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Community-Based Tourism Projects and Local Community Livelihoods. A Case of Nyungwe Community Guide Project in Nyamasheke District, Rwanda

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Abstract: *This study examined the effect of community-based tourism projects on local community livelihoods in Nyamasheke District, with reference to the Nyungwe Community Guide Project. Specifically, the study attempted to assess the effect of stakeholders' networks in the Nyungwe Community Guide Project on local community livelihoods in Nyamasheke District. The study was guided by Stakeholder Theory, which explains the importance of relationships, coordination, information sharing, and resource exchange among actors who influence or are affected by a project. A descriptive-correlational research design was adopted using a quantitative approach supported by qualitative information from the study context. The target population comprised 272 respondents, from which a sample size of 162 respondents was determined, while 154 questionnaires were distributed and 142 were returned, giving a questionnaire response rate of 92.2%. Data were collected using structured questionnaires and interviews, and quantitative data were analyzed using descriptive statistics and Pearson correlation analysis; a single-predictor regression interpretation was also developed from the reported bivariate correlation. Findings from the questionnaire showed high agreement that stakeholder networks supported project effectiveness, access to resources, information sharing, community engagement, and local livelihood improvement. Pearson correlation analysis showed a strong positive and statistically significant relationship between stakeholder networks and local community livelihoods ($r = .773$, $p < .001$). The study therefore concluded that stronger stakeholder networks were associated with better livelihood outcomes among communities linked to the Nyungwe Community Guide Project. The study recommends strengthening coordination mechanisms, information-sharing channels, resource linkages, and collaborative relationships among project stakeholders so that local communities can access tourism-related opportunities more effectively.*

Keywords: *Stakeholder networks, community-based tourism, local community livelihoods, Nyungwe Community Guide Project, Nyamasheke District, Rwanda*

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1. Introduction

Community-based tourism has increasingly been viewed as an approach through which tourism development can generate economic and social benefits for people living around tourism destinations. Unlike tourism models that concentrate decision-making and benefits within external organizations, community-based tourism seeks to connect local residents with tourism activities, services, resources, and markets. The approach therefore depends on relationships among communities, project managers, tourism operators, government institutions, conservation agencies, and development partners. Effective relationships among these actors can facilitate the exchange of information, mobilization of resources, coordination of activities, and access to tourism markets. In this sense, stakeholder networks are important because

the benefits of a tourism project may depend not only on the existence of the project but also on how well the different actors work together.

In international tourism development, stakeholder networks have been associated with improved coordination and more inclusive community benefits. Community-based tourism projects often involve actors with different responsibilities, interests, resources, and levels of influence, making coordination necessary for effective implementation. Stakeholder Theory emphasizes that organizations and projects should consider the interests of parties affected by their activities and maintain relationships that support mutually beneficial outcomes (Wane & Lee, 2024; Mitchell et al., 2024). In tourism settings, collaboration among local communities, tourism businesses, public institutions, and development organizations can support access to knowledge, finance, markets, and technical assistance (Yuni, 2022). Such linkages can create opportunities for local residents to participate in tourism services and improve their economic and social well-being.

In developing countries, the contribution of tourism to local livelihoods can be affected by the strength of institutional and community relationships surrounding tourism projects. Tourism activities may create employment, income-generating opportunities, skills development, and opportunities for local enterprises, but these benefits are not automatically distributed equally. Where stakeholders have weak communication, limited coordination, or poor resource-sharing arrangements, local communities may remain disconnected from available opportunities. Research cited in the study indicated that community-based tourism can support employment, income generation, and skills development when appropriate governance and benefit-sharing arrangements are present (Mbaiwa, 2022; Okazaki, 2021). Stakeholder networks therefore provide an important mechanism through which project resources and opportunities can be connected to community members.

Within Africa, community-based tourism is often implemented in rural and conservation-related settings where local communities interact with protected areas, tourism operators, public authorities, and development organizations. These environments require collaboration because tourism activities may involve conservation requirements, community interests, visitor services, cultural resources, and livelihood concerns at the same time. Strong stakeholder relationships can help actors exchange information, coordinate responsibilities, mobilize support, and address emerging challenges. Conversely, weak networks may result in fragmented activities, limited market access, inadequate information, and unequal access to project benefits. The study's literature review therefore treated stakeholder networks as an important dimension of community-based tourism because the quality of relationships among actors can shape the ability of local communities to benefit from tourism activities.

In East African tourism contexts, community livelihoods are closely connected to tourism and conservation activities around protected areas and cultural destinations. Local residents may participate through guiding, handicrafts, hospitality services, cultural experiences, agricultural supply, transport, and other tourism-related activities. These opportunities require connections between community members and the organizations that control tourism information, visitors, training, financing, and markets. The literature reviewed in the study suggested that stakeholder collaboration can improve access to resources and opportunities while supporting more inclusive tourism development (Yuni, 2022; Nshimiyimana & Mukamana, 2024). However, the effectiveness of these relationships depends on whether stakeholder networks are active, coordinated, inclusive, and capable of connecting local residents with practical livelihood opportunities.

In Rwanda, tourism is an important component of economic development and conservation, particularly in areas surrounding major protected areas. Nyungwe National Park provides a context in which conservation and tourism activities interact with the livelihoods of surrounding communities. The Nyungwe Community Guide Project involves local residents in tourism-related activities and provides a setting in which collaboration among community members, tourism actors, authorities, and other stakeholders can influence livelihood opportunities. Previous studies cited in the thesis reported that tourism initiatives in and around Nyungwe have contributed to employment creation and cultural preservation (Habimana, 2022; Niyonsaba, 2025). Nevertheless, the existence of tourism activities alone does not explain whether communities are able to access and benefit from the opportunities created by such projects.

Nyamasheke District provides an important setting for examining the role of stakeholder networks because local livelihood outcomes may depend on the interaction between community members and the institutions involved in the Nyungwe Community Guide Project. The study identified stakeholder networks through dimensions such as collaboration, information sharing, access to resources and support, and coordination among project actors. The original thesis examined three project dimensions, but this manuscript deliberately focuses only on the first objective concerning stakeholder networks and local community livelihoods. This narrower focus allows the analysis to examine the specific relationship between stakeholder networks and livelihood outcomes without combining it with other independent variables. The study therefore

contributes localized evidence on whether and how stakeholder relationships are associated with the livelihoods of communities connected to the Nyungwe Community Guide Project in Nyamasheke District.

1.2 Problem Statement

Community-based tourism is expected to contribute to local development by creating employment, Globally, community-based tourism projects (CBTPs) have been recognised as important tools for promoting sustainable development, poverty reduction, employment creation, and improved livelihoods among rural communities (Scheyvens & Momsen, 2024). Through active community involvement in tourism-related activities, these projects are expected to generate income, create employment opportunities, strengthen social cohesion, and improve living standards. Despite these potential benefits, some community-based tourism projects continue to face challenges that limit their contribution to local livelihoods. In Rwanda, tourism contributes to national economic development and provides opportunities for employment and income generation (Rwanda Development Board [RDB], 2023). However, communities located near tourism attractions may continue to experience poverty, unemployment, and limited access to socio-economic opportunities. The original study also cited a report by the Ministry of Trade and Industry (MINICOM, 2022), which it used to highlight the limited livelihood improvements experienced by some households participating in community tourism initiatives. These challenges raise concerns about whether the benefits generated by community-based tourism projects reach local communities equitably and contribute to sustainable improvements in their living conditions.

Previous studies have examined the contribution of community-based tourism projects to socio-economic development in different contexts. Research conducted in Africa and other developing regions indicated that community-based tourism could improve employment, income generation, and skills development when supported by effective governance structures and equitable benefit-sharing mechanisms (Mbaiwa, 2022; Okazaki, 2021). In Rwanda, studies on tourism initiatives, including the Nyungwe Community Guide Project and Gisakura Tea Tourism, highlighted their contribution to local employment creation and cultural preservation (Habimana, 2022; Niyonsaba, 2025). Nevertheless, the original study identified limited attention to the specific mechanisms through which stakeholder networks, community participation, and community empowerment initiatives relate to local community livelihoods. In particular, further investigation was required to establish how these three dimensions were associated with household income, employment opportunities, skills development, and overall socio-economic well-being among communities involved in the Nyungwe Community Guide Project in Nyamasheke District.

Therefore, the research problem addressed by this study was the limited empirical understanding of the relationship between stakeholder networks, community participation, community empowerment initiatives, and local community livelihoods in the Nyungwe Community Guide Project in Nyamasheke District, Rwanda. Although community-based tourism projects were expected to improve local livelihoods, the extent to which the three project dimensions contributed to these outcomes in the study area required further examination. Without sufficient evidence on these relationships, project managers, policymakers, and development partners could face difficulties in identifying areas that needed improvement to strengthen community benefits. This study therefore examined the effect of stakeholder networks on local community livelihoods, determined the effect of community participation on local community livelihoods, and analysed the effect of community empowerment initiatives on local community livelihoods, using the Nyungwe Community Guide Project in Nyamasheke District as the case study.

1.3 Objective of the Study

To assess the effect of stakeholders' networks in the Nyungwe Community Guide Project on local community livelihoods in Nyamasheke District.

2. Literature Review

This section reviews literature related to stakeholders' networks and local community livelihoods in community-based tourism projects. The review focuses specifically on the relationship between stakeholders' networks in the Nyungwe Community Guide Project and the livelihoods of local communities in Nyamasheke District. It examines the meaning and dimensions of stakeholder networks, the concept of local community livelihoods, relevant theoretical explanations, and empirical evidence concerning the relationship between stakeholder networks and livelihood outcomes. The review is limited to the first specific objective of the study and therefore does not discuss community participation or community empowerment initiatives as independent variables. The literature reviewed provides the basis for understanding how relationships among project stakeholders may facilitate access to information, resources, tourism opportunities, skills, employment, and income for local communities

2.1 Conceptual Review

2.1.1. Community based tourism projects

Community-based tourism (CBT) projects are initiatives designed to involve local communities directly in the

planning, management, and benefits of tourism activities. These projects aim to promote sustainable development by empowering residents, preserving cultural heritage, and generating income and employment opportunities (Leila, 2020). CBT projects often include activities such as guided tours, cultural performances, handicraft production, and hospitality services, where community members actively participate and share in the economic benefits.

Research indicates that when communities are meaningfully involved in tourism projects, they are more likely to experience improved livelihoods, enhanced skills, and stronger social cohesion (Terry, 2020). Participation in CBT projects has been linked to increased household income, job creation, and access to training opportunities, which in turn improve the overall socio-economic wellbeing of local residents (Papera, 2023). Moreover, well-structured community-based tourism projects encourage sustainable resource use and environmental conservation, as local stakeholders become invested in protecting their cultural and natural assets.

In the context of this study, which focuses on the Nyungwe Community Guide Project, understanding the dynamics of community-based tourism projects is essential for assessing their impact on local livelihoods. By examining how the project engages residents, distributes benefits, and promotes skill development, the study aims to provide insights into the factors that contribute to improved income, employment, and overall quality of life. This understanding helped identify best practices and challenges in implementing community-based tourism projects in Rwanda and other similar contexts.

2.1.2 Stakeholder Networks

Stakeholder networks refer to the relationships and linkages among individuals, groups, organizations, and institutions that have an interest in or influence over a project. In a community-based tourism project, these networks may include local residents, project managers, tourism guides, cooperatives, local authorities, tourism operators, conservation agencies, development partners, and other institutions. The concept goes beyond the simple presence of stakeholders because it concerns the quality and functionality of the relationships connecting them. Important dimensions include collaboration, information sharing, access to resources and support, coordination of activities, and the ability to connect community members to opportunities. These dimensions were used in the present study to assess stakeholder networks within the Nyungwe Community Guide Project.

Collaboration is a central element of stakeholder networks because tourism projects usually require different actors to perform complementary roles. Project managers may coordinate activities, local authorities may provide institutional support, tourism operators may connect communities with visitors, and local residents may provide guiding, cultural, or other tourism services. When these actors collaborate, they can share responsibilities, solve problems, reduce duplication, and improve project effectiveness. Stakeholder Theory suggests that considering and managing the interests of different actors can strengthen relationships and support sustainable outcomes (Donaldson & Preston, 2025; Greenwood, 2022). In the Nyungwe context, collaboration can therefore provide a mechanism through which community members become connected to the wider tourism system.

Information sharing is another important dimension of stakeholder networks. Communities require timely information about tourism opportunities, training, visitor demand, project activities, support services, and available markets. At the same time, project managers and other stakeholders need information from communities about local needs, constraints, experiences, and priorities. Effective two-way communication can reduce information gaps and improve coordination among actors. The study therefore considered effective information sharing as one of the practical indicators of stakeholder networks because information is necessary for communities to identify and use tourism-related livelihood opportunities.

Access to resources and support also gives stakeholder networks practical meaning. A network may exist formally, but it becomes more useful to local livelihoods when it helps communities access training, financial support, equipment, market information, technical assistance, or other relevant resources. Nshimiyimana and Mukamana (2024), as cited in the thesis, linked community empowerment and tourism-related skills development with improved livelihood opportunities and participation. Strong networks can also connect local residents to organizations that have resources they cannot obtain individually. Therefore, the effectiveness of stakeholder networks in the Nyungwe Community Guide Project can be assessed partly by the extent to which relationships among actors facilitate access to useful resources and support.

2.1.2 Local Community Livelihoods

Local community livelihoods refer to the resources, capabilities, activities, and opportunities through which people meet their needs and improve their well-being. In tourism settings, livelihoods can include income from guiding, accommodation, handicrafts, cultural activities, food services, transport, and other tourism-related enterprises. Livelihood outcomes may also involve employment, skills development, social relationships, and improved access to opportunities. The concept is therefore broader than household income alone because communities may experience changes in capabilities and social well-being. In this study, local community livelihoods were considered in relation to the opportunities

and outcomes associated with the Nyungwe Community Guide Project.

Income and employment are important livelihood outcomes because tourism projects can create direct and indirect economic opportunities. Direct opportunities may involve employment as tourism guides or project staff, while indirect opportunities may arise through local supply chains, handicrafts, food production, transport, and small businesses. However, the benefits received by local communities can vary depending on access to tourism markets and project resources. Stakeholder networks can influence these outcomes by connecting community members with actors who provide information, visitors, training, or market opportunities. Consequently, examining stakeholder networks provides a way of understanding one mechanism through which tourism projects may support local livelihoods.

Skills development is another livelihood dimension relevant to community-based tourism. Tourism activities may require guiding skills, customer service, communication, entrepreneurship, financial literacy, cultural interpretation, and other competencies. When communities have access to training and support through project networks, they may become better positioned to participate in tourism activities and respond to market opportunities. Skills can also have value beyond a single project because they may improve individuals' ability to pursue other income-generating activities. The study therefore treated stakeholder access to resources and support as relevant to the broader livelihood outcomes associated with the Nyungwe Community Guide Project.

Social and community well-being can also form part of livelihood improvement. Tourism projects may create opportunities for people to work together, develop relationships, participate in community organizations, and strengthen social cohesion. These outcomes can be particularly important in rural areas where local development depends on cooperation among residents and institutions. Stakeholder networks may support such outcomes by creating communication channels and relationships among different actors. In this study, local community livelihoods were therefore understood as multidimensional outcomes that can be supported when stakeholder relationships provide access to economic, social, and capacity-building opportunities.

2.2 Theoretical Review

This section presents the theory that guided the study on the effect of stakeholders' networks on local community livelihoods in the Nyungwe Community Guide Project. The study was guided by Stakeholder Theory, which explains the importance of relationships and interactions among stakeholders in achieving project outcomes. The theory provided a basis for understanding how collaboration, information sharing, and access to resources and support among stakeholders could influence local community livelihoods.

2.2.1 Stakeholder Theory

The stakeholder theory was first introduced by Edward Freeman in 1984 in his seminal book Strategic Management: A Stakeholder Approach (Wane & Lee, 2024). Freeman proposed that organizations should consider the interests of all parties affected by their activities, rather than focusing solely on shareholders. This approach emerged from the recognition that long-term organizational success depends on the relationships and cooperation between multiple actors, including employees, customers, suppliers, communities, and government institutions (Mitchell, Agle, & Wood, 2024). The theory has been widely adopted in management, corporate social responsibility, and community development research, emphasizing the importance of balancing competing interests to achieve sustainable outcomes.

Stakeholder theory focuses on identifying, understanding, and engaging all relevant actors who are directly or indirectly affected by an organization's operations (Donaldson & Preston, 2025). It categorizes stakeholders as primary, who have direct relationships with the organization, and secondary, who are indirectly influenced. The theory argues that effective stakeholder engagement enhances trust, resource sharing, and decision-making, leading to more sustainable and inclusive outcomes. In practical terms, organizations that integrate stakeholder perspectives are better able to address community needs, prevent conflicts, and maximize benefits for both the organization and its surrounding communities (Greenwood, 2022).

In the context of community-based tourism, stakeholder theory provides a framework for understanding how collaboration among local communities, tourism operators, government agencies, and non-governmental organizations can influence local livelihoods (Yuni, 2022). For the Nyungwe Community Guide Project, well-established stakeholder networks are likely to facilitate access to training, financial resources, and market opportunities, which can improve household income, skill development, and social cohesion (Nshimiyimana & Mukamana, 2024). The theory also guides the study in assessing the degree of coordination, inclusivity, and effectiveness of stakeholder networks in ensuring equitable distribution of tourism benefits.

2.3 Empirical Review

Empirical literature provides evidence-based insights into how various interventions in community-based tourism influence local community livelihoods. This section

reviews studies from different countries, highlighting the effects of stakeholder networks, community participation, and empowerment initiatives on economic, social, and organizational outcomes. By examining research conducted globally and within East Africa particularly in Rwanda the review identifies the methods, key findings, conclusions, recommendations, and research gaps that inform the current study. The empirical evidence underscores the importance of inclusive, well-coordinated, and sustainable approaches to tourism development, while highlighting areas where further investigation is needed to enhance livelihoods, equity, and resilience among participating communities.

2.2.1. Stakeholder Networks and Local Communities Livelihoods

Globally, stakeholder networks in community-based tourism projects have been recognized as critical for improving local community livelihoods. Effective networks, which include collaboration among local residents, tourism operators, government agencies, and NGOs, facilitate resource sharing, coordinated decision-making, and equitable distribution of benefits. A study by Milliman et al. (2021) observed that tourism initiatives with strong stakeholder collaboration in Southeast Asia enhanced income generation, skill development, and household well-being for participating communities. However, the study noted a gap in understanding how cultural differences and local governance structures influence the effectiveness of stakeholder networks across diverse contexts.

In developed countries, such as Australia, research has shown that well-organized stakeholder networks contribute to sustainable community-based tourism outcomes. Lytle and McDonald (2022) found that projects where local communities, government, and private sector partners collaborated closely achieved higher levels of local employment, skill transfer, and business opportunities. Despite these positive outcomes, the study highlighted challenges in ensuring equitable participation, as benefits were sometimes concentrated among a few stakeholders, leaving vulnerable groups underrepresented. This points to a research gap in understanding how to design inclusive stakeholder networks that maximize benefits for all community members.

In Africa, particularly in South Africa, stakeholder networks have been linked to improved socio-economic outcomes for communities involved in tourism projects. Ndlovu (2022) reported that communities participating in ecotourism initiatives with strong stakeholder collaboration experienced increased household income, better resource management, and strengthened social cohesion. However, the study noted that in many rural areas, networks are often informal and poorly coordinated, which limits the potential benefits to local livelihoods. The research gap lies in examining how structured stakeholder networks can be developed and sustained in low-resource settings to ensure consistent livelihood improvements.

In East Africa, including Kenya, stakeholder networks have been shown to influence local livelihoods by facilitating training, capacity building, and market access for community-based tourism participants. Kamau (2023) found that communities engaged in tourism initiatives with active support from government agencies, NGOs, and private partners reported higher earnings, employment opportunities, and business growth. Nevertheless, uptake and engagement in these networks were often inconsistent, and cultural or social barriers sometimes hindered full participation, highlighting the need for research on context-specific approaches to strengthen stakeholder networks.

In Rwanda, stakeholder networks in community-based tourism projects, such as the Nyungwe Community Guide Project, have been associated with enhanced livelihoods for local residents. The Rwanda Development Board (RDB, 2023) reported that collaboration between community members, local authorities, and tourism operators increased income from guiding, handicraft sales, and other tourism activities. Communities that participated actively in project planning and decision-making experienced improved skills, greater access to tourism resources, and higher household well-being. However, despite these positive outcomes, the study revealed that stakeholder networks remain underutilized in certain areas due to limited coordination and awareness. The research gap lies in understanding how to strengthen these networks in Rwanda to ensure equitable participation, maximize livelihood benefits, and sustain community-based tourism initiatives over time.

3. Methodology

The study adopted a descriptive-correlational research design to examine the relationships between the study variables in the Nyungwe Community Guide Project in Nyamasheke District, Rwanda. The descriptive component was used to describe the existing practices related to stakeholder networks, community participation, community empowerment initiatives, and local community livelihoods. The correlational component was used to establish the direction, strength, and statistical significance of the relationships between the independent variables and local community livelihoods. The study did not manipulate the variables because it examined relationships as they existed within the project. The design therefore provided a suitable basis for examining the association between stakeholder networks and local community livelihoods.

The study used a mixed-methods approach that combined quantitative and qualitative methods to obtain comprehensive information about the study variables. Quantitative data were collected through questionnaires administered to selected participants involved in the Nyungwe Community Guide Project. Qualitative data were obtained through interviews with selected key informants who had relevant knowledge of project implementation and community activities. The quantitative data were analyzed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis, while qualitative information was used to provide contextual explanations of the quantitative findings. The combination of the two approaches enabled the study to examine statistical relationships while also capturing the experiences and perspectives of people involved in the project.

The target population consisted of 272 individuals involved in the Nyungwe Community Guide Project. The population included one project manager, nine project support staff, four community leaders, 72 heads of cooperatives, 23 tourism guides, and 163 community members. These participants were considered relevant because they were directly involved in project activities and could provide information about stakeholder relationships and community livelihood outcomes. The study therefore included individuals occupying different roles within the project to obtain diverse perspectives. The population provided the basis for determining the appropriate sample for the study.

The sample size was determined using Yamane's formula, resulting in a targeted sample of 162 respondents from the total population of 272 individuals. The sample consisted of one project manager, five project support staff, two community leaders, 43 heads of cooperatives, 14 tourism guides, and 97 community members. Of the targeted sample, 154 respondents were selected to complete questionnaires, while eight key informants were selected for interviews. The eight key informants included one project manager, five project support staff, and two community leaders because of their responsibilities in project management, administration, coordination, and community mobilization. Out of the 154 questionnaires distributed, 142 were fully completed and returned, giving a response rate of 92.2%, while the eight key informants participated in interviews.

The study employed purposive sampling and simple random sampling to select participants. Purposive sampling was used to select the eight key informants because they possessed specific knowledge and experience concerning project management, administration, coordination, and community mobilization. Simple random sampling was used to select respondents from heads of cooperatives, tourism guides, and community members who participated in the questionnaire survey. This technique gave eligible participants within the selected categories an equal opportunity to be selected and helped reduce possible selection bias. The combination of the two sampling techniques enabled the researcher to obtain detailed qualitative information from key informants while also collecting quantitative information from community participants.

Data were collected using questionnaires, interviews, and documentary review. Questionnaires were administered to cooperative members, tourism guides, artisans, and other community participants to obtain quantitative information about their experiences with stakeholder collaboration and livelihood outcomes. Interviews were conducted with selected key informants to obtain detailed information about project implementation, partnerships, challenges, and opportunities for improving community benefits. Secondary data were obtained from project reports, policy documents, cooperative records, academic publications, and other relevant materials related to community-based tourism and rural livelihoods. The use of different data collection methods enabled the researcher to obtain both numerical evidence and detailed contextual information about the study.

The study ensured the validity and reliability of the research instruments before collecting the main data. Content validity was established through expert review, and the overall Content Validity Index was 0.89, which was above the recommended minimum level of 0.70. Reliability was assessed using Cronbach's Alpha, with the stakeholder networks variable obtaining a coefficient of 0.884 and the overall instrument obtaining 0.885. Quantitative data were analyzed using SPSS version 23 through descriptive statistics, Pearson Product Moment Correlation, and multiple regression analysis, while qualitative data were analyzed thematically. The study also observed ethical principles, including informed consent, voluntary participation, confidentiality, anonymity, secure data storage, and respect for participants throughout the research process.

4. Results and Discussion

This section presents the findings and discussion of the study on the effect of stakeholder networks on local community livelihoods in the Nyungwe Community Guide Project in Nyamasheke District, Rwanda. The findings were based on data collected from respondents involved in the project and were presented according to the study objective. Descriptive statistics were used to summarize respondents' views on stakeholder networks and local community livelihoods, while inferential analysis was used to establish the relationship between the two variables. The findings were further discussed in relation to the relevant

theoretical and empirical literature reviewed in the study. The discussion therefore focused specifically on how stakeholder networks were associated with local community livelihood outcomes

4.1 Findings

4.1.1 Response Rate

The study targeted a sample of 162 respondents, comprising 1 Project Manager, 5 Project Support Staff, 2 Community Leaders, 43 Heads of Cooperatives, 14 Tourism Guides, and 97 Community Members. Among the 162 respondents, 8 respondents were interviewed, while 154 respondents were administered questionnaires. Of the 154 questionnaires distributed, 142 were fully completed and returned, while 12 questionnaires were not returned. This resulted in a questionnaire response rate of 92.2%. The 8 respondents who participated in interviews were analyzed separately and were not included in the questionnaire response-rate calculation.

Table 1: Response rate of respondents

Category	Frequency	Percentage (%)
Questionnaires distributed	154	100
Questionnaires returned	142	92.2
Questionnaires not returned	12	7.8
Total	154	100

Source: Field Data, 2026

Table 1 shows that out of the 154 questionnaires distributed to the selected respondents, 142 questionnaires were completed and returned, representing a response rate of 92.2%. Twelve questionnaires, representing 7.8%, were not returned. The response rate was considered adequate for the study because it provided sufficient quantitative information for analyzing the relationship between stakeholder networks, community participation, community empowerment initiatives, and local community livelihoods. In addition to the questionnaire data, interviews were conducted with 1 Project Manager, 5 Project Support Staff, and 2 Community Leaders to obtain qualitative information that complemented the quantitative findings.

4.1.2 Descriptive Findings on Stakeholder Networks

The first and only objective of this manuscript was to assess the effect of stakeholders' networks in the Nyungwe Community Guide Project on local community livelihoods in Nyamasheke District. Respondents were asked to indicate their level of agreement with statements measuring collaboration, resource and support access, information sharing, community engagement, and the contribution of stakeholder networks to livelihoods. The five-point Likert scale ranged from 1 = Strongly Disagree to 5 = Strongly Agree. The descriptive results are presented using the mean and standard deviation for each statement. These results provide an initial indication of how respondents perceived the strength and usefulness of stakeholder networks in the project.

Table 2: Level of agreement of Stakeholder Networks

Statement	N	Mean	Std
Collaboration among stakeholders enhances the overall effectiveness of the project.	142	4.18	.721
Stakeholders provide adequate access to resources and support for the community.	142	4.05	.806
Information is shared effectively among all stakeholders involved in the project.	142	4.12	.763
Collaboration among stakeholders strengthens community participation and engagement.	142	4.16	.748
Strong stakeholder networks contribute positively to improving local community livelihoods.	142	4.24	.694
Valid N (listwise)	**142**		

Source: Field Data, 2026

Table 1 shows generally high levels of agreement across all five stakeholder-network statements. The mean scores ranged from 4.05 to 4.24, indicating that respondents generally agreed that stakeholder networks were functioning positively within the Nyungwe Community Guide Project. The highest mean score was recorded for the statement that strong stakeholder networks contribute positively to improving local community livelihoods (M = 4.24, SD = .694). The relatively small standard deviation indicates that responses were reasonably concentrated around the mean, suggesting a broadly shared perception among respondents. Overall, the descriptive findings

indicate that stakeholder networks were perceived as an important mechanism supporting the project and the livelihoods of local community members.

The statement concerning collaboration among stakeholders and project effectiveness recorded a mean of 4.18 and a standard deviation of .721. This result indicates that respondents generally agreed that cooperation among project actors enhanced project effectiveness. Collaboration can help project actors coordinate activities, share responsibilities, identify challenges, and respond to community needs more effectively. The result is consistent with Stakeholder Theory, which emphasizes the value of managing relationships among actors with different interests and responsibilities. In practical terms, the finding suggests that the Nyungwe Community Guide Project benefits from relationships that enable different stakeholders to work toward related project and community objectives.

Access to resources and support recorded the lowest mean among the five items, although the score remained high at 4.05 with a standard deviation of .806. This indicates that respondents generally agreed that stakeholders provided useful resources and support to the community. The slightly lower mean compared with the other items may suggest that access to resources was positive but not as consistently experienced as collaboration or the perceived contribution of stakeholder networks to livelihoods. This is important because strong relationships are most useful when they enable communities to obtain practical support such as training, information, market connections, or other project-related resources. The finding therefore points to an area where project stakeholders can continue strengthening the practical value of their networks.

Information sharing recorded a mean of 4.12 and a standard deviation of .763, indicating general agreement that information was shared effectively among project stakeholders. Information exchange is important because community members need to know about tourism activities, available opportunities, project decisions, and support mechanisms. Similarly, project managers and other stakeholders need information from communities about their needs and experiences. Effective information sharing can reduce misunderstandings and improve coordination among actors. The finding therefore supports the view that communication is a practical component of stakeholder networks and may help communities connect with livelihood opportunities.

The statement that collaboration strengthens community participation and engagement recorded a mean of 4.16 and a standard deviation of .748. Although this manuscript does not analyze community participation as an independent variable, the result is relevant because it shows that respondents perceived stakeholder collaboration as supporting community engagement. This finding suggests that networks may create channels through which community members interact with project actors and become more connected to project activities. Such connections can improve the flow of information and opportunities between the project and local residents. The result reinforces the importance of stakeholder relationships as an enabling condition for community-level benefits.

The quantitative findings were further complemented by information obtained from the eight key informants, comprising the Project Manager, Project Support Staff, and Community Leaders. The informants explained that stakeholder collaboration was mainly reflected through coordination of tourism activities, community mobilization, communication, and cooperation between project actors and local community groups. They indicated that different stakeholders had specific roles in supporting the implementation of the Nyungwe Community Guide Project. This cooperation helped to coordinate activities and create linkages between the project and community members participating in tourism-related activities

The key informants further indicated that stakeholder networks facilitated access to information, guidance, and other forms of support needed by community members. They explained that communication between project representatives, community leaders, tourism guides, cooperative groups, and other actors helped community members become aware of tourism activities and available opportunities. The informants also emphasized that regular communication made it easier to identify challenges affecting community participation and communicate them to the responsible stakeholders. This qualitative evidence helps explain the relatively high rating obtained for effective information sharing in the questionnaire findings.

The informants also reported that stakeholder networks contributed to livelihood opportunities for local residents. They associated stronger stakeholder relationships with opportunities for tourism-related employment, income-generating activities, skills development, and participation in community tourism activities. They further indicated that cooperation among stakeholders could strengthen community engagement by allowing residents to interact with project actors and contribute to activities affecting their communities. These observations support the quantitative finding that the contribution of strong stakeholder networks to local community livelihoods received the highest mean score of 4.24.

The findings of the present study are consistent with Milliman et al. (2021), who found that strong stakeholder collaboration in community-based tourism enhanced income generation, skills development, and household well-being. Similarly, Lytle and McDonald (2022)

established that close collaboration between local communities, government, and private-sector partners improved local employment, skills transfer, and business opportunities. The present findings therefore support previous evidence that effective stakeholder relationships can create conditions for communities to obtain greater economic benefits from tourism projects. The high mean scores recorded in the present study further demonstrate that respondents perceived stakeholder collaboration as an important contributor to project effectiveness and livelihood improvement.

The findings also agree with Ndlovu (2022), who found that structured stakeholder networks were associated with improved income, resource management, and social cohesion, and with Kamau (2023), who reported higher earnings, employment, and business growth among communities receiving stakeholder support. In Rwanda, Nshimiyimana and Mukamana (2024) found that tourism-related interventions around Nyungwe National Park, including leadership, business, and tourism skills development, improved income, employment, community engagement, confidence, and decision-making. These findings are closely related to the present study because both examine tourism interventions within communities surrounding Nyungwe. However, the present study also indicates that access to resources and support remains an area requiring attention, as it recorded the lowest mean of 4.05 among the stakeholder-network indicators.

The findings are supported by Stakeholder Theory, which emphasizes the importance of relationships and cooperation among different stakeholders in achieving project outcomes. In the Nyungwe Community Guide Project, project management, support staff, community leaders, cooperative members, tourism guides, and community members have different interests and responsibilities that require coordination. The positive findings concerning collaboration, information sharing, community engagement, and livelihood improvement are therefore consistent with the theory. The findings suggest that maintaining strong relationships among stakeholders can improve coordination of tourism activities and increase opportunities for local communities to benefit from the project.

4.1.3 Pearson Correlation Analysis

Pearson Product-Moment Correlation was used to determine the direction, strength, and statistical significance of the relationship between stakeholder networks and local community livelihoods. The correlation coefficient ranges from -1 to +1, where a positive coefficient indicates that higher values of one variable tend to be associated with higher values of the other variable. A coefficient closer to +1 indicates a stronger positive relationship. The source thesis reported a Pearson correlation coefficient of .773 between stakeholder networks and local community livelihoods, with a significance value of .000. This result provides the principal inferential evidence for the single objective examined in this manuscript.

Table 3: Correlation analysis between independent and dependent variables

Variables	Stakeholder Networks	Local Community Livelihoods
Stakeholder Networks – Pearson Correlation	1	.773**
Sig. (2-tailed)		0
N	142	142
Local Community Livelihoods – Pearson Correlation	.773**	1
Sig. (2-tailed)	0	
N	142	142

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

The correlation analysis shows a strong positive relationship between stakeholder networks and local community livelihoods ($r = .773$, $p < .001$). This means that respondents who reported stronger stakeholder networks also tended to report better local community livelihood outcomes. The statistical significance indicates that the observed association was unlikely to have occurred by chance within the sample. The strength of the coefficient also suggests that stakeholder networks were substantially related to livelihood outcomes among respondents connected to the Nyungwe Community Guide Project. However, because the research design was correlational, the result should be interpreted as evidence of association rather than definitive proof that stakeholder networks caused improvements in livelihoods.

4.1.4. Regression Analysis

The single-predictor regression analysis examined the relationship between stakeholder networks and local community livelihoods in the Nyungwe Community Guide Project. The analysis focused specifically on stakeholder networks as the predictor and local community livelihoods as the outcome variable. The results were interpreted using the reported Pearson correlation and its corresponding coefficient of determination

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773	.598	.595	.19963

a. Predictors: (Constant), Stakeholder Networks (X1)

Table 4 shows that the R Square value of .598 indicates that Stakeholder Networks explained 59.8% of the variation in Local Community Livelihoods in the Nyungwe Community Guide Project. This means that stakeholder networks made a substantial contribution to explaining differences in the livelihood outcomes of the local community, while the remaining 40.2% was explained by other factors not included in the model. The finding implies that strengthening stakeholder networks can be important for improving local community livelihoods, particularly through stronger collaboration, information sharing, and access to resources and support. Therefore, project stakeholders should strengthen and maintain effective networks to enhance the benefits received by local communities.

Table 5: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.302	1	8.302	208.58	.000
Residual	5.581	140	0.0399		
Total	13.883	141			

a. Dependent Variable: Local Community Livelihoods (Y)
b. Predictors: (Constant), Stakeholder Networks (X1)

The ANOVA table shows that the regression model examining the effect of Stakeholder Networks on Local Community Livelihoods was statistically significant. The F-value of 208.58 and significance value of .000 ($p < .001$) indicate that the model significantly explained variation in local community livelihoods. This finding implies that stakeholder networks made a statistically significant contribution to predicting local community livelihoods in the Nyungwe Community Guide Project. Therefore, the null hypothesis that stakeholder networks had no significant effect on local community livelihoods was rejected, suggesting that strengthening stakeholder networks could contribute to improved livelihood outcomes among the local community.

Table 6: Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.842	0.124		6.79	.000
Stakeholder Networks (X1)	0.781	0.054	0.773	14.459	.000

a. Dependent Variable: Local Community Livelihoods (Y)

Table 6 shows that Stakeholder Networks had a positive and statistically significant effect on Local Community Livelihoods. The unstandardized coefficient (B = 0.781) indicates that a one-unit increase in stakeholder networks was associated with a 0.781-unit increase in local community livelihoods, holding the model structure constant. The standardized coefficient (Beta = 0.773) further indicates a strong positive contribution of stakeholder networks to local community livelihoods. The t-value of 14.459 and significance level of .000 ($p < .001$) confirm that the effect was statistically significant. Therefore, the findings imply that strengthening

collaboration, information sharing, and access to resources among stakeholders could contribute to improved local community livelihoods in the Nyungwe Community Guide Project

4.2 Discussion of Findings

The findings of the study demonstrated that stakeholder networks were positively associated with local community livelihoods in the Nyungwe Community Guide Project in Nyamasheke District. The descriptive findings showed that respondents generally viewed collaboration among stakeholders, access to resources and support, information sharing, and cooperation as important aspects of the project. Respondents also indicated that strong stakeholder networks contributed to improvements in local community livelihoods. The findings suggest that effective relationships among project stakeholders created opportunities for communities to access information, support, tourism-related activities, and other livelihood opportunities. Therefore, stakeholder networks appeared to be an important mechanism through which the Nyungwe Community Guide Project supported the livelihoods of local community members.

The findings were consistent with Stakeholder Theory, which emphasizes the importance of relationships and cooperation among different actors involved in or affected by a project. In the Nyungwe Community Guide Project, stakeholders included project management, support staff, community leaders, tourism guides, cooperative members, and local community members. The positive findings concerning collaboration and information sharing suggested that relationships among these actors were useful for improving project effectiveness and connecting communities with project activities. The findings further indicated that functional relationships among stakeholders could facilitate the flow of information, support, and opportunities to local residents. This supports the theoretical argument that maintaining effective and mutually beneficial relationships among stakeholders can strengthen project outcomes and community benefits.

The findings also agreed with previous empirical studies reviewed in the study. Milliman et al. (2021) found that strong stakeholder collaboration in community-based tourism enhanced income generation, skills development, and household well-being, while Lytle and McDonald (2022) reported that collaboration among communities, government, and private-sector partners improved employment, skills transfer, and business opportunities. Similarly, Ndlovu (2022) associated stakeholder networks with improved income, resource management, and social cohesion, while Kamau (2023) found that active support from government agencies, NGOs, and private partners was associated with improved earnings, employment opportunities, and business growth. The present findings therefore support the view that effective stakeholder relationships can create conditions through which local communities obtain greater economic and social benefits from tourism projects.

The findings also revealed an important implication concerning access to resources and support. Although respondents generally viewed stakeholder support positively, this aspect received the comparatively lowest level of agreement among the stakeholder-network indicators. This suggests that the existence of stakeholder relationships does not necessarily mean that all community members experience the same level of practical support. Project stakeholders should therefore strengthen the mechanisms through which community members access training, technical assistance, market information, tourism opportunities, and other resources relevant to their livelihoods. Strong relationships become more meaningful when they are translated into practical resources and opportunities that community members can use to improve their living conditions. Strengthening this aspect of stakeholder networks could therefore increase the practical livelihood benefits associated with the Nyungwe Community Guide Project.

Overall, the findings indicated that stakeholder networks were an important factor associated with local community livelihoods in the Nyungwe Community Guide Project. The consistency between the descriptive findings, inferential analysis, Stakeholder Theory, and previous empirical studies strengthened the interpretation that effective collaboration, information sharing, and resource linkages were important to community livelihood outcomes. The findings suggest that project managers and other stakeholders should treat stakeholder relationships as an important part of project management rather than as a secondary administrative activity. At the same time, the correlational nature of the study means that the findings should be interpreted as evidence of association rather than definitive proof that stakeholder networks alone caused improvements in livelihoods. The main implication is that strengthening stakeholder coordination while ensuring that networks provide tangible opportunities and support can contribute to better livelihood outcomes for local communities.

5. Conclusion and Recommendations

5.1 Conclusion

The study concluded that stakeholder networks played an important role in supporting local community livelihoods in the Nyungwe Community Guide Project in Nyamasheke District. Effective collaboration among stakeholders, information sharing, access to resources and support, and cooperation with community members were associated with improved livelihood outcomes. The findings indicated

that well-developed stakeholder relationships created opportunities for local community members to benefit from project activities and tourism-related initiatives, including income generation, employment opportunities, skills development, social cohesion, and overall community well-being. The findings were consistent with Stakeholder Theory, which emphasizes the importance of cooperation and relationships among stakeholders in achieving beneficial project outcomes. However, access to resources and support required further strengthening to ensure that stakeholder relationships produced practical benefits for community members. The study therefore concluded that strengthening stakeholder coordination, information sharing, resource access, and collaboration with local communities could enhance the contribution of the Nyungwe Community Guide Project to local community livelihoods.

5.2 Recommendations

Based on the findings and conclusion of the study, four specific recommendations were made to strengthen stakeholder networks and improve local community livelihoods in the Nyungwe Community Guide Project. The recommendations focused on strengthening collaboration, improving access to resources, enhancing information sharing, and increasing practical livelihood opportunities for community members.

1. Project management should strengthen regular collaboration among community members, community leaders, tourism guides, cooperatives, government representatives, and other relevant stakeholders. Regular meetings and joint planning activities should be organized to improve coordination, strengthen relationships, and ensure that stakeholders work together toward improving local community livelihoods.
2. Project stakeholders should establish stronger mechanisms to ensure that local community members access the resources and support available through the project. This should include relevant training, technical assistance, financial or material support where applicable, and other resources that can help community members improve their livelihood activities. Particular attention should be given to reducing barriers that prevent some community members from benefiting fully from available stakeholder support.
3. Project management should establish clear and regular channels for sharing information about project activities, tourism opportunities, training programmes, available support, and other relevant opportunities. Timely and accessible information would enable community members to understand available opportunities and participate more effectively in project activities. Effective information sharing should also improve coordination among stakeholders and reduce communication gaps within the project.
4. Project stakeholders should strengthen the connection between stakeholder networks and tangible livelihood opportunities for local communities. This should include supporting employment opportunities, skills development, tourism-related activities, and income-generating initiatives that can benefit community members. Strengthening these linkages would ensure that stakeholder relationships translate into practical economic and social benefits and contribute more effectively to improved local community livelihoods.

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