

Influence of Project Management Skills on Project Sustainability: A Case of Vision 2020 Umurenge Program in Burera District, Rwanda

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ABSTRACT

The main purpose of this study Was to investigate the influence of project management skills on the project sustainability. This research was carried out to achieve the following specific objectives: To determine the influence of leadership skills on the sustainability of VUP in Burera district, To determine the influence of communication skills on the sustainability of VUP in Burera district, To assess the influence of problem-solving skills on the sustainability of VUP in Burera district. The study adopted the mix method research design. In data analysis the study used both descriptive (frequencies, percentages, mean and standard deviation) and inferential statistics (Pearson correlations and regression analysis). In order to select the sample size, the researcher adopted census sampling technique with 53 respondents. The data was corrected by means of questionnaire then after while analyzing data derived from questionnaire SPSS software was helpful as it helped us to have mean, standard deviation, frequency and other required items that helped us to analyze and interpret information so that the researcher can get reliable findings. The analysis revealed significant correlations between the project management skills and project sustainability outcomes: Leadership Skills: The correlation coefficient between leadership skills and project sustainability was 0.705** ($p < 0.01$), indicating a strong positive relationship. Higher leadership skills were associated with improved project sustainability outcomes. Communication Skills: The correlation coefficient between communication skills and project sustainability was 0.942** ($p < 0.01$), indicating a robust positive relationship. Greater communication skills were strongly linked to enhanced project sustainability outcomes. Problem-Solving Skills: The correlation coefficient between problem-solving skills and project sustainability was 0.683** ($p < 0.01$), affirming a significant positive relationship. Strong problem-solving skills were correlated with better project sustainability outcomes. These findings suggest that project managers possessing higher levels of leadership, communication, and problem-solving skills are better positioned to ensure project sustainability. The study contributes to both academia and practice by shedding light on the critical competencies that drive projects toward lasting positive impacts. Organizational decisions related to project management training and skill development can benefit from these insights, ultimately fostering more sustainable project outcomes. Based on the findings, the study recommends the government of Rwanda to invest in Leadership Development to empower project teams to navigate challenges, inspire motivation, and foster a shared vision, ultimately contributing to the sustainable success of the VUP program.

Keywords: Project sustainability, communication, leadership, problem-solving skills

INTRODUCTION

Sustainability is an improvement concern that depicts the capability of a project to provide long-term significant effect. That is the reason, world sustainability target or sustainable development goals (SDGs) catalyst for the growth of discourses that develop quality of living way, integrity of surrounding and enjoy prosperity of the world (United Nations Development Group, 2016). Sustainable projects provide permanent flow of profits, stability of the project, equitable and correct sharing of the benefits and safeguard continuous participation of community (Project Management Institute, 2021). However, worries have been identified over unfair integration of sustainability decisions in the course of project implementation.

For the benefit, is monitoring and evaluation activities which is referred to play great part to contribute in sustainability of project (Bukhala and Ganesh, 2016). For example, in United States the demand of greater significant impacts is force project monitoring and evaluation leaders to embrace pragmatic methods that integrate and update sustainable decisions (Saad, 2020). Equally, the demand for good impacts in improvement projects is obliging Asian Countries to start collaborative monitoring and evaluation decision making process (Njue, Mulwa, Kyalo&Mbugua, 2021). In the middle-east and North Africa, sustainability is guaranteed through monitoring and evaluation processes that are connected across different domain and stakeholders (Ratnayake, WickramaarachchiandWattege, 2017).

The situation is similar in South Africa whereby monitoring and evaluation decisions are done through multi-stakeholders' methods to develop sustainability. Sustainability of current investments projects in East African Community (Warinda et al., 2020). In addition to that the situation is the same as in Kenya whereby sustainability of development initiative is fastened in the supreme law which requires developed planning and review of development discourses.

In order to professionally lead a project in the best manner possible, the project leaders must have the needed knowledge and skills. Referring to the speedy transforming global context of industry with some concerns including quick information development, inadequate of skills and the technologies for communication as well as enabling prioritizing of queries like environmental safeguarding, sustainability and changes of climate so the project manager's role can be simulated. Through the augmenting world concern regarding negative impacts of human activities on environment in this years, a lot of institutions are observing for sustainable improvement as well as putting into practice of green measurements. As the changes in institutions happen, the project managers meet with new challenges and can take the responsibilities which have not been part of their assigned tasks traditionally (Edum-FotweandMcCaffer, 2000).

In order to successfully manage a project capability of project manager is necessary, and some skills have been quoted and focused on different studies (Söderlund,2012). The achievement and success of project depends on the manager skills and knowledge in terms of management this has over 34-37 % influence. Project management skills have to be characterized as those key concern inborn in the project, which can be recommended to guarantee efficiency in the implementation of the project. These skills require daily consideration and work through the time of undertaking. They are necessary concern inherent in the project, which can be kept for an efficient and effective implementation of the project. Some of the main practices in project management involve: partners' participation, capacity building, superior management help and funding (Ocharo&Kimutai, 2018).

Haque and Anwar (2012) disclosed that leadership is fair instrument to be utilized by the project manager which reasonably affect project impacts, otherwise, insufficient leadership skills are directly linked with

project decline. Haque& Anwar (2012) disclosed that superior management team have to back project activities and project officers to hold the leadership role. Many researchers, scholars disclosed that higher management effort was necessary for developing project achievement in Pakistan. Another crucial factor that should be taken into consideration for success of any project, according to Lester (2006), is successful communication. Performance and effectiveness of project communication depends on the arrangement of the communication channels. The success of project communication all through the project life scheme may be analyzed as the level to which accuracy information reaches the targeted information sources/recovers at specific time.

Management of resources is another main issue of project management practices. Resources are inadequate; therefore, it is necessary distribute them in order to gain the desired outcomes of the project. Selaru, (2012) indicated that the outcomes of the resources distribution enhance organized beginning and completion dates of every project activity, time on which each resource will be needed and the rate of that needs and organized cumulative expenditures incurred by the consumption of resources over time. Partners bring a big range of skills, knowledge, and experience to the project and if they are well controlled, they can contribute to make the project to become more successful (Bourne, 2006). The achievement and decline of many improvement projects and programs has given the partners inclusion or absence of participation in the project cycle management.

In order to professionally manage a project in the best way possible, the project manager should have the needed knowledge and skills. Project management skills are critical in ensuring the success of project. This study highlights the impact of project management skills focusing in management skills on how it performs in renewable energy project. They were managing human resources, transformational leadership and knowledge sharing. The mixed methods approach was implemented in this research, which are literature review and questionnaire survey. Eighty-six (86) data from palm and oil mills located in Peninsular have been collected through questionnaire and respondents involved majority were the project managers. Results shows, all variables had significant relationship which could significantly affect the energy project performance (Zakaria&Ahmadian, 2019)

Rwandan government have launched the VUP as one of the policies which is helping to curb the problem of poverty which is hindering the economic growth and development of people especially the rural areas vulnerable categories (MINALOC 2009:10). The VUP has been gradually rolled out across Rwanda since 2008. In 2019, the scope of coverage was extended to include 244 out of 416 sectors, benefiting 133,000 households through traditional public works initiatives, 150 sectors assisting 23,000 households via expanded public works efforts, and providing direct support to 107,000 households, as reported by the World Bank in 2019. The predominant body of research on the VUP program consists of assessments conducted by various stakeholders, including donors and government agencies, examining different facets of the program, as evidenced by studies conducted by Ashley and Kyanga in 2013, Gahamanyi and Kettlewell in 2015, and Sabates-Wheeler and colleagues in 2015.

Project management skills are crucial skills that must be possessed by various project managers from various project irrespective of its type. For project managers to ensure whether a project is being run accordingly and its sustainability its mandatory that there should be proper application of some of the skills like leadership skills, communication skills, problem solving skills so, some challenges of implementation of skills in projects are: Some skills like soft skills are hard to measure. Some skills are

harder to learn than others, you can teach someone to fish, but you can't teach them to enjoy fishing, It's not about you; it's about me. (Rao, 2018).

The research problem is that many project managers lack some managerial skills that in turn also lead to improper sustainability of the project in Rwanda, there is also high rate of project failure due to inapplicability of the project management skills in the project they are leading. Many organizations strive to effectively manage projects and ensure their long-term sustainability, Project management skills play a vital role in ensuring successful project outcomes, but there is a lack of understanding and implementation of these skills within organizations.

Furthermore, project sustainability is often overlooked or not adequately addressed, resulting in projects that are not aligned with long-term goals or fail to create lasting impact. The problem is that no in-depth analysis has been done on information on the influence of project management skills on project sustainability and took VUP project in Burera district as a case. The expected findings are to ensure that the project management skills are being used effectively and efficiently which lead to better project sustainability. Not only this but also to ensure that the project manager and some other stakeholders as well as beneficiaries of VUP are aware of utilization of skills like leadership skills, communication skills, problem solving skills and others which play a big role on sustainability of project. This study helped to discover the significant influence that project management skills project on the sustainability of project and how productive they are. Overall, this research will assist in contributing to the knowledge of the use of project management skills in VUP project, develop the beneficiaries and country in general.

THEORETICAL REVIEW

Scientific management theory

It is a theory Developed by Frederick Taylor; he was one of the first to study work performance scientifically. Taylor's principles advocated for the application of the scientific method in workplace operations, rather than relying solely on the leader's judgment or the discretionary decisions of team members. His philosophy underscored the idea that enhanced productivity could be achieved not through sheer exertion but by simplifying tasks. He advised leaders to match team members with roles that aligned with their skills, provide comprehensive training, and oversee their performance to ensure efficiency.

Although Taylor's focus on optimizing task completion for maximum workplace efficiency was valuable, it sometimes overlooked the human aspect of individuals. Today, this theory is rarely implemented in its unadulterated form. However, it did impart to leaders the significance of workplace efficiency, the necessity of comprehensive training for team members, and the importance of fostering teamwork and collaboration between supervisors and employees.

This theory is compliment of leadership skills and it is relevant to this study because it clarify how a company can select a good leader especially the one who have scientific mind. It means the one who have been at school and it also shows that a leader must assign team members to jobs that best match their abilities, train them thoroughly and supervise them to ensure they are efficient in the role

Bureaucratic management theory

It has been emphasized by Max Weber; bureaucratic management theory focuses on structuring organizations in a hierarchy so there are clear rules of governance. His principles for creating this system include a chain of command, clear division of labor, separation of personal and organizational assets of the owner, strict and consistent rules and regulations, meticulous recordkeeping and documentation and

the selection and promotion of employees based on their performance and qualifications. This theory has played a key role in establishing standards and procedures that are at the core of most organizations today. Its relevance and relationship with study is that it shows the hierarchy in organization and clear rules of governance which must be done by a leader, hence it is also a compliment of leadership skills as one of the skills which must be possessed by manager/leader.

Human relations theory

According to Elton Mayo, who is a developer of this theory, he conducted experiments designed to improve productivity that laid the foundation for the human relations movement. His focus was on changing working conditions like lighting, break times and the length of the workday. Every change he tested was met with an improvement in performance. Ultimately, he concluded that the improvements were not due to the changes but the result of the researcher is paying attention to the employees and making them feel valued. These experiments gave rise to the theory that employees are more motivated by personal attention and being part of a group than they are by money or even working conditions.

Also, this theory has relationship with my study because it combines all the skills such as leadership skills, communication skills and problem-solving skills. It means that this theory can be applied in each of these skills because it talks about the relationship between the individuals who are in organization.

CONCEPTUAL FRAMEWORK

The study was intended to establish the Influence of independent variable which is project management skills and the dependent variable which is project sustainability as well as intermediate variables.

Independent variable

dependent variable

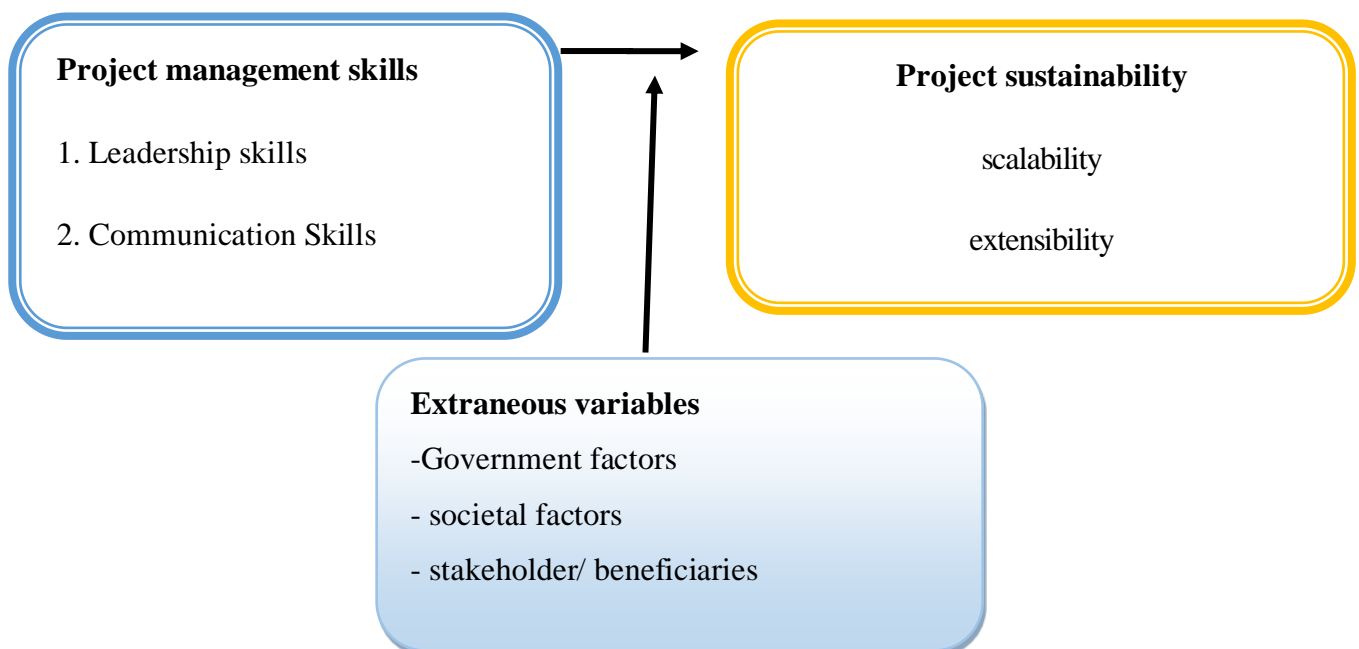


Figure 1: Researcher’s conceptualization of the variables

Source: primary data

Representing the approach taken by this study. In the effect, the model demonstrates the influence of the independent variables (project management skills) on the dependent variables (project sustainability) with the influence of other extraneous variables factors, in other words project management skills can influence project sustainability either positively or negatively that will be indicated while analysing and interpreting

the data collected, with the intervention of other factors, the variables effecting on the main research problem. These are the variables that act as a catalyst between independent and dependent variables.

LITERATURE REVIEW

Influence of leadership skills on project sustainability.

Project managers need strong leadership skills to motivate and guide their teams. They should be able to communicate effectively, resolve conflicts, and make decisions that align with project goals (Kerzner, 2017). The project manager's ability to lead his or her people effectively can have a significant impact on the success of a project. Leadership can be an uncomfortable topic for some people, especially technical project managers who may have extensive experience in being a doer but precious little in being a person who is responsible for leading others to get the job done. Leadership skills, like athletic skills, in our population seem to follow a Normal Curve distribution. Yukl (2012) argued that Leadership refers to a process by which a person can influence a group of individuals in achieving a common goal. Management authority may exist, but it is not required. The leader is the one who has the vision of the future and proposes one or more objectives to be achieved and the group undertakes their implementation by concentrated actions.

Kaleli & Yusuf (2018) Based from their research on role of project management soft skills on sustainability of enwealth financial services projects revealed that The that out of all the respondents, 44.7 % were in agreement that Decision-making skills influence project sustainability to a considerable extent. Additionally, 39.5% of the respondents thought that decision making skills influence the viability of projects to a large extent, and 15.8% to a moderate extent. Majority of the respondents, (57.9%) were in agreement that problem-solving skills are crucial for project sustainability to a very large extent, 36.8% asserted relevance to a large area and 5.3 % to a moderate extent. The majority of the respondents (55.3%) were in agreement that project manager's motivation skills are crucial for project sustainability to a very large extent and 44.7% cited that motivation skills influence project sustainability to a large extent. Moreover, the majority of the respondents were in agreement to a considerable extent that coordination skills are essential in any projects and it enhances project sustainability while the rest 44.7% were in agreement to large extents coordination skills are crucial in any projects, and it enhances project sustainability. The results point out to the importance of leadership skills in projects success and durability and are in support to a previous study by who found that leadership skills are critical to the success of the projects.

Tabassi et al. (2016) researched about the Leadership Behavior of Project Managers in Sustainable Construction Projects. The study unveiled that Eight leadership attributes were assessed and kept by this research to measure the two constructs of leadership which are intellectual competence and managerial competence (see table 4). The results of the study show that among all dimensions of leadership competencies, strategic perspective ($\beta=0.945$) is the most significant factor, followed by critical analysis ($\beta=0.936$), engaging communication ($\beta=0.918$), achieving ($\beta=0.906$), developing ($\beta=0.896$), resource management ($\beta=0.848$), vision and imagination ($\beta=0.796$) and empowering ($\beta=0.658$) in project managers.

Our study validates the findings from [11] as well as those from [23]. Specifically, [24 and 26] argued that the effect of leadership on employee commitment and performance in a temporary arrangement such as a construction project is not the same as for long term projects. However, they observed that project managers in projectized organizations with transformational behavior same as that of managers in

functional organizations have a lower impact on motivation and commitment of their followers. This might be explained by the multiple project leaders and the limited periods of time that they are involved with employees in a project context while team members in a permanent or a long-lasting environment are engaged with mainly one manager for a long period of time.

Our findings show that all attributes are essential to sustainable achievement and are relatively significant in facilitating sustainable building construction. The results also clarify that project managers should possess the necessary leadership competencies, skills and knowledge to be able to achieve sustainability in building projects. Aside from that, the essential aspects of leadership that highlighted in the study will contribute strategically to the transition towards sustainable societies. The ultimate result also provides support for the critical role of project manager in sustainable development, which prompted the Leadership in Energy and Environmental Design (LEED) Rating System to involve project management development tools and techniques into the most up-to-date overhauling of the rating system. In this regard, the study would like to recommend other green building ratings systems, particularly the Green Building Index (GBI) of Malaysia, on the way to improve the current rating system in dealing with building construction by incorporating some points and credits for leadership as one of the project management competencies that related with increasing functionality and flexibility of the construction teams in sustainable or green building projects. Furthermore, based on the above research findings done by previous pioneers, I also testify that the leadership skills will contribute severely to the sustainability of project.

Influence of communication skills on project sustainability

Effective communication is crucial for project managers to convey information, expectations, and updates to stakeholders, team members, and clients. It includes both written and verbal communication skills. Verzuh(2019). There should be effective communication in each and every organization to ensure better performance and attainment of objective. A good manager must possess communication skills to ensure effective and proper communication among all project stakeholders.

Pinkowska (2011) argued that Communication comprises project marketing and unsolicited information, both exchanged ambiguously within the project team as well as with the outside world which is relevant to achieving project goals. Sending a message does not necessarily means that the other side understood us exactly the way we wanted. Besides, the interpretation of the message in a context, which is often unknown to the sending party, may result in a complete adverse picture compared to that, which was originally sent. Proper Communication skills are crucial. (Baron&Kenny1986). In their 2018 research on the role of project management soft skills in the sustainability of affluent financial services projects, Kaleli and Yusuf aimed to investigate the impact of communication skills on project sustainability. Their study uncovered that 47.4% of respondents agreed that clear communication among stakeholders, both before the commencement of a project and during its implementation, significantly enhances participation. Another 47.4% of participants believed that it has a large impact on enhancing participation, with only 5.3% indicating that clear communication contributes to a moderate extent. This suggests that, according to the majority, clear communication fosters increased participation during a project. Furthermore, the research results indicated that effective communication leads to mutual understanding among stakeholders, significantly strengthening project sustainability. Specifically, 47.4% of respondents thought it had a very large impact, 47.4% considered it had a large impact, and a portion believed it had a moderate impact.

These findings align with previous research that emphasized the critical value of communication in building trust among stakeholders, facilitating mutual understanding, and promoting participation, thus

enhancing a project's sustainability. The study also revealed that a majority of participants (57.9%) agreed that clear communication from the project manager significantly encourages participation and contributes to the overall success of the project. Additionally, 36.8% noted that clear communication enhances project success to a large extent, while only 5.3% believed it had a moderate impact.

Similarly, the majority of respondents recognized the importance of listening skills, writing abilities, and interpersonal skills in ensuring project sustainability. These findings are consistent with previous studies conducted in South Africa, which identified key communication skills such as decision-making, problem-solving, listening, motivation, conducting effective meetings, writing, team development, team building, and conflict management as crucial elements in project management.

Zulch & Benita (2014), researched on Communication skills impact on sustainable and green project management in south Africa found that the communication skills are rated the highest are decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management. These communication skills can be seen as the important communication skills that a project manager needs to communicate effectively about sustainability. Leadership is rated the highest, which indicates that a project manager, as the leader of a project, needs the skills of decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management to communicate effectively with all stakeholders of the project regarding green project management. Leaders can achieve sustainability through effective communication skills such as decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management. With these communication skills, the project manager will convince all stakeholders to follow a sustainable approach in managing projects. They concluded that construction project manager has to communicate effectively regarding cost, time and quality as three of the four cornerstone factors on which the success of a sustainable project depends, followed by scope.

Influence of problem-solving skills on project sustainability

Problem-solving skills play a crucial role in determining the sustainability of a project. Effective problem-solving enables project managers to identify and address challenges and obstacles that arise during the project lifecycle, ultimately enhancing the project's chances of success and long-term sustainability. Several studies have examined the relationship between problem-solving skills and project sustainability, providing valuable insights into this important aspect of project management.

Pinto & Kharbanda (2015) argued that Project managers should possess strong problem-solving skills to address issues that arise during the project. They need to analyze problems, identify root causes, and implement effective solutions. According to Jonassen (2010) argued that a good manager is the one who possess the problem-solving skills without being bias on the causal or affected part, must be the one who knows to analyze the problem from the scratch and take or resolve the issue accordingly without being bias.

According to Smith and Johnson (2017), project managers who possess strong problem-solving skills are better equipped to handle unexpected issues and setbacks, minimizing their impact on project outcomes. These skills enable managers to analyze problems systematically, identify root causes, and generate innovative solutions. Furthermore, research by Anderson et al. (2019) indicates that project managers with advanced problem-solving abilities are more likely to foster a proactive and adaptable project environment, enabling teams to respond effectively to changing circumstances. The influence of problem-solving skills on project sustainability extends beyond individual managers. Collaborative problem-solving, as highlighted by Chen and Wang (2018), is essential for fostering team cohesion and synergy,

resulting in enhanced project performance and resilience. By promoting effective communication and collaboration among team members, problem-solving skills contribute to knowledge sharing and the creation of a supportive project culture.

Moreover, the impact of problem-solving skills on project sustainability is evident across diverse industries. For instance, in a study focused on sustainable construction projects, Li et al. (2020) found that project managers' problem-solving abilities significantly influenced the successful implementation of sustainable practices. These skills enabled managers to navigate complex sustainability challenges, such as resource optimization, stakeholder engagement, and environmental impact mitigation.

In summary, problem-solving skills are a critical determinant of project sustainability. They empower project managers to address unforeseen issues, foster adaptability within project teams, promote collaboration, and overcome sustainability challenges specific to the project context. By leveraging effective problem-solving techniques, project managers can enhance the long-term viability and success of their projects.

2.4. Research gap

After cross-reading the research papers, articles, magazines, essays, and other documents, the researcher released that there are few studies on project management skills on the sustainable of project. However, there are few researchers who were about Rwanda, and took Burera district as case of study. The research findings provide valuable insights into the current state of project management skills in Rwanda, the challenges faced by project managers, and the factors contributing to the skills gap. It shed light on the impact of the skills gap on project success and outcomes in Rwanda. The outcomes of this research can be used to inform policy decisions, design training programs, and develop strategies to enhance project management skills in the country.

This is the main reason that pushed me as a researcher to analyze the influence of project management skills on the sustainability of project in Rwanda, VUP project in Burera district. According to some project owners and other stakeholders that are in projects, witnessed that there is a problem for utilization of project management skills that mostly affect the sustainability of project in Rwanda (Ramirez et al 2019).

METHODOLOGY

Study Area

The study has geographically cover 2020 VISION UMURENGE PRGRAM which are located in Burera District, Northern region of Rwanda as geographical coverage.

Sampling and Data Collection

This research adopted a mixed approach design where both qualitative and quantitative methods was considered. Which means that both questionnaire and interview were put in place while seeking the information to be based on while analysing and interpreting such data.

Also, descriptive research was used in facilitating the analysis of data. Descriptive research involves identification of attributes of a particular phenomenon based on an observational basis, or the exploration of correlation between two or more phenomena. These approaches were used while investigating the influence of project management skills on project sustainability. A descriptive research design was used to study the effects of independent variable (project management skills) on dependent variables (project sustainability) as the link between them as well. Qualitative data was analysed using SPSS while qualitative data were analysed using the thematic method. This study used census sampling technique since the total population was 53. In order to facilitate the study to be well accomplished each objective

of the study were investigated by using specific questions. The study applied the following tools of data collection; questionnaires, interview especially for the employees and documentation used to collect secondary data. Data collection was conducted based on secondary and primary data. A Likert-scale questionnaire was used to collect both qualitative and quantitative data.

RESULTS

Descriptive Results

4.2.1 Influence of leadership skills on the project sustainability

Table 1: The influence of leadership skills on the sustainability of VUP in Burera district.

Statements	N	Mean	Std.
Leadership skills have positive effects towards the sustainability of a project	53	4.12	0.98
The project manager of an organization is hired based on an individual's capacity to influence people?	53	3.76	1.15
An organization obliges leaders to have specific sets of abilities at different rate of service management	53	3.89	1.07
Different experiences are criteria of the capability to be hired	53	3.45	1.21
Training for managers is necessary for effective management of an organization.	53	4.28	0.94
Different qualifications are criteria of the capability to be hired	53	3.61	1.13
In spark, effective hierarchical reports is applied to ensure a sound organization.	53	3.92	1.05

Note: Strongly Disagree = [1]= **Very Low mean**; Disagree= [1-2]=**Low mean**; Neutral= [2-3]=**moderated mean**; Agree= [3-4]=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of leadership skills on project sustainability and related factors. Leadership skills have positive influence on sustainability: Respondents, on average, rated this statement with a mean of 4.12, indicating that they generally agree that leadership skills have positive effects on project sustainability. The relatively low standard deviation of 0.98 suggests that there was a relatively consistent agreement among the respondents. The project manager's hiring is based on influence: Respondents provided a mean rating of 3.76 for this statement, indicating a neutral to agreeable perception that project managers are hired based on their capacity to influence people. The standard deviation of 1.15 indicates a wider range of opinions compared to the first statement. Organization obliges leaders to have specific abilities: On average, respondents rated this statement with a mean of 3.89, suggesting a slightly agreeable perception that organizations require leaders to possess specific abilities. The standard deviation of 1.07 implies a moderate level of variability in responses. Different experiences are criteria for hiring: Respondents provided an average rating of 3.45, showing a neutral to somewhat disagreeable perception regarding the use of different experiences as criteria for hiring. The higher standard deviation of 1.21

suggests a wider range of views on this statement. Training for managers is necessary for effectiveness: The statement received a relatively high mean rating of 4.28, indicating that respondents generally agree that training for managers is necessary for effective organizational management. The low standard deviation of 0.94 suggests a consistent agreement among respondents. Different qualifications are criteria for hiring: Respondents, on average, rated this statement with a mean of 3.61, suggesting a neutral to somewhat agreeable perception that different qualifications serve as hiring criteria. The standard deviation of 1.13 indicates varying opinions on this matter. Effective hierarchical reports ensure a sound organization: The statement received a mean rating of 3.92, showing a neutral to agreeable perception that effective hierarchical reports contribute to a sound organization. The standard deviation of 1.05 suggests a moderate level of variability in responses. The analysis of respondents' ratings reveals varying degrees of agreement on the effect of extra-curricular activities on project sustainability and related hiring and management practices. The consistent agreement on some statements suggests certain shared beliefs, while the wider range of opinions on other statements underscores the need for further exploration and consideration of diverse perspectives in project management decisions. Project stakeholders can use these insights to tailor leadership development programs, refine hiring practices, and identify areas for improvement in organizational management to enhance the long-term sustainability and success of the Vision 2020 UMURENGE PRGRAM in Burera District.

Table 11: The influence of Communication skills on the sustainability of VUP in Burera district.

Statements	N	Mean	Std.
Channels of communication used by spark lead to its sustainability.	53	4.15	0.99
Oral communication used in VUP project led to its sustainability.	53	4.06	1.05
Written communication is one of the types of communication used.	53	4.30	0.90
you use email as a way of communicating.	53	4.25	0.98
Video communication used to ensure sustainability	53	3.92	1.12
you have website which allows people to access your shared information.	53	3.98	1.07
Audio conferences communication are used	53	3.85	1.11

Note: Strongly Disagree = [1]= **Very Low mean**; Disagree= [1-2]=**Low mean**; Neutral= [2-3]=**moderated mean**; Agree= [3-4]=**High mean**; Strongly Agree= [4-5] = **Very High mean**.

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of communication skills on project sustainability and related factors. The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of communication skills on project sustainability and the various communication channels used. Channels of communication used by spark lead to sustainability: Respondents, on average, rated this statement with a mean of 4.15, indicating that they generally agree that the communication channels used by Spark lead to project sustainability. The relatively low standard deviation of 0.99 suggests a relatively consistent agreement among the respondents. Oral communication used in VUP

project led to sustainability: Respondents provided a mean rating of 4.06 for this statement, showing a neutral to agreeable perception that oral communication used in the VUP project contributes to its sustainability. The standard deviation of 1.05 indicates a moderate level of variability in responses. Written communication is one of the types of communication used: On average, respondents rated this statement with a mean of 4.30, suggesting a relatively strong agreement that written communication is one of the types of communication utilized in the project. The low standard deviation of 0.90 indicates a consistent agreement among respondents. You use email as a way of communicating: The statement received a relatively high mean rating of 4.25, indicating that respondents generally agree that email is used as a way of communication. The standard deviation of 0.98 suggests a consistent agreement among respondents. Video communication used to ensure sustainability: Respondents, on average, rated this statement with a mean of 3.92, indicating a neutral to somewhat agreeable perception that video communication is used to ensure project sustainability. The higher standard deviation of 1.12 suggests varying opinions on this matter. You have a website which allows people to access shared information: The statement received an average rating of 3.98, showing a neutral to somewhat agreeable perception that a website is used to allow access to shared information. The standard deviation of 1.07 indicates varying opinions on this statement. Audio conferences communication is used: The statement received a mean rating of 3.85, suggesting a neutral to somewhat agreeable perception that audio conferences are used for communication. The standard deviation of 1.11 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on the effect of communication skills and the various communication channels on project sustainability. While some statements received strong agreement, others showed a wider range of opinions. Project stakeholders can utilize this information to identify areas for improvement in communication strategies, foster effective communication practices, and enhance project sustainability for the Vision 2020 UMURENGE PROGRAM in Burera District.

Table 15: The influence of problem-solving skills on the sustainability of VUP in Burera district.

Statements	N	Mean	Std.
Problem solving skills lead to sustainability	53	4.18	0.96
The conflicts are dealt well.	53	4.00	1.07
Collaborating is one of the methods of conflict resolution	53	3.98	1.04
Use of mediation and reconciliation method are applied	53	3.89	1.15
Avoiding the conflict is a style	53	3.60	1.14
the conflict management reduce disagreement between managers and co-workers	53	4.05	1.00
Negotiation method of conflict resolution is applied	53	4.15	1.03

Note: Strongly Disagree = [1]= **Very Low mean**; Disagree= [1-2]=**Low mean**; Neutral= [2-3]=**moderated mean**; Agree= [3-4]=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of problem-solving skills on project sustainability and related factors. The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of problem-solving skills on project sustainability and various conflict resolution

methods. Problem-solving skills lead to sustainability: Respondents, on average, rated this statement with a mean of 4.18, indicating a generally agreeable perception that problem-solving skills contribute to project sustainability. The relatively low standard deviation of 0.96 suggests a relatively consistent agreement among the respondents. The conflicts are dealt well: Respondents provided a mean rating of 4.00 for this statement, suggesting a neutral to agreeable perception that conflicts are managed effectively. The standard deviation of 1.07 indicates a moderate level of variability in responses.

Collaborating is one of the methods of conflict resolution: On average, respondents rated this statement with a mean of 3.98, indicating a slightly agreeable perception that collaborating is a method of conflict resolution. The standard deviation of 1.04 implies a moderate level of variability in responses. Use of mediation and reconciliation method are applied: Respondents gave an average rating of 3.89, showing a neutral to somewhat agreeable perception that mediation and reconciliation methods are applied in conflict resolution. The higher standard deviation of 1.15 suggests varying opinions on this matter. Avoiding the conflict is a style: The statement received an average rating of 3.60, suggesting a neutral to somewhat disagreeable perception that avoiding conflict is a style used in conflict resolution. The standard deviation of 1.14 indicates varying opinions on this statement. The conflict management reduces disagreement between managers and co-workers: The statement received a mean rating of 4.05, indicating a neutral to agreeable perception that conflict management reduces disagreement between managers and co-workers. The standard deviation of 1.00 suggests a moderate level of variability in responses. Negotiation method of conflict resolution is applied: The statement received a mean rating of 4.15, indicating a generally agreeable perception that negotiation is applied as a method of conflict resolution. The standard deviation of 1.03 suggests a moderate level of variability in responses. The analysis of respondents' ratings reveals varying degrees of agreement on the effect of problem-solving skills and various conflict resolution methods on project sustainability. Some statements received strong agreement, while others showed a wider range of opinions. Project stakeholders can use this information to identify areas for improvement in problem-solving and conflict resolution strategies, foster effective collaboration, and enhance project sustainability for the Vision 2020 UMURENGE PRGRAM in Burera District.

Table 19: Descriptive statistics on project sustainability

Statements	N	Mean	Std.
In last 3 years, sustainability ensured effectively	53	4.13	0.97
Economic sustainability was ensured	53	4.06	1.02
Social perspective was ensured	53	4.20	0.95
VUP project helped to ensure environmental perspective	53	3.98	1.08
VUP project helped to ensure human perspective.	53	4.12	0.99
Corporate social responsibility as principle of sustainability was also applied	53	4.28	0.92
VUP project base on efficiency as evaluation criteria of sustainability	53	4.10	1.04

Note: Strongly Disagree = [1]= **Very Low mean**; Disagree= [1-2]=**Low mean**; Neutral= [2-3]=**moderated mean**; Agree= [3-4]=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the

respondents' perceptions on project sustainability. The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of descriptive statistics on Project Sustainability. In the last 3 years, sustainability ensured effectively: Respondents, on average, rated this statement with a mean of 4.13, indicating that they generally agree that sustainability was ensured effectively in the last three years. The relatively low standard deviation of 0.97 suggests a relatively consistent agreement among the respondents. Economic sustainability was ensured: Respondents provided a mean rating of 4.06 for this statement, suggesting a neutral to agreeable perception that economic sustainability was ensured. The standard deviation of 1.02 indicates a moderate level of variability in responses. Social perspective was ensured: On average, respondents rated this statement with a mean of 4.20, indicating a slightly agreeable perception that the social perspective was ensured in the project's sustainability. The standard deviation of 0.95 implies a moderate level of variability in responses. VUP project helped ensure environmental perspective: Respondents gave an average rating of 3.98, showing a neutral to somewhat agreeable perception that the VUP project helped ensure the environmental perspective in sustainability. The higher standard deviation of 1.08 suggests varying opinions on this matter. VUP project helped ensure human perspective: The statement received an average rating of 4.12, suggesting a slightly agreeable perception that the VUP project helped ensure the human perspective in sustainability. The standard deviation of 0.99 indicates varying opinions on this statement.

Corporate social responsibility as a principle of sustainability was also applied: The statement received a mean rating of 4.28, indicating a generally agreeable perception that corporate social responsibility principles were applied in sustainability. The standard deviation of 0.92 suggests a relatively consistent agreement among respondents. VUP project based on efficiency as the evaluation criteria of sustainability: The statement received a mean rating of 4.10, indicating a slightly agreeable perception that the VUP project was based on efficiency as evaluation criteria of sustainability. The standard deviation of 1.04 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on descriptive statistics related to Project Sustainability. Some statements received strong agreement, while others showed a wider range of opinions. Project stakeholders can utilize this information to identify areas for improvement, validate the effectiveness of the sustainability measures implemented, and further enhance project sustainability for the Vision 2020 UMURENGE PRGRAM in Burera District.

Correlation analysis

**Table 20: Ordinary correlation analysis
Component Matrix**

Correlations		Leadership skills	Communication Skills	Problem-Solving Skills	Project sustainability
Leadership Skills	Pearson Correlation	1	.915**	.931**	.919**
	Sig. (2-tailed)		.000	.000	.000
	N	10	10	10	10
Communication Skills	Pearson Correlation	.915**	1	.993**	.923**
	Sig. (2-tailed)	.000		.000	.000

	N	10	10	10	10
Problem solving skills	Pearson Correlation	.931**	.993**	1	.903**
	Sig. (2-tailed)	.000	.000		.000
	N	10	10	10	10
Project Sustainability	Pearson Correlation	.919**	.923**	.903**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	10	10	10	10
**. Correlation is significant at the 0.01 level (2-tailed).					

The multiple correlation analysis reveals that there is a strong positive correlation between "Project Management Skills" and "Project Sustainability." This indicates that higher levels of project management skills are associated with higher levels of project sustainability. It suggests that effective project management plays a crucial role in contributing to the sustainability of the Vision 2020 UMURENGE PRGRAM in Burera District.

Furthermore, the analysis shows that "Project Management Skills" also have strong positive correlations with "Leadership Skills" (0.919), "Communication Skills" (0.923), and "Problem-Solving Skills" (0.903). These results suggest that individuals with better project management skills tend to have higher levels of leadership, communication, and problem-solving abilities.

The multiple correlation analysis highlights the importance of strong project management skills in driving project sustainability and underscores the interconnectedness between project management, leadership, communication, and problem-solving skills. Project stakeholders can use these insights to prioritize the development of project management competencies and foster a collaborative and skilled project management team, ultimately enhancing the long-term sustainability and success of the Vision 2020 UMURENGE PRGRAM in Burera District.

CONCLUSION

In conclusion, this study delved into the influence of leadership skills, communication skills, and problem-solving skills on the sustainability of the Vision Umurenge Program (VUP) project in Burera district. The research findings have provided valuable insights into the critical factors affecting project sustainability and have highlighted the importance of proficient project management skills in ensuring the long-term success of the Vision 2020 Umurenge Project. The analysis revealed that effective leadership skills, communication skills and problem-solving skills significantly contribute to project sustainability, fostering a positive impact on the overall project outcomes.

Recommendations

Based on the findings of the study regarding the influence of leadership skills, communication skills, and problem-solving skills on the sustainability of the Vision Umurenge Program (VUP) program in Burera district, the following recommendations are offered: The government of Rwanda should invest in Leadership Development to empower project teams to navigate challenges, inspire motivation, and foster a shared vision, ultimately contributing to the sustainable success of the VUP program, The government of Rwanda should enhance Communication Training , To leverage the power of effective communication, project managers and team members should receive training in various communication methods, including

verbal, written, and digital communication, Project managers should integrating problem-solving training and workshops to equip project team with essential tools and techniques to identify and address challenges proactively.

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