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Factors Influencing Sustainability of Community Based Project in Rwanda: A Case of Imali Project

Mr. Felicien Ngiruwonsanga[1] & Dr. Eugenia Nkechi Irechukwu[2](PhD)

[1] School of Business and Economics, Master of Business Administration (MBA), Project Management, Mount Kenya University, Kigali, Rwanda

[2]Mount Kenya University, Kigali, Rwanda

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Abstract

The main objective of this research study was to determine out the factors influencing sustainability of community-based project in Rwanda with Imali case project implemented by Imbuto Foundation in Gasabo, Kayonza, Huye, Musanze and Rubavu districts. The specific goals of the study are: to find out how community participation affects the sustainability of the Imali project; to find out how resource capacity affects the sustainability of the Imali project; and to find out how project management expertise affects the sustainability of the Imali project. Descriptive research used for this study, and it used both quantitative and qualitative methods. There were 359 persons in all included in the research, representing 9 different cooperatives. The simple size of 196 people was determined by using Krejcie and Morgan (1970) formula and the stratified random sampling used to allocate and deploy the calculated sample size in nine cooperatives proportionally to the size of each one. These showed that the human (age, education, management skills, population participation), economic (resource, purchase capacity), environment (market, calamity disaster) and greenhouse technology usage. The results presented in tables, figures and cross tables among others and be analyzed by using the literature reviews and proceed by a conclusion and recommendation to the results obtained assuring that the intended beneficiaries and other relevant parties are set up for success once donor funding wanes. The regression analysis on model summary results that indicate the influence of community participation, community resource capacity and project management skills on sustainability of the Imali project. The results indicated R of .798, R square of 0.636 and adjusted R square 0.630 based on R square it shows that 63.60% of total variation on sustainability of Imali project explained by those factors. ANOVA shows that F=108.441 and p 0.000<0.05 which is set as the standard significance level. This means that the researcher can confirm there is an influence of community participation, community resource capacity and project management skills on sustainability of the Imali project. The management of agricultural cooperatives recommended to establish good and sustainable management that ensure sustainability, autonomy, and independency rather than always waiting the external support.

Keywords: *Sustainability, Community Based Project, Rwanda.*

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1. Introduction

A strong agricultural sector is essential to sustained development in many developing countries. But the farming industry is characterized by severe-poverty, with small-scale farmers and rural-communities living in a pattern of stability that is defined by low-income and investment-activities, poor productivity-rates, low value addition and low market-orientation (Joseph, 2018). According to the National Institute of Statistics in Rwanda (2018), a study showed that families led by women are more likely to be classified as poor compared to those led by men. The study also revealed that adult women have a higher poverty rate compared to adult males and are more engaged in farming activities with limited access to quality agricultural chemicals due to economic constraints. In the 2013/14 survey, 38.2% of the population in Rwanda lived in poverty, with a slight decrease in absolute poverty during that period. The majority of the disadvantaged population, including the poor and the very poor, reside in rural areas. The Imali Project specifically targeted rural women in Gasabo, Huye, Kayonza, Musanze, and Nyagatare districts (NISR, 2015).

Imali project supported different cooperatives in 16 districts (Gasabo, Kicukiro, Bugesera, Ngoma, Kirehe, Kayonza, Nyagatare, Rwamagana, Kamonyi, Muhanga, Ruhango, Huye, Nyaruguru, Gicumbi, Musanze and Rubavu) the agency's main objective was to protect rural women's rights and incomes as part of long-term growth and prosperity by training them in income-generating activities, particularly regarding horticulture intensification (tomato production) and give some startup capital. Most of these cooperatives were not sustained and the objectives of the project are not achieved. A community-based program's long-term viability is essential for the people it serves. Such projects are no longer viable, resulting in disappointed assumptions for the community as their influence diminishes. As a result, it is important to examine the sustainability of community-based projects. Due to a lack of expertise in financial-management or Human-Resources and an absence of possession and personal-interests and financial-resources, the Imali-Project was not completed on time or on budget due to the following reasons (Sebastian, 2018).

According to Niyigena (2021), an investigation into Factors impacting sustainability of externally sponsored community initiatives in Rwanda and concluded that project operations often come to a stop or drop in the priority population shortly after the program has concluded due to the some household characteristics significantly influenced by food security, adoption and others did not do so and the Participation was significantly influenced by the age of farmers, their occupation, their reported seasonal income, and the land size owned. and The level of farmers' access to agricultural information was significantly associated with their participation in decision making relating to radical terraces project the education level that give it to be non-significant factor influencing the sustainability of the community-based projects.

Number of studies have been conducted globally, regional, and locally about the determinants influencing projects sustainability in community such as Niyigena (2021) but, the studies did not evidently mention the capacities of those initiatives on community members involved it should be complemented by many determinants including community participation, community resource capacity and project management skills. Therefore, this study put an emphasis on assessing the extent of community participation on sustainability, extent of community resource capacity on sustainability and project management skills on sustainability in Rwanda. A case of Imali project implemented by Imbuto foundation in five districts.

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1.2. Objectives of the Study

1.2.1. General Objective

The general objective of this study was to determine the factors influencing sustainability of community-based projects in Rwanda, a case of Imali project in Gasabo, Kayonza, Huye, Musanze and Rubavu Districts.

1.2.2 Specific Objective of the study

(i) To assess the influence of community participation on sustainability of the Imali project.
(ii) To examine the effect of community resource capacity on sustainability of the Imali project.
(iii) To determine the effect of project management skills on sustainability of the Imali project.

1.3 Research Hypotheses

The Research try to respond to the following hypothesis:

(i) $H0_1$. There is no statistical relationship between community participation and sustainability of Imali project.
(ii) $H0_2$. There is no relationship between resource capacity and Imali project sustainability.
(iii) $H0_3$. There is no influence of management skills to the sustainability of Imali project.

2.1 Empirical Literature Review

2.1.1 Community Participation and Project Sustainability

Beatrice (2019) assessed community participation and project sustainability in Rwanda. A comprehensive research strategy was used for this investigation, from a total population of 1600 members of the welfare initiative in Nyarugunga Sector, a sample of 95 were surveyed. The study' sample size was decided by a simple random sampling procedure. The researcher surveyed participants by sending out surveys, Excel and SPSS were used to evaluate the quantitative with qualitative data, there results were sworn as frequencies in tables and graphs. The interaction between the dependent and independent variables were determined with correlation and regression models. This greenhouse technology gains prominence in a context that values high-quality and high-yield production as well as efficient use of available resources. To flourish, plants like fruits, vegetables, and flowers are placed in the modern greenhouse, which is an enclosed building constructed of glass or plastic. The efficiency and functionality of the technology rely heavily on the greenhouse designs used in production.

Yuniah (2016) demonstrated the importance of community engagement in the sustainability of the MaMaSe-project in the Mara Basin - Kenya. The sample of community leaders was done using census selection, whereas the sampling of project managers was done using the Purposive-Sampling approach. A total of 50 community-leaders and 11 project-managers were included in the study. Questionnaires were sent to the community-leaders, and interviews were conducted with the project-managers, to gather information. SPSS V21 was used to analyze the collected data. The adjusted R-squared value of 71.3 indicates a fairly significant association between variables showing that the framework illustrates 71.3% of the facts while leaving 28.7% of data unaccounted for. The findings of the research show that Self-reliant and

empowered communities can only be created by encouraging people to take part in their own affairs and make decisions together. The research also found that community involvement has a favorable and substantial impact on project-sustainability.

Chistophe (2018) examined the impact of beneficiary participation on ATN-Farming Rwanda's God's Way Project in Ntarama Sector, Bugesera District. A combined strategy of descriptive and correlational design was utilized to establish the interrelationships between the variables. After the survey questions were coded, they were imported into Statistics Packages for the Social Sciences (SPPS v.21), a widely used program for social science data processing. There was a favorable correlation between beneficiary involvement at all stages of the project life cycle (r =.230, p =.163), including planning, implementation, and monitoring and evaluation (r =.006, p =.970). According to the study, increasing beneficiary engagement throughout the project cycle increased project sustainability. The study found that beneficiary involvement in project planning had the most effect, followed by planning and assessment, and finally execution.

2.1.2 Resource Capacity and Project Sustainability

Benson and Lydia (2021) studying the impact of community capacity building on project sustainability in Kiolme Sub-County, Makueni County, Kenya. The research study employed stakeholder and resource dependence theories to explain how community capacity building might be applied in project management to guarantee long term project sustainability. ' As part of the study endeavor, the subcounty was broken up into geographical groupings known as sub districts, which were then randomly sampled. With a significance value of 0.000, $p< 0.05$, the findings demonstrated that community capacity development characteristics had a substantial positive correlation with project sustainability ($p <0.05$). Standard error was estimated to be 0.4313, which means that the parameters affected the project's viability by 55.7%. Sustainability was affected by community capacity investment by 0.375 and by community organization by 0.499. Based on the results of the research, it is suggested that government agencies tasked with economic growth form new water user organizations of fortify existing ones and educate locals on better project management practices.

Nyiransabimana (2017) an investigation on the application of global development projects for sustainable outcomes in Rwanda was carried out. When the financing time for the PAIRB project ends, the research was undertaken to determine how sustainable the project's operations would be. The investigator used both qualitative and quantitative methods in this investigation. Questionnaires were provided to both PAIRB recipients and the project's implementers as the primary mode of data collecting. 80 percent of the respondents agreed that they were able to feed their family members before the project; 75.5 percent of the respondents agreed that their ability to buy school materials for their children was increased after the project; 100 percent of the project implementers confirmed that beneficiaries were asked to take over some of the project activities during the transition period. Beneficiaries were found to be heavily engaged in the project's early planning stages, according to the findings of the research. Throughout the transition stage, there is a high degree of participation. The two phases of the project adequately prepared the project's beneficiaries by giving them the tools and training they needed to continue the project's operations following the closure period.

2.1.3 Project Management Skills and Project Sustainability

According to Oino *et al.* (2015) assessed sustainable community-based initiatives in Kenya is a conundrum. Effective management guarantees that the project's local resources and community ability are sufficient to maintain it long after the project's sponsors have left. Achieving long-term viability necessitates providing sufficient human and financial resources to the project's implementers and social organizations. Considering the Kenyan government's

best efforts, researchers found that just 55% of the country's population has access to improved sanitation and drinking water as of 2013. 59% of Kenyans have access to clean water, while rural regions having the lowest percentage (47%). Individuals and groups in governance are empowered to make decisions that lead to desired results because of the engagement.

Sekyere East District, Ghana was chosen as a case study by Brainnah *et al*. (2016), who studied the efficiency of local management systems for rural water infrastructure to ensure consistent service delivery. The wellestablished entities also contribute to enhancing civic en gagement and promotes social devotion to resource management. According to the findings, a round 55% of community-based management structures/bodies funded the operation and maintenance of the water facilities via fees from families and special levies. Weekly gatherings at water locations were the focal focus almost 65% of all community events. Among the other group cleaning duties were landscaping the grounds and sanitizing the standards.

2.2 Research Gap

Previous studies by different writers have revealed a combination of characteristics that tend to impact the longevity of community initiatives throughout the globe. There are numerous case studies which express similar findings, but those that are based or possibly confined to a single example to attract attention, appear to miss the essence. In line with Beatrice (2019) assessed community participation and project sustainability in Rwanda. The study adopted a descriptive research. Research by Yuniah (2016) demonstrated the importance of community engagement in the sustainability of the MaMaSe project in the Mara Basin - Kenya. In the community based watershed management in Kirehe-Rwanda, Chistophe (2018) examined the impact of beneficiary participation on ATN-Farming Rwanda's God's Way Project in Ntarama Sector, Bugesera District.

Mentioned studies have no multiple regression analysis for hypothesis so that they can give statistical evidence to confirm or reject hypothesis, the current study used model summary and regression analysis. Jacob (2011) Invested African, Asian, and Latin American environmental-sustainability factors. Studying the impact of community- capacity building on project sustainability in Kilome Sub-county, Makueni County, Kenya was the goal of Benson and Lydia (2021). Nyiransabimana (2017) examined how international development-projects are implemented in Rwanda for long-term success.

The studies assessed community capacity building and project sustainability in general none of the above studies focused on resource capacity as they have project sustainability indicators which are not the same with considered projects. According to Oino et al. (2015) assessed sustainable community-based initiatives in Kenya is a conundrum. According to Braimah et al. (2016), the efficiency of rural water facility local management systems for long-term service provision in Ghana was studied. All the studies are for abroad, none of the study find out the relationship between project management skills and project sustainability in Rwanda.

Number of studies have been conducted globally, regional and in Rwanda about factors influencing projects sustainability in community but the studies did not evidently mention the capacities of those initiatives on community involved it should be complemented by many determinants including community participation, community resource capacity and project skills. There, this study put an emphasis on assessing the extent of community participation on sustainability, extent of community resource on sustainability and project management skills

on sustainability in Rwanda. A case of Imali project implanted by imbuto foundation in five districts in Rwanda.

2.3 Conceptual Framework

The conceptual framework illustrates the relationship between factors such as community participation, resource capacity, and project management skills, and their impact on indicators of project sustainability such as self-sufficiency, improved standard of living, and leadership management.

Independent Variables

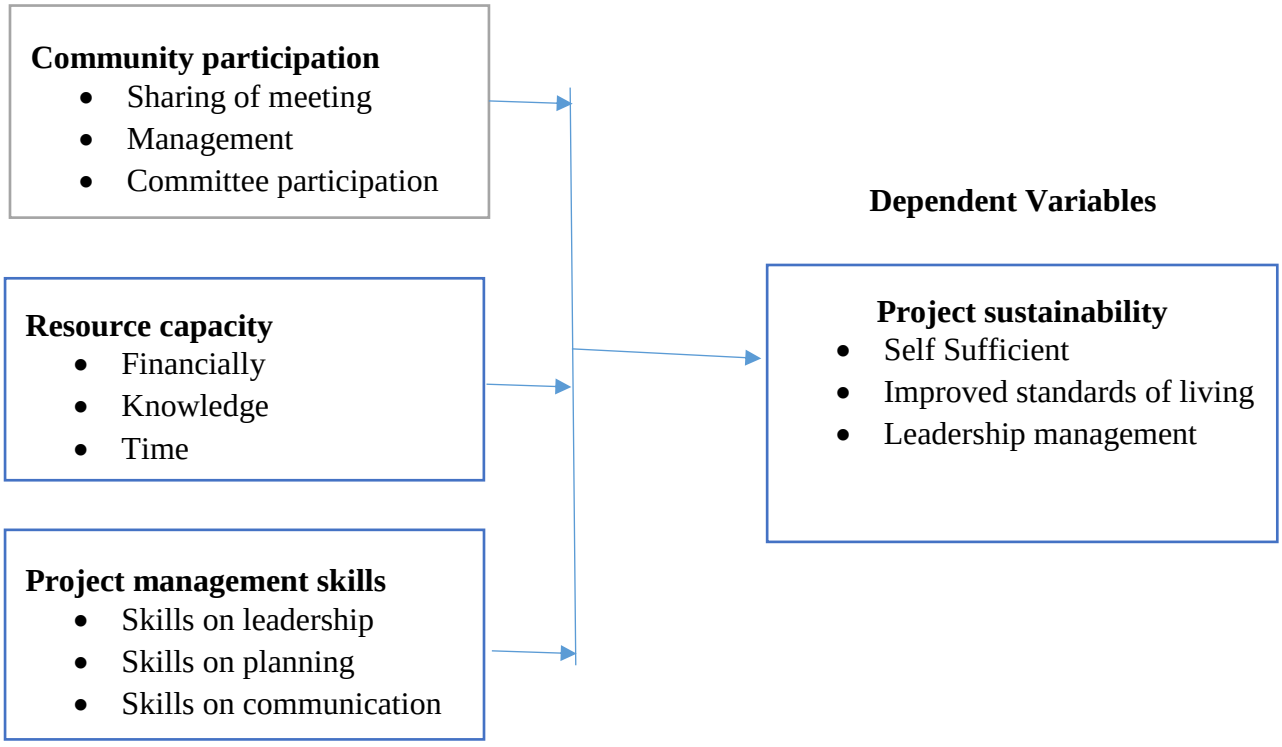

Figure 1: Conceptual Framework

The conceptual framework demonstrate that any independent variable should affect the sustainability of community project positively or negatively. Sustainability of community based project measured by the following demonstrated indicators and sub variables. Community participation as independent variable has different indicators including sharing meeting, management and committee participation, this means that effective management of those indicators have positive influence lead to project sustainability.

Resource capacity measure by indicators like financial capacity, knowledge capacity and time for the project to be sustainable must focus on those indicators as have influence self-sufficient, improved standards and leadership management of the project. Project management skills are among the factors to be analysed for assessing its influence on project sustainability. Leadership skills, planning skills and communication skills have influence on project sustainability.
In this study, the independent variables are planning for M&E, staff technical skills in M&E, and Reporting for M&E while the dependent variable is Project Performance IN Non-Government organizations public. Indicators of planning for M&E are Stakeholders

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involvement, M&E resource allocation, and Budgeting for M&E. Indicators of staff technical skills in M&E are Experience in M&E, Staff training on M&E, and Level of Education. Indicators of Reporting for M&E are Reporting tools & systems, Data quality, and Stakeholder communication & feedback. All those variables are tested to determine their effect on the Project Performance measured in terms of schedule, Cost, and Stakeholders satisfaction.

3.0 Materials and Methods

The research design used in this study is descriptive research, which aimed to collect accurate characteristics of a group of people. Both quantitative and qualitative approaches were employed. The quantitative approach involved gathering numerical data from a representative sample of the population for statistical analysis, utilizing methods such as regression and correlation analysis. Descriptive statistics such as frequencies, percentages, mean, and standard deviation were also used. The target population of the study comprised 359 beneficiaries from 9 cooperatives in Gasabo, Kayonza, Huye, Musanze, and Nyagatare. Most of the beneficiaries were women, including widows, HIV+, disadvantaged families, and orphans. The cooperatives involved in the study were Twubakane, Abahuza, Dutegurindyoyuzuye, Abeza b'Indatwa, Abasa, Girubuzima Munyarwanda, KOASORU, Amahoro, and Twiyungunganye.

A stratified random sampling method was used to allocate the sample size proportionally to the size of each cooperative. The sample size was determined using Krejcie and Morgan's formula to achieve a 95% confidence level for estimation of population parameters. The resulting representative sample size was 196 cooperative members, consisting of 159 females and 37 males. Data collection methods included the use of a multi-module questionnaire focusing on greenhouse technology adoption, community role, financial resources, project management, and group member contributions. The questionnaire was administered to the cooperative members, and documentary techniques were also employed to gather secondary data from various sources.

Qualitative data collection involved conducting two focus group discussions (FGDs) in each selected cooperative, one for women and one for men beneficiaries. The FGDs aimed to assess their understanding of cooperative development and sustainability, social needs, and community challenges. Reliability and validity were ensured through a pilot test of the research tools and a review by three scientific research experts. Cronbach's alpha was used as a measure of reliability, and a value of 0.7 or higher was considered acceptable.

Data analysis involved the use of the Statistical Package for the Social Sciences (SPSS) version 23 for descriptive and correlational analysis. Editing, coding, tabulation, and statistical methods such as regression analysis and content analysis were applied to analyze the data and draw conclusions. The ethical considerations of the study emphasized participant confidentiality, privacy, and respect. Data collected were kept confidential and used solely for the study's purposes. The researcher ensured modest requests for participants' time and cooperation, avoiding discrimination based on race, gender, or other characteristics.

4.0 Presentation of research findings

4.1 Findings on influence of community participatory in sustainability of Imali project

The first objective of the study was to assess the influence of community participation on sustainability of the Imali project. The findings on related statements were discussed in the Table 1.

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Table 1: Influence of community participatory in sustainability of Imali project

Statements	Mean	SD
I have a hand in the choosing of this undertaking.	4.28	1.003
Ideas for project execution are disseminated to the surrounding community.	4.11	.999
Project-management and budgetary decisions are made by project-committees.	4.12	1.079
Determine the timetable for completing the project.	3.94	1.062
Committee/individuals' secrecy is necessary for project-success	3.95	1.083
The ability of the program's beneficiaries to run it effectively	3.94	1.060
In this project's execution, local authorities have a say.	3.75	1.044
Overall	4.012	1.05

Table 1 shows the respondents' perspectives on the impact of community participation on the sustainability of the Imali project, whereby 35.3% agree and 52.1% strongly agree that they have a hand in the choosing of this undertaking. Furthermore, 41.6% agree and 40.5% strongly agree that Ideas for project execution are disseminated to the surrounding community.

One of respondents stated, "*Taking part in activities of Imali project help me acquire or develop existing interests and competencies in agriculture. Being active in this project is a necessary step to personal growth and usefulness. Feeling like I have made a difference in my domain through activities like working on a project that benefits society it is very satisfying*".

Moreover, respondents represented by 37.9% agree and 44.7% strongly agree that project management and budgetary decisions are made by project-committees. Also, majority of respondents 49.5% agree and 30.5% strongly agree that determine the timetable for completing the project. In addition, a larger number of respondents 38.4% agree and 35.8% strongly agree that committee/individuals' secrecy is necessary for project-success. Furthermore, majority of respondents 50.0% agree and 31.1% strongly agree that there is ability of the program's beneficiaries to run it effectively. Lastly, 60.5% of respondents agree and 17.4% strongly agreed that in this project's execution, local authorities have a say.

The results agree with the study conducted by Beatrice (2019) assessed community participation and project sustainability in Rwanda. A comprehensive research strategy was used for this investigation, from a total population of 1600 members of the welfare initiative in Nyarugunga Sector, a sample of 95 were surveyed. This greenhouse technology gains prominence in a context that values high quality and high-yield production as well as efficient use of available resources. To flourish, plants like those that fruits, vegetables, and flowers are placed in the modern greenhouse, which is an enclosed building constructed of glass or plastic. The efficiency and functionality of the technology rely heavily on the greenhouse designs used in production.

The researcher discovered that most respondents agree or strongly agree that community participation has an influence on the sustainability of the Imali project. The findings are supported by an overall mean of 4.012, which is a high mean and evidence of the existence of the facts, as well as a standard deviation of 1.05, which shows that the responses were heterogeneous.

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4.2 Findings on influence of community resource capacity on sustainability of the Imali project

The second objective of this study was to evaluate the examine the influence of community resource capacity on sustainability of the Imali project. The findings on related statements were discussed in the Table 2.

Table 2: Influence of community resource capacity in sustainability of Imali project

	Mean	SD
Communication is among the factors of capacity building community	4.03	1.018
Technology is a virtual-resource capacity in sustainability	3.94	1.151
Community-resource capacity enables members to have access on economic-factor	3.54	1.347
Environment is a key factor supporting community-capacity	3.82	1.186
Effective and efficient funding is available for use.	3.88	.958
Since the potential of local resources, a timeline was devised	3.92	.937
The project has effective community resource capacity.	3.85	1.138
Overall	3.854	

The findings in Table 4.7 revealed the respondents' views on the influence of community resource capacity on sustainability of the Imali project, such that 42.1% agree and 36.8% strongly agree that communication is among the factors of capacity building community. Therefore, 45.3% of respondents agree and 35.3% strongly agree that technology is a virtual-resource capacity in sustainability. Also, 35.3% agree and 27.9% strongly agree that community-resource capacity enables members to have access on economic-factor. Meanwhile, 40.5% of respondents agree and 32.6% strongly agree that environment is a key factor supporting community-capacity. Furthermore, 55.8% agree and 23.7% strongly agree that effective and efficient funding is available for use.

A respondent said, "*I can benefit from resource capacity as it allows me to recognize the tools I need to complete tasks. Staff help us to determine if the resources are sufficient. Available resource used to complete a job or an endeavor. For this project, the resources are in terms of tools, money, or time. To be successful, Imali project have a wide variety of tools and components*".

In addition, majority of respondents 57.9% agree and 24.7% strongly agree that on the basis of the potential of local resources, a timeline was devised. Lastly, 47.9% of respondents agree and 28.9% strongly agreed that the project has effective community resource capacity. The results are in line with the study conducted by Nyiransabimana (2017) investigated the application of global development projects for sustainable outcomes in Rwanda was carried out. 100 percent of the project implementers confirmed that beneficiaries were asked to take over some of the project activities during the transition period. Beneficiaries were found to be heavily engaged in the project's early planning stages, according to the findings of the research. Throughout the transition stage, there is a high degree of participation. The two phases of the project adequately prepared the project's beneficiaries by giving them the tools and training they needed to continue the project's operations following the closure period.

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The findings indicated that majority of respondents agree and strongly that there is influence of community resource capacity on sustainability of the Imali project. The percentages are supported by overall mean of 3.848 as high mean, which is an evidence on existence of the facts with standard deviation of 1.105; indicate the heterogeneous of responses on mentioned statements.

4.3 Findings on influence of project management skills in sustainability of Imali Project

The third objective of the study was to determine the influence of project management skills on sustainability of the Imali project. The findings on related statements were discussed in the Table 3.

Table 3: Influence of project management skills in sustainability of Imali Project

	Mean	Std. Dev.
The recipients are familiar with the fundamentals of greenhouse-management.	4.08	1.004
This initiative teaches beneficiaries how to grow tomatoes.	4.03	.992
Each one of the recipients is well-versed in money management.	3.63	1.223
To maximize the potential of a project, marketing expertise is used.	3.74	.922
Leadership Skills is beneficial to project	3.78	.960
Project-planning skills help to delivery more than expected outputs	4.03	.897
Conflict-management Skills enhance my decision-making ability	3.94	.759
Overall	3.890	0.965

The results in Table 3 indicate the respondents' views on the influence of project management skills on sustainability of the Imali project, whereby 46.8% of respondents agree and 37.4% agree that the recipients are familiar with the fundamentals of greenhouse-management. Furthermore, 44.2% of respondents agree and 34.7% strongly agree that this initiative teaches beneficiaries how to grow tomatoes. Moreover, 43.2% agree and 23.7% strongly agree that each and every one of the recipients is well-versed in money management. Also majority of respondents 61.6% agree and 13.7% strongly agree that to maximize the potential of a project, marketing expertise is used. Furthermore, 61.1% strongly agree and 15.8% strongly agree that leadership Skills is beneficial to project. In addition, 50.5% of respondents agree and 31.1% strongly agree that project-planning skills help to delivery more than expected outputs.

Another respondent said, "*The ability to manage projects provides access to a wide variety of supporting tools and techniques. By putting those skills and abilities to use, I have access to a wealth of tools that will allow me to meet my goals. The staff gives us their own group of advisors and specialists they consult with to find the best solutions to any issues that may arise. I don't expect project staff to have all the answers, but they should be able to gather teams around any problem and come up with a group response*".

Conflict-management Skills enhance my decision-making ability as confirmed by 67.4% who agree and 18.5% strongly agree with the statement. The results are complement with the study conducted by Oino *et al.* (2015) assessed sustainable community-based initiatives in Kenya is

a conundrum. Effective management guarantees that the project's local resources and community ability are sufficient to maintain it long after the project's sponsors have left. Achieving long-term viability necessitates providing sufficient human and financial resources to the project's implementers and social organizations. Individuals and groups in governance are empowered to make decisions that lead to desired results as a result of the engagement.

The researcher discovered that majority of respondents agree and strongly agree that there is influence of project management skills on sustainability of the Imali project. The results in percentages were supported by overall mean of 3.890 which high as evidence on existence of that fact and standard deviation of 0.965 that shows that responses were heterogeneous.

Table 4: Sustainability of Imali project

	Mean	Std. Dev.
The initiative achieves its goals and objectives.	3.94	.909
The project's funds are being used wisely.	3.78	1.023
The variables are well managed in order to meet the needs of the participants.	3.82	1.085
Project services are delivered on time and within budget.	3.82	.869
Performing a task to the agreed-upon level of excellence.	3.82	.897
Beneficiaries are pleased with the project's results.	3.89	.873
The outcomes have been better than expected.	3.82	.845
Overall	3.840	0.928

The findings in Table 4 show the respondents views on statements about sustainability of Imali project. Majority of respondents 55.3% agree and 25.3% strongly agree that the initiative achieves its goals and objectives. Besides, 57.4% agree and 21.6% strongly agree that the project's funds are being used wisely. Many respondents 54.2% agree and 24.2% strongly agree that the factors are well managed in order to meet the needs of the participants. Furthermore, 65.8% agree and 14.7% strongly agree that project services are delivered on time and within budget. Moreover, 60.5% of respondents agree and 16.8% strongly agree that they performed task to the agreed-upon level of excellence. Beneficiaries are pleased with the project's results as 70.0% agree and 15.8% strongly agree with the statement.

An interviewee narrated "*Imali project has helped me to increase my level on access of agricultural tools, use of knowledge, technologies, access on market and infrastructures which contributed on higher levels of productivity, profitability and farm incomes*". The outcomes have been better than expected as confirmed by 70.5% who agree and 12.1% strongly agree. The results are not far for Flint (2012) stated that another way to look at sustainability is as whether or not anything progress to perform extra four distinct results were identified in an examination of concepts of sustainability. The most common definitions of sustainability were continuation of health programs, community-capacity, preservation of health-benefits, and institutionalization of programs inside an organization's structure, all of which were followed by preservation of sustainability.

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The findings indicated that a large number of respondents agree and strongly that there is sustainability of Imali project. Descriptive statistics with mean and standard deviation also supported the results as overall mean of 3.840 which is high as evidence on existence of the fact and standard deviation of 0.928 as evidence on heterogeneity of respondents.

4.4 Inferential statistics

For this section inferential statistics were used as statistical evidence on relationship and impact between variables under the study with aims to verify the hypothesis of the study including; There is no statistical relationship between community participation and sustainability of Imali project, There is no relationship between resource capacity and Imali project sustainability and there is no influence of management skills to the sustainability of Imali project.

Table 5: Correlation matrix

		Project sustainability	Community participation
Community resource capacity	Pearson Correlation	.721**	.681**
	Sig. (2-tailed)	.000	.000
	N	190	190
Project management skills	Pearson Correlation	.702**	.654**
	Sig. (2-tailed)	.000	.000
	N	190	190

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

Table 5 indicates correlation analysis results based on specific objective and hypotheses of the study. The results indicate p value of 0.000<0.05 which is significance and Pearson correlation of 0.710 which show that there a positive moderate relationship between community participation and sustainability of Imali project. The findings show p value 0.000<0.05 and Pearson correlation of 0.721 means that the relationship is significance as positive moderate relationship between resource capacity and Imali project sustainability.

The Table indicate p value of 0.000<0.05 as significance level which revealed that Pearson correlation of 0.702 is an evidence on positive moderate relationship between management skills and the sustainability of Imali project. Consistent with the findings of Chistophe (2018) examined the impact of beneficiary participation on ATN-Farming Rwanda's God's Way Project in Ntarama Sector, Bugesera District. There was a favorable correlation between beneficiary involvement at all stages of the project life cycle (r =.230, p =.163), including planning, implementation, and monitoring and evaluation (r =.006, p =.970). According to the study increasing beneficiary engagement throughout the project cycle increased project sustainability. The study found that beneficiary involvement in project planning had the most effect, followed by planning and assessment, and finally execution.

Table 6: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798[a]	.636	.630	8.71491

a. Predictors: (Constant), Project management skills, Community participation, Community resource capacity

Table 6 showed the regression analysis on model summary results that indicate the influence of community participation, community resource capacity and project management skills on sustainability of the Imali project. The results indicated R of .798, R square of 0.636 and

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adjusted R square 0.630 based on R square it shows that 63.60% of total variation on sustainability of Imali project explained by those factors. The findings are in line with the study done by Yuniah (2016) demonstrated the importance of community engagement in the sustainability of the MaMaSe-project in the Mara Basin-Kenya. The adjusted R-squared value of 71.3 indicates a fairly significant association between variables showing that the framework illustrates 71.3% of the facts while leaving 28.7% of data unaccounted for. The research also found that community involvement has a favorable and substantial impact on project-sustainability.

Table 7: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24708.079	3	8236.026	108.441	.000[b]
	Residual	14126.637	186	75.950		
	Total	38834.716	189			

a. Dependent Variable: Project sustainability
b. Predictors: (Constant), Project management skills, Community participation, Community resource capacity

Table 7 of ANOVA shows that F=108.441 and p 0.000<0.05 which is set as the standard significance level. This means that the researcher can confirm there is an influence of community participation, community resource capacity and project management skills on Imali project sustainability. The results are in line with Benson and Lydia (2021) studying the impact of community capacity on project sustainability in Kiolme Sub-County, Makueni County, Kenya. With a significance value of 0.000, p 0.05, the findings demonstrated that community capacity development characteristics had a substantial positive correlation with project sustainability (p 0.05). based on the results, it is suggested that government agencies tasked with economic growth from new water user organizations of fortify existing ones and educate locals on better project management practices.

Table 8: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.085	2.723		1.500	.013
	Community participation	1.390	.260	.338	5.335	.000
	Community resource capacity	.962	.232	.298	4.143	.000
	Project management skills	.825	.222	.258	3.712	.000

a. Dependent Variable: Project sustainability

The analytical model for this research is shown as an equation below.
$Y= \alpha + b_1X_1+b_2X_2+b_3X_3+ \varepsilon$
Y = Project Sustainability, α = constant, b1-3 = Regression Coefficient, X_1: Community participation, X_2: Resource capacity, X_3: Project management and ε = error term

Table 8 of regression coefficient shows that the long-term success of a project always depends on a constant factor of 4.085, no matter what other factors are at play. The other variables

explain why the sustainability of the Imali project went up by a factor of 1.390 for every extra unit of community participation. Every one-unit increase in community resource capacity made the Imali project 0.962 times more likely to last. Every unit increase in project management skills made the Imali project 8.25 times more likely to last.

4.5 Test of hypotheses

The findings in Table 8 show that community participation ($p=0.000<0.05$), community resource capacity ($p=0.000<0.05$) and project management skills ($p=0.000<0.05$) are statistically influenced sustainability of the Imali project. Hereby, the researcher rejected (Ho1) and stated that community participation has statistical relationship with the sustainability of the Imali project. The (Ho2) which stated that there is no relationship between resource capacity and Imali project sustainability was rejected. Also, the researcher rejected the (Ho3) and confirmed that project management skills influenced the sustainability of the Imali project.

5.1 Conclusion

In conclusion, the main objective of this research study finds out the factors influencing sustainability of community-based project in Rwanda with Imali case project implemented by Imbuto Foundation. The specific goals of the study are to find out how community participation affects the sustainability of the Imali project; to find out how resource capacity affects the sustainability of the Imali project; and to find out how project management expertise affects the sustainability of the Imali project. The researcher discovered that the huge number of surveyed people agree and strongly agree that community participation influenced Imali project' sustainability. The findings are supported by strong mean which is evidence of the existence of the evidence. The researcher rejected the first hypothesis stated that there is no statistical influence of community participation on Imali project's sustainability.

The findings showed that many participants agree and strongly agree that community resource capacity has an influence on sustainability of the Imali project. The percentages are supported by high mean, which is evidence on existence of the facts. The second hypothesis stated that there is no relationship between resource capacity and Imali project sustainability was rejected. The majority of respondents agreed or strongly agreed that project management skills had an impact on the long-term viability of the Imali project, confirming the researcher's hypothesized relationship between the two. High quality evidence, as measured by those percentages, suggests that the effect in discussion is real. The third hypothesis, which stated that management skills have no effect on the long-term viability of the Imali project, was also ignored by the study's author. Based on research findings on each objective, the researcher revealed that all research objectives were achieved, and null hypotheses were rejected.

6.1 Recommendations

The project supervisor's job is to promote and make it easier for more people to be included in the project. It is important that everyone involved in the project, including the entire workforce and any outside stakeholders, has a voice in the decisions that are made. As a result, more eyes on the project means better assessments. The management of agricultural cooperatives may establish good and sustainable management that ensure sustainability, autonomy and independency rather than always waiting the external support. The trainings on cooperatives management shall be conducted to increase better leadership, organization and performance of agricultural cooperatives to real engine for rural development.

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