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Stakeholder Participation and Sustainability of World Bank Funded Water Projects in Karamoja, Uganda

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Abstract:

According to the Stakeholder Theory, the participation of stakeholders affects project outcomes, thus, it is theorised where the stakeholder has a stake in the project process that the project will meet its set out objectives and be sustainable. The aim of the research project was to establish the effect of stakeholder participation on project sustainability. Stakeholder participation focused on inclusion in project identification, planning, implementation and monitoring and evaluation. The study was guided by the theory of systems, the stakeholder theory, and the contingency theory. The research design used in this research project was descriptive. The target population of the study were the sixty-water project constructed in the seven districts in the Karamoja region of Uganda. The unit of observations were officials from the World Bank, district officials from the Ministry of Water and Environment, project developers, community leaders, and beneficiaries. The information needed to determine stakeholder participation was obtained using questionnaires. The data collected was analysed using descriptive and inferential analysis which consists of correlations and regression. From the responses given, it was established that the stakeholders were involved in the determination of the site of the projects, the projects developed adhered to government development plans, there was consultation in determining the site of the projects, timelines were agreed upon by the stakeholders, every step of construction was controlled by the stakeholders, funds were released based on progress made and there were regular site visits. Through statistical analysis it was determined that stakeholder participation in project identification, project planning, project implementation and project monitoring and evaluation had a positive and statistically significant effect on sustainability. From the findings, it was concluded that increased participation of stakeholders in every aspect of the project process enhanced project sustainability. Based on the findings, it is recommended that the stakeholders, particularly the beneficiaries should be included in all aspects of the project.

Keywords: Participation, funded, sustainability, stakeholders, government, development, water

1. Introduction

1.1. Background to the Study

Sustainability considerations are necessary during the project design and implementation as this ensures that the project meets the needs or the objectives that it was intended to achieve for a given period of time (Silvius, Brink, and Köhler, 2011). Adams (2006) indicates that for a project to be sustainable it must integrate the longevity considerations. Labuschagne and Brent (2006) indicate that sustainability has to do with the total life cycle of the project. Access to water is important to promoting the livelihoods and wellbeing of communities that live in arid and semi-arid areas. Uganda is blessed with many lakes, rivers, and streams. Additionally, the country receives rainfall for at least eight months of the year. However, access to clean and safe water remains a major challenge for ordinary Ugandans (Musoke, 2018).

In Africa, infrastructure development and the sustainability of the infrastructure have been recognised as fundamental to ensuring economic growth, improve health care and enhanced quality of life (Saghir, 2017). As such, the governments in Africa have signed the Africa Water Vision for 2025 plan which is aimed at ensuring that water infrastructure projects are designed to stimulate economic growth and wellbeing and are sustainable (Economic Commission for Africa, 2020). In Kenya, the government policy incorporates the market-based principles in order to ensure that the water and sanitation services can achieve long-term financial sustainability (Global Waters Organisation, 2020).

In a survey conducted by Twaweza (2018), it was established that both in the urban and rural areas of Uganda, households were facing challenges with regards to cost, time, and convenience in access to water. In an attempt to address the water challenges facing its citizens, the Government of Uganda (GOU) approached the World Bank (WB) for the financing of various water projects. Cumulatively, more than 180 projects worth approximately \$3.7 billion have been advanced by WB for water projects in Uganda (WB, 2020). World Bank undertook an assessment of the current status of the water projects it has funded in Uganda over the years. The assessment a significant number of the water projects were

not operational, partially operational, or inadequately being used (WB, 2019). This has seriously hampered the government's efforts to ensure that the cost and time to access water by Ugandans is reduced and the water quality is high. According to Sang (2015), the WB funds projects that are well designed and are able to yield benefits to the public, however, the projects often fail due to lack of incorporation of stakeholders and sustainability considerations. Bal (2014), established that stakeholders are the main determinants of the ability of the ability of projects to sustain themselves. According to Huemann, Eskerod, and Ringhofer (2016), many projects fail because the interests of the stakeholders are not adequately catered for.

1.1.1. Project Sustainability

Silvius and Schipper (2014), indicated that project sustainability is concerned with the efficient and effective provision of services over a period of time. Sang (2015) measured project sustainability using the continued provision of services and benefits for the identified users, which included the period of time over which the project kept running. For projects that are funded by donors, project sustainability is defined as the continuation of the benefits envisioned in the project objectives after major assistance by the donor is withdrawn (Ochunga, 2016). According to Alonzi (2018), donors intend for the projects they fund to impact the lives of the target communities even after their involvement ends. Sustainability encompasses the maintenance of the benefits received from the project into the future.

Project sustainability is important as it ensures that the communities or organisations that are supported by the projects can maintain and continue to enjoy the benefits (International Fund for Agriculture Development, 2016). Currently, the WB funds projects that are demand-driven and thus is concerned with the benefits that they deliver and the duration over which the benefits are felt i.e., the lifespan of the project. The concern is driven by the fact that the organisation invests millions of dollars in these projects (Lockwood, Bakalian, & Wakeman, n.d.). Organisations view project sustainability differently and attach significant to different aspects: these include technical performance, health, empowerment, social security or the environment to name but a few. In water supply and sanitation, sustainability is mainly associated with the financial operations and the need to make the projects self-sufficient, especially in low-income communities, where there is a need for the users to contribute to the cost (Virine & Trumper, 2008).

Water projects can be classified as infrastructure development projects. Infrastructure projects tend to be part of the government's development agenda because they have an impact on the economic growth, welfare of the populace, and significantly impact the urbanisation of regions (Flyvbjerg, 2014). Therefore, one of the major stakeholders of the water projects is the government. According to WB (2020b), the funding entity normally conducts the monitoring and evaluation. This ensures that the probability of smooth running and implementation of the projects hence the long-lifespan and continuity. In this research work, sustainability was measured by the maintenance of the project, continuous delivery of services, and life span of the project after the donor funding ends.

1.1.2 Stakeholder Participation

Maina and Kimutai (2018) defines the project stakeholder as the person or entity that finances the project, determine its end point, or are affected by the completion and operation of the project. Di Madaloni and Davis (2017) identified two categories of project stakeholders. The first category was the primary stakeholders who included owners, suppliers, customers, sponsors, project management, and project teams. The secondary stakeholders included the government, welfare advocates, rivals, conservationists, groups with special interests, and the local community.

The main stakeholders of the water projects include the local community, the project developers, the government of Uganda represented by the Ministry of Water, and the World Bank. In the seminal work of Freeman (1984), it is argued that stakeholder participation approach provides an inclusive and holistic perspective by including the stakeholders who would be most harmed or realise the most benefits from the project. The inclusion of the local community in every area and stage ensures that their expectations are met and their reservations are resolved (Choudhury, 2014).

According to Calderon and Chelleri (2013) projects, particularly development projects are complex undertaking which requires a holistic approach which is achieved through stakeholder participation which entails allowing the different stakeholders meaningful involvement. Arnstein (1969) in the ladder of participation hypothesis indicated that participation is the redistribution of influence and decision making to parties that are excluded from the political and economic arena. Traditionally, project management started from the assumption that the customer/ the users of the project knew what they wanted and what they need. However, Haapasalo and Soderstrom (2013) argue that project management today is about value creation and sustainability thus, there is a need to for project managers to find solutions to the problems that the customers want from the project, help the customers understand the project objectives, identify conflicts between the customers and other stakeholders, and provide alternatives that were never considered by the customers.

Virine and Trumper (2008) identify project management teams as the main stakeholders in the project process given that they determine the successful completion and operation of the project. The outcome of the project was considered successful if it was delivered in time, within the quality standards specified, and within the budgeted costs. Projects with cost and time over runs and poor quality were considered unsuccessful and would not meet the goals set out in the project plan. Ouma and Mburu (2017) found that different stakeholders perform different task in the project process. The project management team conducts project planning and project implementation. According to Bakker (2010), project managers/ implementers are the drivers of sustainability and success of any project. Consequently, project implementers need to take into consideration the cultural, communal, and environment surrounding their projects. Project implementers need to understand the needs of the other stakeholders and minimise any negative effects of the projects

this enhances the accountability and transparency of the project (Loosemore, 2014). The study will evaluate the project management's technical skills, stakeholder needs and expectation identification, and management skills.

1.2. Statement of the Problem

Most development works and projects are undertaken to improve social and economic wellbeing of the communities in which they are implemented (WB, 2020a). Therefore, it is important that the projects are sustainable so that the communities can be able to enjoy higher quality of life. World Bank funded projects often have a life span of many years and involve large amounts of investment, generate uneven cash flows, and involve complex contracts (Sang, 2015). Further, the projects are subject to environmental and climate changes, changing political systems, and changes in regulatory frameworks. The WB incorporates sustainability in its project design to ensure that the identified stakeholder reap maximum benefits for the longest period (WB, 2020b). However, WB funded projects in Uganda have performed poorly in terms of sustainability. Moreover, the level of performance of projects in Karamoja has been found to be very low (Seve, 2018; FAO, 2018). This has made it difficult to stimulate economic growth or to ensure food security for the people in that region (FAO, 2018).

Research has shown that in Uganda, approximately 30% of the rural water supply boreholes suffer high failure rates despite 90% of them are being managed by the local community (Africa Groundwater Atlas, 2019). In Karamoja district, a survey of water projects by Bonsor, Oates, Chilton et al. (2015) found that many water projects were not operational due to vandalism, failure by the local community to pay water bills, and the limited underground water potential of the region. A review of the water projects in Karamoja by the Ugandan Ministry of Water and Environmental (MWE) showed that major water projects such as Amudat, Kacheri and Lokona, Orwamuge, Morulem, Kapedo, Namalu, Nabilatuk, Alerek, and Karenga waterworks were in a state of disrepair and were not providing services to the area region (Republic of Uganda, 2019). Further, 27% of the projects were in need of expansion and maintenance.

A review of literature shows that some studies have been conducted to understand the effect of stakeholder participation on project outcomes. From the review, the researcher was able to identify various research gaps. Mutimba (2013) investigated the role of donors in project sustainability and established that the actions of donors have a marginal effect on project sustainability. There is a contextual gap given that Mutimba (2013) investigate the role of donors in Ganze Kilifi, Kenya. This study will fill the contextual gap by focusing on Karamoja in Uganda. Umugwaneza and Kule (2016) investigated monitoring and evaluation on sustainability in electricity access scale-up they that the two variables had positive and significant impacts on project outcomes. The study by Umugwaneza and Kule (2016) had a methodological gap given that the target population consisted of individuals working on the projects without considering the beneficiaries in the community. Nasr, Kashan, Maleki et al. (2020) investigated the barriers to renewable energy development; they established that lack of stakeholder participation in project planning was a major barrier to the development of renewable energy projects. There is an analytical gap given that Nasr et al. (2020) focused on renewable energy development and project planning. The identified gaps necessitate further studies to assess that factors that influence and determine project sustainability. This study filled the gaps by evaluating the effects of stakeholder participation in WB funded water projects in Karamoja region of Uganda.

1.3. Objectives of the Study

The objective of the study was to determine the influence of stakeholder participation on the sustainability of World Bank-funded water projects in Karamoja Uganda. The general objectives of the study were achieved through the following specific objectives:

- To determine the effect of stakeholder participation in project identification on the sustainability of WB funded water projects in Karamoja, Uganda.
- To determine the effect of stakeholder participation in project planning on the sustainability of WB funded water projects in Karamoja, Uganda.
- To determine the effect of stakeholder participation in project implementation on the sustainability of WB funded water projects in Karamoja, Uganda.
- To determine the effect of stakeholder participation in monitoring and evaluation on the sustainability of WB funded water projects in Karamoja, Uganda.

2. Literature Review

2.1. Theoretical Review

Theories provide an explanation and prediction of the nature of the relationship between the variables. In this paper systems theory and stakeholder theories explain the relationship between participation and sustainability. The contingency theory shows that the outcomes of the project are determined by both internal and external factors.

2.1.1. Systems Theory

This theory is attributed to the work of Bertalanffy (1934) known as the general systems theory (GST). He argued that everyday phenomena are a conglomeration of interrelated and interdependent part which can be natural or human made. Therefore, each system is determined by space and time, its environment which consists of structure and purpose and expressed through functioning. The system is the sum of its parts if it creates synergy or emergent behaviour (Stichwel, 2011).

The theory is based on the hypothesis that the whole is the sum of its parts (Anderson, Carter, & Lowe, 1999). Systems theory is important to project sustainability. This is because the project is influenced by different stakeholders these include the government, project managers, local communities, donors, amongst others who determine project identification, project plans, project implementation, and monitoring and evaluation. The intention of any project is that the project provides positive outcomes with sustainability being one of the positive outcomes.

2.1.2. Stakeholder Theory

In the book *Strategic Management: A stakeholder Approach* published in 1984, Freeman argues that in order to enhance the performance of an organisation then the perspective of others, stakeholder, should be taken into consideration. This theory focuses on the management of the organisation by taking into consideration the multiple groups of individuals and entities such as employees, government, suppliers, local communities, creditors amongst other that are affected by the activities of the organisation and also affect the activities of the organisation.

The field of project management also adopted the concept of stakeholder management and participation. According to Aarseth, Rolstadas, and Andersen (2011) in project management, project stakeholders are important for project success due to four factors. First, the project needs financial and non-financial resources from stakeholders. Second, the stakeholders provide a criterion for accessing the success of the project. Third, the stakeholder's non-acceptance of the project many create risks and negatively impact the outcomes of the project. Fourth, the project might affect the stakeholders both in negative and positive ways. According to Eskerod and Jepsen (2013), it is important for the project team to conduct stakeholder analysis so as to increase the chances of identifying opportunities and problems in advance so that the team has sufficient time to plan and manoeuvre each eventuality.

2.1.3. Contingency Theory

This theory is attributed to the work of Fred Fielder (1964). This theory stipulated that the outcome of any situation is contingent (dependent) on internal and external factors. Woodward (1958), argues that the contingency theory tries to explain how formal structures are integrated with other structures to form the best technologies. These technologies determine outcomes because they dictate span of control, authority, and formalisation of rules and procedures. Pennings (1975), found that internal structural attributes as well as external attributes impacted performance. Pennings (1975), concluded that management and organisations are open systems that need to embrace contingency factors such as government policy, consumer demands, changing climate and so forth in their operations. Following the propositions of Pennings (1975), Artoo, Kujala, Dietrich and Martinsuo (2008), argue that the contingency theory can be applied to project management. This is because projects transform strategy into outcomes but are determined by various factors. Contingency theory is applicable to this study given that the internal and external factors determine the sustainability of projects.

3. Research Methodology

3.1. Introduction

This section of the study presents the approach used to address the research gaps identified in the chapter one and two. In this section the research design and target population are identified, the sampling technique, and data handling approaches are given.

3.2. Research Design

The research design is the procedure that guides the manner in which the study data is collected and analysed (Rozinah, 2016). The descriptive research design was adopted. The descriptive approach entails accurately and systematically describing the phenomenon under study. It answers the what, when, where, and how questions (McCombes, 2020). The explanatory design aims to account for the descriptive information (Grey, 2014). The explanatory approach builds on the descriptive research by identifying the actual reasons, looks for causes and consequences, provide support or disputes explanation or prediction. This study hoped to establish how stakeholder participation affected the lifespan and outcome of WB funded water projects.

3.3. Target Population

According to Parahoo (1997), this includes all items or subjects over which the study results are generalised over. The identified population of interest in this research work was the sixty water projects in Karamoja in Uganda which had been initiated by the GOU with funding from WB through the Integrated Water Management and Development Projects during the period 2010-2019 (Appendix 3). Every year, the GOU publishes the status of the water projects. Appendix 3 shows the status of the water projects that were funded by the WB in Karamoja. The water projects impact approximately 500,000 individuals living in various communities in Karamoja. The sixty projects form the unit of analysis. The unit of observation in this study was the stakeholders who include the World Bank, the Government of Uganda which was represented by the Ministry of Water and Environment, project developers, local community leaders and beneficiaries of the water projects.

There are seven districts in Karamoja namely Kaabong, Abim, Kotidao, Moroto, Napak, Nakapiripirit, and Amudat. Thus, the study population consisted of World Bank, Project Managers, the Government of Uganda, and the local communities as depicted in Table 1.

Stakeholders	Study Participants	Number
World Bank	Water Development Lead	4
Government of Uganda	Ministry of Water and Development Officials in Karamoja	30
Project Developers	Various Companies doing the construction	4
Local Community Leaders	Water Supply and Sanitation Board Members	60
Beneficiaries	Local Community Members	395476

Table 1: Study Population
Source: Researcher (2020)

3.4. Sampling and Study Sample

The subset of the target population included in the study was summarised in Table 2.

Stakeholders	Participants	Total Number	Respondents
World Bank	Water Development Lead	4	4
Government of Uganda	Ministry of Water and Development Officials in Karamoja	30	30
Project Developers	Various Companies doing the construction	4	4
Local Community Leaders	Water Supply and Sanitation Board Members	60	60
Beneficiaries	Local Community Members	395476	120
Total			218

Table 2: Study Sample
Source: Researcher (2020)

Cumulatively, the study had two hundred and eighteen participants. The researcher used census because the number of waters leads, ministry officials, project developers, and local community leaders is small. The number of community members at 395,476 was considered to be too large, thus, the researcher only sampled one hundred and twenty members of the local community. The community members were selected randomly.

3.5. Data Collection Tools and Instruments

The nature of this study required that primary data be used. There are different data collection tools, they included interviews, focus groups, observations, questionnaires, and surveys (Mugenda & Mugenda, 2019). After careful analysis and taking into consideration the social distancing measures in place due to Covid-19 pandemic, the questionnaire was found to be the most ideal method of collection information. The questionnaire consisted of four sections which included instructions to the respondents about the study and ethical considerations; background information of the respondents; a section to understand dimensions of stakeholder participation, and, project sustainability. The questionnaire contained both open and close ended questions.

4. Research Findings and Discussions

4.1. Descriptive Analysis

4.1.1. Stakeholder Participation in Project Identification

It was essential to determine the degree to which the different stakeholders participate in project identification. This was investigated using questionnaires and responses were ranked.

Dimensions of Project Identification	N	Mean (M)	Std. Deviation (SD)
The water projects developed are based on the needs and expectations of the community	187	3.95	0.67
There is grassroots participation in determining the location of water projects	187	3.92	0.60
The scope of the project is determined by the local community, the government, and the donor	187	3.79	0.68
The project developer provides clarification for stakeholders about the project viability and feasibility	187	4.18	0.69
During the project identification process conflicts between different stakeholders is identified and resolved	187	4.28	0.76
The water projects must be in line with government policy and development plans	187	4.57	0.50
The status of prior water projects is taken into consideration when identifying new projects	187	3.38	0.87
Average	187	4.01	0.69

Table 3: Stakeholder Participation in Project Identification
Source: Study Data (2021)

The M of 3.95 and SD of 0.67 suggests that for most of the water projects were developed based on the needs and expectations of the community. The mean of 3.92 suggests that there is moderate participation when determining the location of the water projects. The mean of 3.79 suggests that there is moderate participation by all stakeholders in the determination of the scope. The participants indicated that to a great extent conflicts between different groups are identified and resolved and that the projects are in line with government policy and development plans.

The overall mean and standard deviation are 4.01 and 0.69 respectively which suggests that there is great level of participation by stakeholders in the project implementation process. The overall mean and the dispersion in the means for the different questions suggest that the different stakeholders are involved in different processes of the project identification process. These findings confirm the findings of Bal, Bryde, Fearon, and Ochieng (2013) who established that for complex projects such as those linked to government and development, high levels of stakeholder participation in all parts of the project are necessary because the absence of stakeholder participation hinders the success and effectiveness of the project. According to Mutimba (2013), the high level of stakeholder participation in the identification process is important for project impact because the local community is best at articulating their needs and the locations of the projects.

4.1.2 Stakeholder Participation in Project Planning

The researcher analysed the degree to which stakeholders participate in project planning for WB funded water projects in Karamoja. This section provides a discussion of the analysis.

Dimensions of Project Planning	N	Mean (M)	Std. Deviation (SD)
There is consultation on the objectives of the project	187	4.50	0.66
Participation in the selection of project developers/managers	187	3.47	0.78
The cost and cost management measures are determined by stakeholders	187	2.92	0.85
The project timelines are set and agreed upon by stakeholders	187	4.89	0.60
The project deliverables are shared with the stakeholders	187	4.80	0.40
Average	187	4.12	0.66

Table 4: Stakeholder Participation in Project Planning

Source: Study Data (2021)

The M of 4.50 and SD of 0.66 suggests that consultation on the objectives of the projects is carried out to a great extent. According to Eskerod and Jepsen (2013), it is important for the project team to include the stakeholders in all the processes and stages of the project. This is because the stakeholders, especially the local communities have a wealth of information that will help the project to be successful. These findings suggest that the objectives of the project are in line with those of the local community. According to Ayuso, Rodriguez, Castro, and Arino (2011) some projects are complex and need technical competencies which not all stakeholders possess and as such does not allow for all stakeholders to participate.

The M of 4.80 and SD of 0.40 suggest that project deliverables are shared with stakeholders to a great extent. The overall mean and standard deviation for stakeholder participation is 4.12 and standard deviation 0.66 suggesting that stakeholders participate in the project planning process to a great extent. These findings contradict the findings of Huemann et al. (2016) who found that for most projects, the stakeholders are a source of resources for the project. According to Huemann et al. (2014) sometimes stakeholders are excluded from project planning as they are seen to hinder the process or lack the capacity to contribute. In this case they are the source of resources as well as the drivers of the project.

4.1.3 Stakeholder Participation in Project Implementation

This research work sought to understand the level of stakeholder engagement during the process of project implementation.

Dimensions of Project Implementation	N	Mean (M)	Std. Deviation (SD)
The project plan is executed is the one agreed upon by the stakeholders	187	4.36	0.34
The stakeholders set times lines for project task executions	187	4.11	0.48
The project implementation is controlled by the stakeholders	187	4.09	0.58
There is supervision by stakeholders to ensure that there is adherence to project plans	187	4.12	0.77
The project developer/manager provides a track of the project implementation process and takes corrective action recommended by the stakeholders	187	4.03	0.44
The stakeholders participate in quality management	187	4.27	0.51
Aggregate	187	4.16	0.52

Table 5: Stakeholder Participation in Project Implementation

The results suggest that to a great extent the project plans are implemented according to the one agreed upon by stakeholders, the implementation process is controlled by stakeholders and the stakeholders participate in quality management as implied by means of 4.36, 4.49, and 4.27 respectively. According to the Project Management Institute (2013) for successful project implementation the project team needs to include all the stakeholders, however, it creates a big challenge for project managers to include all stakeholders in certain projects. These findings suggest that the project managers are able to balance the project demands while including stakeholders.

The M of 4.12 and SD of 0.77 suggests that to a great extent the stakeholders participate in project implementation to ensure that there is adherence to project plans. The expectation was that there would be a high level of stakeholder participation in the process of ensuring that project plans are adhered to so that the project can be completed in a timely manner. The findings suggest that the suppositions of Kobusingye et al (2017) are achieved in the water projects, as the high levels of participation in the implementation process results in the achievement of the set-out objectives. The findings suggest that there is high level of ownership. According to Onditi and Mburu (2017) high levels of participation in the project implementation process ensures that the stakeholders can identify with the project and own the responsibility of ensuring its sustainability. The overall M and SD are 4.16 and 0.52 respectively. These findings suggest that stakeholders' participation in project implementation is significant.

4.1.4. Stakeholder Participation in Project Monitoring and Evaluation

Table 6 provides a summary of the level to which the different stakeholders participate in monitoring and evaluation

Dimensions of Monitoring and Evaluation	N	Mean (M)	Std. Deviation (SD)
There stakeholders participate in the preparation of the work plans	187	3.64	0.89
The project managers/developers prepare periodic progress reports for the stakeholders	187	4.06	0.85
Funds are released by both the World Bank and Government according to progress reports	187	4.08	0.60
There are site visits by stakeholders	187	4.26	0.75
There are stakeholder forums	187	4.06	0.70
Average	187	4.02	0.76

Table 6: Stakeholder Monitoring and Evaluation

The summarised results suggest that the stakeholders participate in the preparation of work plans and project developers prepare reports for stakeholders to a moderate and great extent as implied by means of 3.64 and 4.56 respectively. According to Fageha and Aibinu (2016), stakeholder participation in preparation of work plans and setting out of time schedules is important as it allows them to establish a framework for monitoring the project progression. The means of 4.26 and 4.06 and standard deviations of 0.75 and 0.70 suggest that there are site visits by stakeholders and stakeholder forums.

The overall mean for stakeholder participation in monitoring and evaluation is 4.02 which implies that the stakeholders are actively engaged in the assessment of the actual performance against the targeted performance. According to Heravia et al. (2015) high levels of stakeholder participation is desirable as it allows for the immediate identification of short-comings and ensures conformity. This is important particularly for government projects which have large financial commitments.

4.1.5. Project Sustainability

The researcher sought to establish the sustainability of WB funded water projects in Karamoja in Uganda.

Project Sustainability	N	Mean (M)	Std. Deviation (SD)
After the donor stops financial support, the projects can sustain themselves	187	3.96	0.71
The projects can continue to deliver services after donor support is withdrawn	187	4.01	0.92
The lifespan of the projects is at least 10 years	187	4.08	0.97
Aggregate	187	4.02	0.87

Table 7: Project Sustainability
Source: Study Data (2021)

The findings suggest that after the donor stops financial support the projects on average the projects can sustain themselves as implied by mean of 3.96. The means of 4.01 and 4.08 suggest that to a great extent the projects can continue to deliver services after donor support is withdrawn and that the lifespan of projects is at least 10 years. The overall mean for project sustainability was 4.02 and standard deviation was 0.87. The study by Komalawati (2008) found that the lack of

significant participation by the local community significantly impacted the sustainability of projects. The findings suggest that communities significantly participate in the project process, hence the high levels of sustainability. Project sustainability is important as it ensures that the communities or organisations that are supported by the projects can maintain and continue to enjoy the benefits (Australian Agency for International Development, 2015).

4.2. Regression Analysis

4.2.1. Model Summary

The characteristics of the model used in this research work are presented in Table 8. This evaluation is important as it indicates the appropriateness of the model.

Model	R.	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669 ^a	.437	.418	0.868
a. Predictors: (Constant), Project Monitoring and Evaluation, Project Implementation, Project Planning, Project Identification				
b. Dependent Variable: Project Sustainability				

Table 8: Model Summary
Source: Study Data (2020)

The computed adjusted regression coefficient (adjusted R Squared) is 0.418. This implies that 41.8% of variation in project sustainability is explained by the monitoring and evaluation, implementation, planning and identification. The remaining 58.2% variation in project sustainability is due to factors not included in the model.

4.2.2. Analysis of Variance

The results of ANOVA are presented in Table 31.

Model		Sums of Squares	df	Mean Square	F	Sig.
1	Regression	21.672	4	5.418	7.194	.000 ^b
	Residual	137.066	182	.753		
	Total	158.738	186			

Table 9: Analysis of Variance

The computed critical value is 0.000 which is less than the 5% significance level. This implies that the relationship between project sustainability and stakeholder participation is statistically significant. The findings suggest that the slope of the regression line is not zero. This implies that the overall regression model is significant.

4.2.3. Regression Coefficient

The results of the regression estimation are presented in Table 10.

	Un-stand. Coeff.		Stand. Coeff.	t	Sig.
	B	Stand. Err.	Beta		
Constant term	2.893	.620		4.655	.000
Identification	.277	.068	.316	4.072	.000
Planning	.193	.048	.290	4.057	.000
Implementation	.297	.138	.164	2.156	.032
Monitoring and Evaluation	.146	.060	.173	2.424	.007

Table 10: Estimation Results

This research work sought to understand using regression analysis the relationship between stakeholder participation and project sustainability. Regression results show that project identification has a positive and statistically significant effect on project sustainability as implied by a coefficient of 0.277 and p-value 0.000. These results are similar to the results found by Mutimba (2013) who established that the participation of stakeholders in project identification determines the projects sustainability. The findings contradict the findings of Komalawati (2008) who found that stakeholder participation does not significantly affect project sustainability.

The second item of determination was the effects of stakeholder participation in the process of planning on the sustainability of projects. Beta of 0.193 and p-value 0.000 suggest that the effects of planning are positive and statistically significant. These findings confirm the findings of Lorika, Nyenje and Mutiba (2015) who established that stakeholder participation had positive effects on project sustainability.

The third question of this research work was the effect of stakeholder involvement in the process of implementation and its impact on project sustainability. A coefficient and p-value of 0.297 and 0.032 respectively, suggested that stakeholder participation in project implementation has positive and statistically significant effects on

project sustainability. These findings contradict the findings of Babar (2016) who found that participation by local communities hampered the process of implementing the project.

The final objective was to establish the effect of stakeholder involvement in the process of monitoring and evaluation on project sustainability. The findings indicate that stakeholder participation in monitoring and evaluation had positive and statistically significant effects as implied by a beta of 0.146 p-value 0.007. These findings contradict the findings of Ondieki (2016) who found that the contribution of stakeholders in monitoring and evaluation was negligible attributing this to the fact that they did not have the capacity and competencies needed to carry out this function.

5. Summary, Conclusion and Recommendation

5.1. Summary of Findings

This research work purposed to academically evaluate the effects of stakeholder participation on the sustainability of World Bank-funded water projects in Karamoja region of Uganda. The researcher evaluated stakeholder participation in four project processes of identification, planning, implementation, and monitoring and evaluation. Project sustainability was evaluated using maintenance, continuity, and life span. The study sampled various stakeholders including officials from the World Bank, government of Uganda officials, local leaders and local community members.

The first objective was to assess the extent of stakeholder involvement in the process of project identification and the result of such participation on the sustainability of the project. The study found that to a great extent the water projects were developed based on the needs and expectations of the community and there was a high degree of participation by the local community in determining the location and scope of water projects. The overall influence of the participation by all the different stakeholders in the process of project identification was positive and statistically significant.

The second area investigated by the researcher was the level of participation by the stakeholders in planning for the project and the impact on sustainability. The study established that there is great consultation on the objectives of the projects to be carried out; the objectives of the project were to a great extent in line with those of the local community, and; the project deliverables were shared with stakeholders to a great extent. The results of the linear regression analysis showed that stakeholder participation in project planning has a positive and statistically significant effect on the lifespan and sustainability of the project.

The third research question of the study was on the effect of stakeholder participation in project implementation on project sustainability. The researcher found that stakeholders that to a great extent the project plans are implemented according to the one agreed upon by stakeholders, the implementation process is controlled by stakeholders and the stakeholders participate in quality management. It was determined that to a great extent the stakeholders participate in project implementation to ensure that there is adherence to project plans. The regression analysis showed that stakeholder participation in project implementation had a positive and statistically significant effect on project sustainability.

The fourth objective was to determine the extent of stakeholder involvement in the process of monitoring and evaluation of the project and the impact of their participation on project sustainability. It was found that the stakeholders participate in the preparation of work plans and project developers prepare reports for stakeholders. It was established that there are site visits by stakeholders and stakeholder forums. The regression analysis showed that effect of stakeholder participation in monitoring and evaluation on project sustainability was positive and statistically significant.

5.2. Conclusions

The study established that the stakeholders of the WB funded water projects in Karamoja region of Uganda participated in the determination of the locations of the water projects; the viability and feasibility of the water projects was established during the identification stage and the water projects were in line with government policy. The regression analysis showed that stakeholder participation in project identification had a positive and significant effect on sustainability. The study concludes that stakeholder participation in location identification, the establishment of the viability and feasibility of projects during the identification stage, and; the construction of projects in line with stakeholder policy are important to sustainability.

The study found that in WB funded water projects in the Uganda region of Karamoja there was significant participation by the stakeholders in setting the objectives of the projects, the time-lines for the project were agreed by the stakeholders, and the project deliverables were shared by the stakeholders. The regression estimation showed that stakeholder participation in project identification had a positive and statistically significant effect on project sustainability. The study thus concludes that the participation of stakeholder in project identification was important to sustainability.

The study established that stakeholder participation in project implementation had a positive and statistically significant effect on project sustainability. The findings imply that when the stakeholders participate in the step-by-step development of the project, the project objectives are met. Thus, the study concludes that stakeholder participation in project implementation affects sustainability.

The fourth objective of the study was to establish the effect of monitoring and evaluation by stakeholders and its effect on project sustainability. The study established that monitoring and evaluation had a positive and statistically significant effect on project sustainability. The study concludes that stakeholder participation in monitoring and evaluation is important for project sustainability.

5.3. Recommendations

The study recommends that all projects undertaken by the government of Kenya should be developed based on the needs or expectations of the community; increased grassroots participation in determining location of water projects; the scope of the projects should also be determined by the local community; conflicts between different stakeholders should be identified or resolved before the project begins; and the project developers should provide clarification on project viability and feasibility to all stakeholders.

The study recommends that the government of Uganda and the World Bank continue to consult on the scope of the project, choice of project managers/developers, cost and cost management measures, timelines of the projects, and sharing of project deliverables. The study further recommends that there should be continued participation by the local communities in the process of project planning.

The study recommends that the level of participation by stakeholders in areas of project implementation such as determination of the project plan, the setting of timelines for project task executions, control of project plan implementation, ensuring adherence to the project time lines, keeping track of project progress and taking corrective actions, and quality management should continue to include all stakeholders.

The study recommends that for all development projects in Uganda, there should be stakeholder participation in preparation of work plans; the project developers furnish all stakeholders with periodic progress reports; the process of funds release by the donor should be clear and open; there should be more site visits and stakeholder forums.

5.4. Recommendations for Future Studies

Further research needs to be conducted in other areas of Uganda to determine the extent and impact of stakeholder participation in other WB funded projects such as roads, schools, electricity, and hospitals. This will provide a comprehensive picture of levels of participation and the impacts on project outcomes. Additionally, comparative studies should be done in other East African countries so that there can be an understanding on the effectiveness of stakeholder participation on project outcomes.

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