delivery even

after the other practices were included in the model. Joshi and Sharma (2023) similarly linked professional competence with stronger delivery outcomes, while Mwangi and Wanyoike (2022) found that skills improved the performance of public development projects in Kenya.

Human Capital Theory offers a direct interpretation of these findings: project personnel become more productive when their knowledge and experience match assigned responsibilities. The positive result is also consistent with Uwizeyimana and Habimana (2023), who associated technical competence with NGO project performance in Rwanda. For Compassion International projects, maintaining technical competency registers and targeted refresher training would support task quality and implementation reliability.

4.4.2 Communication Management and Project Performance

Communication management showed a strong positive correlation with project performance ($r = 0.799$) and the largest unique regression coefficient ($B = 0.388$, $t = 7.918$, $p < 0.05$). This implies that accurate and timely messages, regular feedback, listening and stakeholder interaction were particularly important predictors of project delivery in the combined model. Li and Chen (2023) linked communication competence to better coordination in infrastructure work, and García and Rodríguez (2022) found similar benefits in technology-related projects.

From a Resource-Based View perspective, communication represents an internal capability that allows teams to coordinate information and resources

efficiently. The Ruhango evidence therefore supports treating communication as a core management routine rather than an incidental administrative task. Documented work plans, clear reporting channels and short coordination meetings would help convert this capability into consistent delivery of Compassion International activities.

4.4.3 Conflict Management and Project Performance

Conflict management had a positive correlation with project performance ($r = 0.744$) and a significant conditional effect ($B = 0.179$, $t = 4.366$, $p < 0.05$). Effective dispute resolution, negotiation, mediation and respectful interpersonal conduct were consequently associated with stronger project performance in Ruhango District. Park and Lee (2023) reported benefits from constructive conflict handling, while Kiprotich and Rotich (2022) associated conflict-management practices with improved implementation of Kenyan development projects.

Social Exchange Theory explains this relationship through reciprocal trust, respect and cooperation. Where disagreements are addressed constructively, personnel may remain more committed to common project goals and less likely to disrupt implementation. The findings suggest that Compassion International project managers should formalise simple reporting and mediation procedures, thereby protecting coordination and team cohesion during demanding implementation periods.

4.4.4 Team Collaboration and Project Performance

Team collaboration had the strongest bivariate association with project performance ($r = 0.800$), and the combined regression indicated a significant positive contribution ($B = 0.209$, $t = 4.180$, $p < 0.05$). This distinction is important: collaboration had the highest simple correlation, but communication management had the largest conditional regression coefficient. Zhang and Huang (2023) identified collaborative working as beneficial in infrastructure projects, and Niyonzima and Mukantwali (2023) reported comparable findings for NGO projects in Rwanda.

Theory of Change helps interpret collaboration as the connection between coordinated implementation tasks and intended development outcomes. Joint planning, task cooperation, collective decisions and mutual support can reduce duplication and improve delivery of project activities. Similar arguments appear in Rossi and Bianchi (2022) and Mensah and Boateng (2023). The findings favour cross-functional planning and collective progress reviews within Compassion International projects in Ruhango District.

5. Conclusion and Recommendations

The conclusions synthesise the statistical evidence, while the recommendations identify practical measures for improving Compassion International project performance in Ruhango District.

5.1 Conclusions

All four project team management dimensions were positively and significantly associated with the performance of Compassion International projects in Ruhango District. Technical expertise management supported accurate execution and problem solving, communication management strengthened information flow and task coordination, conflict management helped sustain constructive professional relationships, and team collaboration supported shared implementation responsibilities. In the adjusted regression model, communication management had the largest coefficient. Jointly, the four predictors explained 80.1% of the observed variation in project performance.

The results are consistent with the study's theoretical framework and emphasise that technical and relational capabilities should operate together. However, the cross-sectional, survey-based design limits causal interpretation, and the findings should be understood as statistical relationships within the observed sample rather than proof of effects across all development projects.

5.2 Recommendations

This section presents recommendations derived from the study findings and conclusions.

1. Compassion International project leadership in Ruhango District should maintain a register of staff expertise and align assignments with verified qualifications and practical experience.
2. Because communication management had the largest conditional coefficient, project coordinators should establish a documented communication protocol specifying the person responsible, audience, channel, reporting frequency and response deadlines.
3. Project teams should implement a clear, accessible procedure for raising and resolving disagreements, accompanied by training in negotiation, mediation, respectful communication and conflict prevention.
4. Leaders should also embed joint planning, cross-functional working groups and collective risk reviews in project implementation, recognising collaboration and shared problem solving during performance appraisal.

References

- Aguinis, H., & Burgi-Tian, J. (2023). *Measuring performance during crises and beyond: The performance management revolution*. Business Horizons, 66(1), 15–25.
- Barney, J. B., & Mackey, A. (2023). *Resource-based theory and the role of internal capabilities in organizational performance*. Strategic Management Journal, 44(3), 561–575.
- Blau, P. M. (2022). *Exchange and power in social life*. Routledge.
- Cropanzano, R., & Mitchell, M. S. (2022). Social exchange theory: An interdisciplinary review. *Journal of Management*, 48(2), 402–432.
- García, M., & Rodríguez, C. (2022). Communication management and performance of technology development projects. *European Journal of Innovation Management*, 25(6), 1780–1798.
- Government of Rwanda. (2023). *National strategy for transformation (NST1) annual implementation report 2022–2023*. Government of Rwanda.
- Joshi, R., & Sharma, P. (2023). Impact of technical competence on infrastructure project success in India. *International Journal of Construction Management*, 23(7), 1124–1133.
- Kiprotich, D., & Rotich, G. (2022). Conflict management practices and performance of county development projects in Kenya. *International Journal of Project Organisation and Management*, 14(3), 285–300.
- Larson, E. W., & Gray, C. F. (2023). *Project management: The managerial process* (8th ed.). McGraw-Hill Education.
- Li, W., & Chen, X. (2023). Communication competence and performance of infrastructure development projects in China. *Engineering, Construction and Architectural Management*, 30(4), 1625–1641.
- Martínez, J., & Pérez, L. (2022). Technical expertise and project success in technology development projects. *International Journal of Project Management*, 40(7), 701–712.
- Mensah, S., & Boateng, K. (2023). Team collaboration and performance of community development projects in Ghana. *Journal of African Business*, 24(2), 215–229.
- Ministry of Finance and Economic Planning. (2022). *Public investment management annual report*. Government of Rwanda.
- Mwangi, P., & Wanyoike, D. (2022). Technical competence and performance of public sector development projects in Kenya. *International Journal of Project Organisation and Management*, 14(4), 341–356.
- Müller, R., & Schneider, A. (2022). Conflict resolution strategies and construction project performance in Germany. *International Journal of Construction Management*, 22(9), 1735–1745.
- Niyonzima, E., & Mukantwali, C. (2023). Team collaboration and performance of NGO development projects in Rwanda. *African Journal of Project Management*, 5(2), 88–101.
- Park, J., & Lee, H. (2023). Conflict management and project performance in technology development teams. *International Journal of Project Management*, 41(5), 489–502.
- Project Management Institute. (2023). *Pulse of the profession 2023: Power skills redefining project success*. Project Management Institute.
- Rossi, M., & Bianchi, S. (2022). Collaborative teamwork and performance of innovation development projects. *European Management Journal*, 40(6), 903–913.
- Rwanda Governance Board. (2022). *Civil society development report*. Rwanda Governance Board.
- Uwizeyimana, J. B., & Habimana, P. (2023). Technical competence and performance of NGO development projects in Rwanda. *Rwanda Journal of Management and Social Sciences*, 5(1), 65–79.
- Walker, D. H. T., & Lloyd-Walker, B. (2023). Collaborative project management practices and project success. *International Journal of Managing Projects in Business*, 16(4), 742–760.
- World Bank. (2022). *Rwanda economic update: Boosting regional integration and economic resilience*. World Bank.
- Zhang, Y., & Huang, J. (2023). Team collaboration and infrastructure project performance in China. *Engineering, Construction and Architectural Management*, 30(6), 2550–2565.