

**EFFECT OF PROJECT LIFE CYCLE MANAGEMENT ON PERFORMANCE
OF OUTPUT-BASED AID PROJECTS IN KENYA: A CASE OF SABASABA
WATER PROJECT**

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**A Research Project Submitted to the Institute of Postgraduate Studies of Kabarak
University in Partial Fulfillment of the Requirements for the Award of the Master
of Science Project Management**

KABARAK UNIVERSITY

NOVEMBER, 2023

DECLARATION

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The research project entitled: **“Effect of Project Management Lifecycle on Performance of Output-Based Aid Projects in Kenya: A Case of Sabasaba Water Project,”**written by **Titus Towett** is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research project and recommend it be accepted in partial fulfillment of the requirement for the award of the degree of Master of Science in Project Management.

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DEDICATION

This research project is dedicated to my family and friends for their love and encouragement.

ACKNOWLEDGEMENTS

I would like to acknowledge the almighty God for granting me the opportunity, energy and good health in pursuit of my education. In addition, special thanks to supervisors Prof. Geoffrey Gitau Kamau and Dr. Richard Bitange Nyaoga for their invaluable contributions during the entire period of this study. As well, great appreciation goes to Kabarak University for the timely support and guidance not forgetting the invaluable input from classmates during coursework journey.

ABSTRACT

Sabasaba urban water supply project was undertaken in order to increase the number of people in low-income areas within Murang'a County with access to clean water at their door-step. In carrying out the project, World Bank employed Output-Based Aid scheme to make sure the project achieves its goals. Output-Based Aid funds predetermined project outputs unlike the conventional way of funding inputs. It serves to ensure prudent utilization of funds by shifting performance risk to the organization mandated to deliver services; it also does so by linking outputs to the ultimate payments; hence transparency during project implementation. The study sought to examine the effect of project initiation, planning, implementation and project monitoring on the project performance of Output-Based Aid funded Sabasaba urban water supply project. The study adopted value chain theory and utilized predictive correlation design. The target population was 56 employees drawn from Murang'a South Water and Sewerage Company which is the implementing agency for Sabasaba urban water supply project. Structured questionnaire was used to collect data from the respondents. Pilot study was undertaken using 10% of the respondents within the Output Based Projects at Nakuru Rural Water and Sanitation Company Limited which have similar funding mechanisms. The study results were analysed using correlation and regression analysis undertaken through SPSS software. The study results found that project initiation, project planning, project implementation, and project monitoring had a statistically significant positive correlation with the project performance ($F=9.127$, $p=0.000$, $p<0.05$). Further, the study found that project initiation and project monitoring had regression coefficients of 0.404 and 0.363 respectively. This indicated that a unit change of project initiation led to 0.404 changes in project performance and in the same way a unit change of project monitoring led to 0.363 changes in project performance with the other independent variables held constant. The study as well found that the project initiation and project monitoring had statistically significant influence on the project performance with both p values being less than 5% significance level. On the other hand, the project planning and project implementation were found not to have a statistically significant influence on the project performance. Conclusion was made that funding agencies should adequately enhance their focus on project initiation and project monitoring that were found to have influence on the project performance of Output-Based Aid funded Sabasaba urban water supply project.

Keywords: *Output Based Aid, Project Implementation, Project Initiation, Project Monitoring, Project Performance, Project Planning*

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ABBREVIATIONS AND ACRONYMS

MUSWASCO	Murang'a South Water and Sanitation Company
NACOSTI	National Commission of Science, Technology and Innovation
NGOS	Non-Governmental Organizations
OBA	Output Based Aid
PBMC	Performance-Based Maintenance Contract
PDO	Project Development Objective
SPSS	Statistical Package for Social Sciences
UNDP	United Nations Development Programme
WASH	Water, Sanitation and Hygiene

CONCEPTUAL AND OPERATIONAL DEFINITION OF TERMS

Output-Based Aid: Disbursement of the project funds are undertaken on the attainment of specific project results (Siddique, 2017). For this study, the output-based aid referred to the disbursement of funds to the utility project after the achievement of specific predetermined project results.

Project Implementation: Implementation of a project refers to the undertaking of various processes that cumulatively enable the project objectives to be actualized (Obuba & Kimutai, 2017). Herein, project implementation means the actualization of the output-based project. This was examined using adequacy of availed resources, resources mobilization, and scheduling of project activities.

Project Initiation This is the mobilization of the stakeholders, determination of project feasibility, and identification of various components related to the project (Maina & Kimutai, 2018). Herein, project initiation meant the mobilization of OBA funded project stakeholders to determine the expectations and needs of the project. The project initiation would be examined using project identification, needs assessment, and project feasibility studies.

Project Lifecycle Management Management of various components applied in carrying out a project; it includes project initiation, implementation, planning and project monitoring aspects (Said, 2018). Herein, project lifecycle management applies to the project initiation, planning, implementation and monitoring and control of the OBA funded project.

Project Monitoring: Collection of information with a view of improving the project performance aspects through informing of the action plans to be undertaken (Kihuga, 2018). Applied on this research, the project monitoring refers to the collection of information to improve on the OBA funded project. The project monitoring activities were measured by utilizing the cost control activities, project monitoring feedback, and frequency of monitoring activities

Project Performance: This is the level or rate at which project objectives are attained (Obuba & Kimutai, 2017).The project performance in this context referred to the attainments of the OBA funded project objectives. The performance of the OBA project was rated by using project scope, project quality and project timeliness.

Project Performance: This is the level or rate at which project objectives are attained (Obuba & Kimutai, 2017).The project performance in this context referred to the attainments of the OBA funded project objectives. The performance of the OBA project was rated by using project scope, project quality and project timeliness.

Project Planning: The scheduling of the sequence of events and activities that will be undertaken in a project (Siddique, 2017). In this research, project planning referred to set of activities planned sequentially to achieve about the OBA funded project. The project planning was examined using formulation of project action plans, project risk management framework, and resources allocation plan.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, water supply projects play an essential role in affording communities with clean water. According to UNICEF (2020), over 663 million people across the world lack access to safe drinking and clean water making them susceptible to diseases associated with use of dirty water. Both UNICEF (2020) and UNDP (2020), note that access to water has a ripple positive impact to human development aspects. In this context, UNDP (2020), indicates that access to clean and safe water is among the most critical element of the Sustainable Development Goals; that entails the elimination of clean water scarcity issue and by so doing, boost access to clean, safe and sustainable water supply. With a view of increasing access to clean water and sustainable water supply, Atwa and Mudi (2019), indicate that the water supply projects are increasingly paramount in achieving the vision of accessibility and connectivity to both households and institutions.

This therefore makes excellence in achieving performance in water projects essential in enabling communities access to sustainable supply of safe and clean water for domestic and commercial use (Bor, 2015; Mburung'a, Ndiritu, & Njeri, 2017). Water supply being a critical utility for human survival and development means there is a huge involvement in government and donor community in its provision and supply. The donor community is particularly active in the Water, Sanitation and Hygiene (WASH) projects. In this context, there exist a huge donor involvement in water projects (Tato, 2017; Ngugi & Wanyonyi, 2018; Wesonga, 2015; Mayeka, 2018; Odenyo & James, 2018). Amongst the major donors in the water projects include World Bank, World Vision and a variety of

national and international based Non-Governmental Organizations, (Apeli, 2015; Muniu, 2017; Ngugi & Wanyonyi, 2018).

Amongst the most prevalent challenges in the donor funded projects are the financial related challenges that include financial mismanagement, lack of value for money, project costs overruns and project funds theft (Keura & Moronge, 2016; Ochieng & Gichuhi, 2017). One of the mechanisms deployed to address project performance within the donor projects include Output Based Aid (OBA) funding model.

In other jurisdictions, OBA is termed as Performance-Based Maintenance Contract (PBMC), Result Based Financing and Result Based Aid (Lee & Medina, 2019; Siddique, 2017). According to Tremolet and Evans (2010), the OBA funding mechanisms implies that the disbursement of projects funds are undertaken upon achievement of specific project results. This view of OBA is further collaborated on by Kumar, Nguyen, and Ljung (2014) who affirmed that OBA involves availing of projects funds based on the predefined project outputs. This view by Kumar *et al.*, (2014) is in tandem with Melinda (2015). The Output Based Aid funding mechanism is gaining traction amongst the donor community due to several advantages associated with the mechanism.

These advantages include greater accountability in financial expenditure, efficiency in financial resources usage, mitigation against possibility of project costs overruns, faster project implementation aspects and more responsive to the user needs (Klingebiel, 2012; Kumar *et al.*, 2014). Despite the accountability mechanisms put in place by the OBA model of funding, the projects funded in this manner still experience project performance challenges. In addition, other project performance challenges include failure to achieve project milestones in a cost effective and timely manner (Obuba & Kimutai, 2017); Stakeholder management, third-party sourcing and prefunding the project. These

challenges are embedded in the whole process of project lifecycle management. Project lifecycle management affects either negatively or positively the performance of a project; it determines all the variables and deliverables a project needs; inherently it houses all the processes that are needed to successfully execute a project. According to Junde et al. (2020) the project lifecycle refers to the series of activities undertaken all the way from project initiation up until the completion of a project. Consequently, Chakuvunga (2019) records the project lifecycle is a whole value chain that is conglomerate of diverse project processes that go through various phases to accomplish project objectives; it points to the relationship inherent to those project processes that influence and direct how project execution goes. The project lifecycle management refers to the management of the various stages in a project; making sure thorough work is done.

The project lifecycle components entail the sequence of phases namely project initiation, planning, implementation and project monitoring; once a project initiation phase has been accomplished it is followed by planning stage which when done well ushers the implementation stage; implementation stage practically delivers the project; it is the phase that puts plans and activities into achieving project deliverables; along with project implementation phase there will be monitoring and controlling phase running concurrently; the monitoring phase ensures that all the deliverables are achieved without any deviation.

In China, hen noted the essential role project initiation component plays within project lifecycle management in relation to the project performance. The project initiation was found critical in enabling project sustainability, project viability, and setting stage for the project planning dynamics. In India, Kumar Ghosh and Kumar Sar (2020) noted that project initiation was paramount in achieving project goals. Kumar Ghosh and Kumar

Sar (2020) found out that involving stakeholders during project initiation process and incorporating their feedback and views in the entire project lifecycle did affected positively on project performance including the projects' sustainability. This, according to Kumar Ghosh and Kumar Sar (2020) was as a result of the incorporation of the diverse project management stakeholders to the project imitation process and hence project planning aspects.

Project planning phase component of project lifecycle has been noted across the globe. In Nepal, Haapala and Keskinen (2018) noted the essential nature of project planning stage on how to attain greater performance during undertaking of water projects; the study records the creations of awareness among the project stakeholders during planning stage to have been a very critical component in achieving greater performance and high level of project execution; also, enhancing the presence of diverse stakeholders in the project planning activities is another element the study noted to be paramount. In this context, Junde et al. (2020) noted that project planning elements were critical in attaining performance of water projects through enabling adequate risk management processes.

In Canada, Nixdorff et al., (2021) noted that project implementation elements has an impact on the project performance. The resources utilization, activities scheduling, resources availability and resources deployment aspects of project implementation were found to be paramount on the water projects performance. In Philippines, Royandoyan (2019) asserted that the decision making aspect during the project implementation phase was a key component of project implementation. The operational performance of day-to-day activities involved in the project implementation phase thus is an essential element of project performance regarding water projects.

Regionally in Rwanda, various components of the project lifecycle management have been noted to influence project performance of water projects. Mutanguha and Kamuhanda (2021) discussing the water aid projects in Rwanda, noted several ways to which project initiation influenced the performance of a project. In this context, the importance of the community participation at project initiation level was noted to improve and accelerate the achievement of project objectives. The project initiation phase thus affects in a greater way the lifecycle of a project and consequently therefore influence positively or negatively the project performance.

The importance of project planning on efficient achievement of project objectives has been noted by Ojile (2020) in respect to the water projects in Nigeria. Ojile (2020) emphasized the need for stakeholder management during project planning phase and more critically the aspect of involving the concern community in order to enhance sustainability. In Tanzania, Muganyizi (2019) noted the role of planning in attaining substantial project performance of water projects; the scholarly article noted the various project dynamics that impacted on the project planning including adequacy of project planning, planning of the cost implication in project, and planning for the schedule of activities in during implementation. In Tanzania, Chakuvunga (2019) noted the indubitable importance of the project implementation and project monitoring on the performance amongst water projects. The decision-making element during implementation of a project is very critical to the project performance. Decision making includes but not limited to aspects such as budgetary allocation, project goal definition, gathering information and project scheduling activities.

1.1.1 Output-Based Aid Funded Projects in Kenya

The output-based aid funding model has been used in Kenya as a means of achieving project success and high project performance. Both Nduku (2020) and Ogutu (2019) noted the inclusion of OBA in funding sanitation based projects in Kenya. Murang'a South Water and Sanitation Company (MUSWASCO), which is a water utility in Murang'a County, was the first water utility in Kenya to benefit from the Output-Based Aid (OBA) mechanism facility; the mechanism was facilitated by the Water Sector Trust Fund (WSTF) in Kenya (EMC Consultants, 2018). The OBA funding model has also used to fund projects undertaken by Nairobi City Water Company in quest to expand the sanitation facilities within the low-cost settlements in the Nairobi county (Nduku, 2020). Ogutu (2019) noted that among the projects undertaken by Nairobi City Water and Sewerage Company, two projects were under the OBA project model which was abbreviated as WaSSIP- P09637 and the KISIP – P113542. These projects were intentioned towards improving the sanitation within the slum areas in Nairobi County. OBA model of funding was also utilized fund Sabasaba urban water supply so as to enhance its project performance.

1.2 Statement of the Problem

Conventionally, funding projects has always been input based; that is availing resources from the onset. This infers that inputs to a project are always given out from initiation stage; that traditionally the model which has been in use fund inputs; be it materials, equipment, labor and other resources needed to implement the project,(Sila & Gakobo, 2021). With conventional way of funding projects, project performances challenges have been encountered which chronically make these projects stall in many cases due issues of theft; resources being stolen since they are initially availed. Other prevalent challenges

include financial mismanagement, lack of value for money, project costs overruns and project funds misplacement(Ochieng & Gichuhi, 2017).Among the solutions advanced to cure these project performance challenges include the utilization of Output Based Aid (OBA) funding mechanism. The OBA funding model is a financing design that was born to cure funding performance problems; the trick being, OBA model funds outputs compared to the conventional model which funds inputs; which means OBA resources do not get availed from the onset; that funding is done after pre-agreed project objectives have been attained.

This implies that project managers need to present pre-agreed project outputs as a basis of their continued funding; hence allowing transparency and accountability during project implementation. OBA in this manner was intentioned to dynamically be a magic model that would heal performance issues resulted from conventional mechanism. But, despite accountability mechanisms put in place by the OBA model of funding, World Bank (2020) recorded that the Sabasaba urban water project still faced various performance challenges and rated it moderately satisfactory in respect to the attainment project objective. Considering Sabasaba Urban water supply project in Murang'a County was undertaken through OBA model of funding, performance challenges such as cost escalation and late project delivery ought to have been eradicated.

It is therefore paramount to understand the inherent reason therein OBA failure to attain the desired intention. This study is meant to address this gap by examining the influence project lifecycle management has on the performance of output-based aid water projects in Kenya by focusing on Sabasaba urban water supply project. Sila and Gakobo(2021) acknowledge that project lifecycle management processes are intended to make sure that a project is delivered within time, budget and agreed quality; this study details the effect

of the project lifecycle processes namely; project initiation, planning, implementation and project monitoring on the performance of a project. Therefore, this study examines the effect of project lifecycle management processes used on project performance of Sabasaba urban water supply project given the OBA funding model that should have cured performance problems which were inherent to conventional model (input based) of funding.

1.3 Objectives of the Study

1.3.1 General Objective

To establish the effect of project life cycle management on performance of output-based aid funded water projects in Kenya; a case of Sabasaba urban water supply project.

1.3.2 Specific Objectives

- i. To establish the effect of project initiation on performance of output-based funded Sabasaba urban water supply project
- ii. To examine the influence of project planning on project performance of output-based funded Sabasaba urban water supply project
- iii. To analyze the effect of project implementation on project performance of output-based funded Sabasaba urban water supply project
- iv. To find out the influence of project monitoring on project performance of output-based funded Sabasaba urban water supply project

1.4 Research Hypotheses

H₀1: There is no statistically significant influence of project initiation on performance of output-based funded Sabasaba urban water supply project

H₀2: There is no statistically significant influence of project planning on performance of output-based funded Sabasaba urban water supply project

H₀₃: There is no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project

H₀₄: There is no statistically significant influence of project monitoring on performance of output-based funded Sabasaba urban water supply project

1.5 Significance of the Study

The study is important and impactful in various ways and to various stakeholders. Amongst the stakeholders that will find the study useful to them include project managers, Output Based Aid funding agencies and project management scholars. The project managers and other project practitioners will benefit through gaining insights in respect to how project phases influenced project performance within the context of output-based Aid funded projects. These project management specialists will gain insights on how these project management components influence the project performance aspects and in what ways they do so. This is critical for them to implement some of the best practices of the project management particularly on Output Based Aid funded projects. This is critical in influencing their policy aspects in respect to the execution of the projects that follow the output-based aid financing scheme. Also, project management scholars will benefit from the study through gaining insights in the ways project lifecycle management on OBA influences project performance.

1.6 Scope of the Study

The geographical scope of the study was Sabasaba area of Murang'a County. The focus being Sabasaba urban water supply project which was the first water project benefiting from OBA mechanism in Kenya. The study was undertaken from January, 2022 to August, 2022 being the time availed by the university for undertaking the project. The target population was 56 employees drawn from Murang'a South Water and Sewerage

Company which is the implementing agency for Sabasaba urban water supply project who were all included during data collection. The project lifecycle management was discussed through project initiation, planning, implementation and project monitoring.

1.7 Limitations of the Study

This study was hindered by the funds and time availability which did not allow a more diversified target population to be included during the carrying out of this research. At the time of undertaking this research project, there was a limited literature sources available discussing the output-based project funding mechanisms and their influence on the project performance. The researcher however used the available literature that examined the project lifecycle management within different context and related the materials to the project performance.

1.8 Assumptions of the Study

The study assumed that respondents would be willing to respond to the provided questionnaires in a truthful and objective manner. It was also assumed that all the relevant permits would be sourced successfully.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section examines the theoretical literature, conceptual framework, empirical literature, critique of the reviewed literature, and the research gaps.

2.2 Theoretical Literature

The theoretical review was undertaken through the use of value chain theory.

2.2.1 Value Chain Theory

The value chain theory was developed in 1985 by Michael Porter which was extensively explained in his book entitled "*Competitive Advantage*" which dwelt on how to sustain and create an environment of attaining superior results in every endeavor (Naeem *et al.*, 2018). The value chain theory examines the execution of a task as a system and sub systems that is composed of a set of activities to support execution of a given task (Matu *et al.*, 2020). The values of a given set of activities build into another of activities that cumulatively lead to desired outputs. This creates a value system leading to the attainment of the desired output (Lurimuah *et al.*, 2018).

In this research, value chain theory was utilized to relate the independent variables (project implementation, initiation, planning and monitoring) to the dependent variable (project performance). The project initiation, planning, implementation and project monitoring are a set of activities in project lifecycle management value system which brings about the desired performance of output-based funded project (Utomo & Anisah, 2021). The project initiation phase represents the initial decisions undertaken to ensure project aims or goals are achieved in a very significant way; that execution of those activities brings about a greater performance rate on how the project attains its

objectives. Therefore the value achieved at project initiation stage, leads to the subsequent prudent execution of the project planning activities. The project planning activities creates value by enabling the decision making in respect to project resources allocation, stakeholder management, and project tasks scheduling. The value created by the project planning activities leads to undertaking of the project implementation aspects in a successful manner(Chen & Hu, 2021). The project implementation aspects include the undertaking of project activities, project stakeholder management, and project team management as well other diverse activities that enable adequate execution of the project. The value attained from carrying out successfully the implementation phase of a project means that the project will meet the triple constraints of time, quality and budget(Sila & Gakobo, 2021). Finally, a rigorous project monitoring process will ensure that the project follows the initial plan without any deviation; by so doing, the project becomes seamless in attaining greater performance; it enables the project to maintain its course in realizing the overall project objective.

2.3 Empirical Review

The empirical literature looks into numerous studies that have been carried out in order to address or link the specific independent variables and the dependent variable.

2.3.1 Project Initiation and Project Performance

Project initiation phase or stage is usually the first set of activity that sets off any project; it sets up the initial direction and course of a project. Focusing on the urban road transport projects, Matu et al., (2020) examined how the stakeholder management process influence the initiation process of a project on attaining its goals. The study noted project initiation as being the starting process of the project execution process. The study unraveled that among the activities that conglomerate the stakeholder management

processes are identification of stakeholders, accurately identifying project goals, needs assessment aspects, and the undertaking of the feasibility activities. These elements were linked how the project attained project performance within the cost and timelines aspects. In a study undertaken on building projects in Roysambu constituency, Kihuga(2018), sought amongst other aspects to link building project success to project initiation activities. The study viewed project initiation as the starting phase of a project under which several activities are carried out; amongst these activities, include project identification, development of budgets and schedules, and identification of the project teams amongst others. The study examined the performance of the project in respect to the project initiation stage which is strongly related to processes formulation, project strategy, and project histories aspects. These results were attributed to the projects ideas identification, project feasibility studies, project assessment and evaluation, and project classification.

Focusing on the reproductive projects, Lurimuah *et al.*, (2018) undertook a study that sought to link participatory project initiation process to the reproductive project success. Lurimuah *et al.*, (2018) identified project need identification process, project feasibility studies process, and stakeholder identification process being project planning components. There this study linked project initiation and project performance under OBA projects.

2.3.2 Project Planning and Project Performance

There exists a wide range of empirical literature examining project planning across the globe. In a study based in Nairobi county, Mohamed and Moronge(2019)carried out a study that targeted to link project planning with the sustainability of the private public projects. In view of achieving the study's objectives, Mohamed and Moronge(2019)

adopted descriptive research model when carrying out the data collection process; he also capitalized on structured type of questionnaires when recording respondents views. The project planning helps in stakeholder management and also scheduling of time, cost and project scope dynamics. The study recommended the need for project managers in their project planning dynamics to have a functional strategic plan for the project execution, clarity of project scope, and clarity in definition of project activities. The findings by Mohamed and Moronge (2019) on the project planning being critical in the project lifecycle management through stakeholder management components is in tandem with other empirical results in the thematic area.

Using quantitative research methodology approach, Naeem *et al.* (2018) conceptualized use of project planning on the project success factors. The research study was based in Pakistan and data was collected utilizing convenience sampling technique. In their study, Naeem *et al.*, (2018) conceptualized the project planning as the decision making phase in order to strategies activities and their timing on rolling out a project. Project planning is critical in project lifecycle management as it enables risk mitigation and control; it enables significant contingencies to be incorporated to the project. Other scholars linking project planning to project risk management in tandem with Naeem *et al.*, (2018) results include Urbański, Haque, and Oino (2019) and Gitau (2015) amongst others. The project risk management aspects that are critical in project lifecycle management include risk prevention, transfer, control or acceptance practices (Aduma & Kimutai, 2018; Maru, 2015).

In a study based on metadata analysis, Igwe *et al.* (2018) noted effect of planning stage has on a project in enhance project performance aspects. The study viewed project planning as the taking of a predefined course of action in undertaking the project

management processes. Igwe *et al.* (2018) study indicated that the project planning measures are important in the project lifecycle management through being flexible, and systematic in nature in view to accommodate emergent challenges in the project management. In Uganda, Ahimbisibwe, Tusiime, and Tumuhairwe (2015) examined the impact of project planning and project success levels. The study adopted survey design as its technique in carrying out the research; the study further utilized responses from 984 respondents through use of structured questionnaire. The study realized Planning stage in a project plays a very essential role in guiding how the project will be done; it lays down the ground work and sequencing the desired activities; project planning therefore is an important element in the whole process of project cycle. Ahimbisibwe *et al.*, (2015) indicated that project planning is associated with efficiencies in budget and time expenditures and risk management components.

2.3.3 Project Implementation and Project Performance

Implementation phase in a project plays a critical role in putting the planned activities into practical and material usage; it brings about the reality of planned activities; this therefore makes this phase very vital component in the project lifecycle management. In Machakos county, Nduthu *et al.* (2018) examined the influence implementation phase of a project had to the performance or goal achievement of indigenous chicken farming projects. The research was based on performance and implementation theories. In the context of methodological choices, Nduthu *et al.*, (2018) utilized a mixed methodology research approach and multi stage sampling methodology in sampling process. The study conceptualized project implementation process in reference to the resource mobilization and activities implementation aspects. The study realized that project implementation process involves the process of how resources are availed and also it dwelt on the ways on which the same resources are utilized.

In Rwanda, Karangwa *et al.*, (2017) examined the effect implementation phase of school project had on the attainment of the projects' objectives. Amongst implementation components that were examined included project scheduling, resources mobilization, and financial management. The study used the descriptive research method and used sampled 90 respondents which were from a stratified purposive sampling process. Karangwa *et al.*, (2017) results noted that importance of the project implementation process in project lifecycle management due to adequate scheduling of project activities, project supervision and financial resources mobilization.

The connection between project implementation and project performance has been successfully explored by Owuor and Kimutai(2018);exploring on none-profit making organizations located in Nairobi their study linked implementation processes of a project to project performance by dwelling on the manner in which financing and knowledge management affect how goals of projects are efficiently achieved. The study utilized a structured questionnaire for the purpose of collecting data which comprised 48 respondents. Owuor and Kimutai (2018) found that project-financing component of project implementation involves aspects such as cost control, resource planning, cost estimating and cost budgeting.

Capitalizing on the agency, resource based, and the contracts theories, Ngage and Muturi (2017)undertook a study that targeted to find out the relationship therein project implementation and project performance. The study administered structured questionnaires to 78 respondents. The study examined the project implementation in relations to procurement, cost, time, and quality management. In a study focused on the Jua kali empowerment projects, Njue, Mulwa, and Kyalo (2019)recorded the impact project implementation had on the attainment of project goals and objectives. The study

applied a mixed methodology approach to the research approach dynamics. Using regression analysis, Njue *et al.*,(2019) found that project implementation process had a great impact on the performance of the Jua kali empowerment project.

2.3.4 Project Monitoring and Performance

Project monitoring ensures that a project follows the already laid down plan; it ensure that the project maintains scope; it protects the project against deviations; project monitoring is a controlling aspect where the project is guarded against kitchen sink syndrome. Murei *et al.*, (2017) examined the link between project monitoring and project performance dwelling on horticultural projects located in Nakuru County. The study sought to achieve its objectives through use of mixed research approach and administered structured questionnaires to the top management of horticultural firms. Murei *et al.*, (2017)found that project monitoring helped in resource management, poor planning of activity execution and management control.

The link of project monitoring on project performance was explored in a study undertaken by Hubert and Mulyungi (2018) in a study done on the none profit making organization in Rwanda. The research used the descriptive survey method for purposes of collecting data; data was sourced from project managers in the Non-Governmental Organizations (NGOs). Hubert & Mulyungi (2018) study unraveled that project monitoring aspects that are critical in project lifecycle management included finances allocation for the project monitoring exercises, project managers' capacity to carry out project monitoring aspects, and use of project monitoring results into improvement of project implementation.

Focusing on the road building projects, Maendo *et al.* (2018) undertook an examination seeking to link project monitoring to the project performance. Maendo *et al.*,

(2018)found that the critical project monitoring components were frequency of conducting project monitoring activities, allocation of financial resources for project monitoring activities and employment of critical staff in the project monitoring team. Importance of monitoring techniques on project goal achievement were examined in a study by (Wanjala et al., 2017). The research study was quantitative in nature and structured type of questionnaires were used to source for data. The study unraveled that diverse aspects of project monitoring influencing project performance included; diversity of project monitoring tools that were used, employees training levels of project monitoring tools, and standardization of the project monitoring tools. Based on the non-governmental projects in Rwanda, Ginyera *et al.*, (2016) examined the importance project monitoring has on the project performance of those projects; the study utilized structured questionnaires to gather data on NGOs' project managers who were involved in implementing the projects. Ginyera *et al.*, (2016) found that project monitoring did affected project performance of the non-governmental projects in Rwanda. The reasons advanced for these observations included the frequency of the site meetings, and examination of the financial statements leading the performance of those projects.

2.3.5 Project Performance

Project performance in a project speaks to how objectives have been attained; the manner in which a project realized its desired goal. Ndungu and Karugu (2019) asserted that the performance of a project can be determined by how it meets the project timeline, budget and quality. Omeno and Sang (2018)noted that project performance can be determined in terms of delivering a project within the desired intent and purposes of the stakeholders. Maina and Kimutai (2018)also viewed project performance in terms of cost, time, scope and quality aspects. In addition, the viewpoints of Maina and Kimutai (2018)who further

mentioned that the project performance can be established using the stakeholder satisfaction levels; this as well is in tandem to Mburia and Bett (2020) who hold the same standpoint.

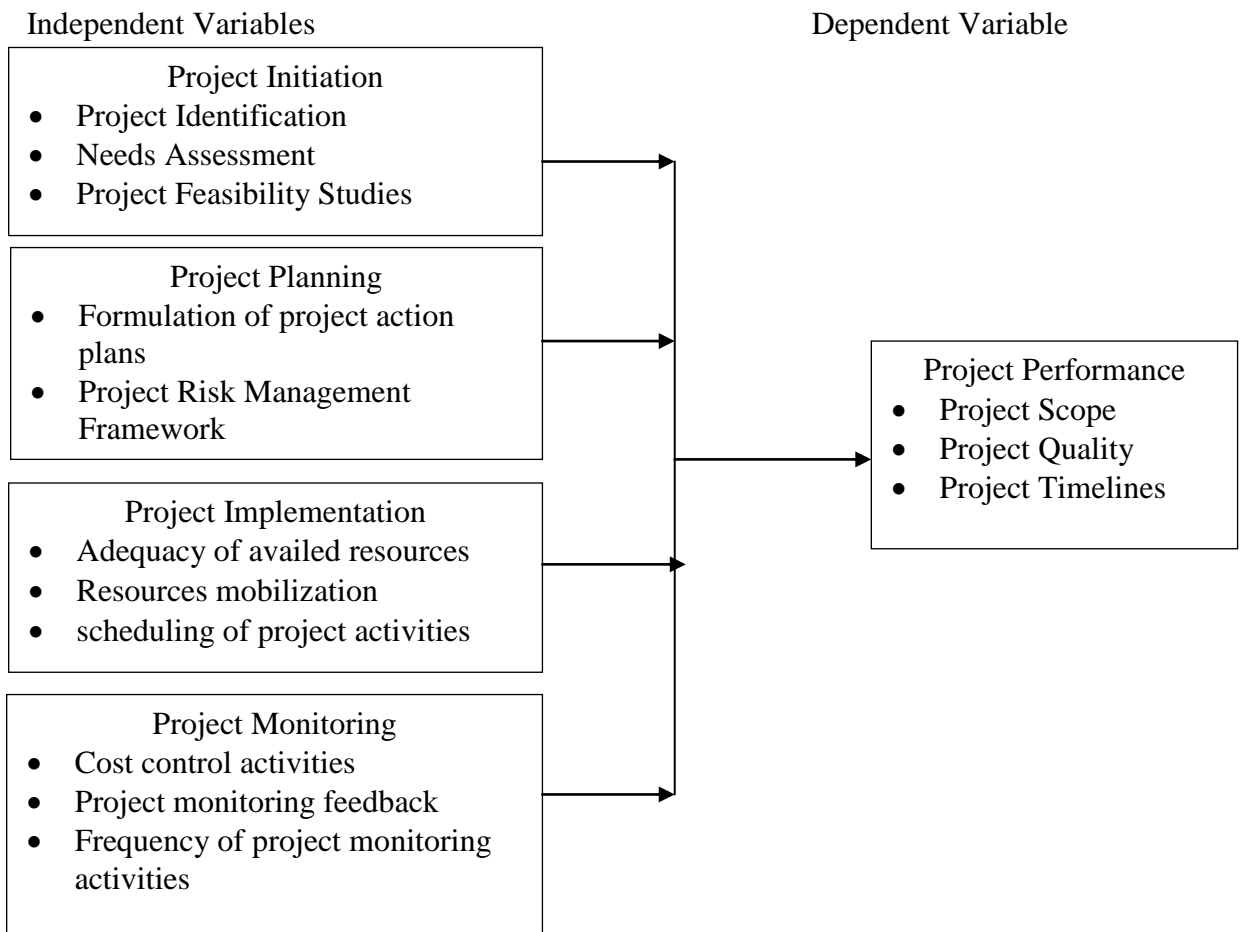
Muyanga(2016) also noted that the project performance aspects can be determined using diverse metrics. These aspects include the project triple constraints of time, cost, and quality aspects. The quality aspects can be established in terms of the capacity of the project to meet its objectives and to be fit for purpose. The project quality is also associated with the project performance safety standards. The cost aspect of project performance infers to the existence of value for money in the project activities and points into reduced or within cost management against cost escalation from the budgeted amounts.

2.4 Conceptual Framework

Conceptual framework uses diagrammatic representation to provide relationship that exists between both the independent and the dependent variables. As shown in Figure 1, the independent variables include project initiation, planning, implementation and project monitoring. The project initiation was based on project identification, needs assessment, and project feasibility studies. The project planning was based on the formulation of project action plans, project risk management framework and resources allocation plan. The project implementation was based on adequacy of available resources, resources mobilization and scheduling of project activities. Project initiation, planning, implementation and eventually monitoring are the phases within project lifecycle that are executed sequentially to bring about the performance of a project; therefore, indicating the relationships therein between independent and dependent variables. The project performance was determined using project scope, quality and timelines.

Figure 1

Conceptual Framework



Source: Author (2023)

2.5 Critique of the Existing Literature Review Relevant to the Study

Kihuga (2018) attributed the influence initiation phase has to the performance aspects of a project; Kihuga (2018) noted that among the elements of project performance related to initiation of a project include projects identification, project feasibility studies, project assessment and evaluation and project classification. However, the study doesn't explicitly indicate the manner in which the identified indicators actually influence the project performance aspects. Similarly, Lurimuah *et al.*, (2018) links without any explanation the effect initiation phase has on the project purposes, goals and objectives, and project charter development. The study ought to have undertaken a discussion on the

ways in which the identified indicators impacted on the success of the project. The study by Mohamed and Moronge (2019) that determined to link project planning and the project sustainability of the private public projects utilized the descriptive research method; being predictive in nature the study ought to have utilized the predictive correlational research design. Gathii, Wamukuru, Karanja, Muriithi, and Maina (2019) recommends that studies in which the researcher seeks to predict the effect of the dependent variable on the independent variable need to utilize the predictive correlational research design. This would enable them adopt regression analysis later on in their study. The utilization of the convenience sampling procedure by Naeem *et al.*, (2018) in linking the project planning on the project performance introduced bias in the statistical results of the research. The use of the probabilistic sampling would have worked to enhance on the statistical inferences of the study.

2.6 Research Gap

Kihuga (2018) in seeking to link project initiation on the building project performance aspects did not take into account output funding model; the study generally considered project lifecycle without dwelling on the impact of the various models of financing projects. These activities included development of budgets and schedules, and identification of the project teams that were found to have impact on the project performance. These elements or activities were not examined within the context of OBA funded projects. The OBA funded projects have a constraint in the way in which budgets and schedules are developed for the purposes of project implementation. The present study thus addressed this challenge by examining the role of project initiation for the project performance of OBA funded projects. In a study done in Nairobi county, Mohamed and Moronge (2019) argued that project planning helps in stakeholder

management and also the aspect of time scheduling, cost and project scope dynamics. These aspects then further drive the project performance elements; project planning in an OBA funded project must make provisions for pre-financing the expected goals together with contextualization the need for output actualization within the project planning dynamics. The present study thus addresses this gap through examination on the manner in which project planning is undertaken within the context of OBA funded projects. The study by Hubert and Mulyungi (2018) argued that project monitoring is critical to the performance of NGO funded projects. The project monitoring aspects that were found critical to the project lifecycle management included finances allocation for the project monitoring exercises, project managers' capacity to carry out project monitoring aspects, and use of the project monitoring results into improvement of the project implementation. This study was not carried out within the context of OBA funded project which is the focus on this study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This section explains the methodology utilized in carrying out this study. It explains the research design, the study area, data collection instrument and target population. It also looks into determination of validity and finding out the reliability of the research instruments; as well it goes ahead to determine ethical issues and data analysis.

3.2 Location of the Study

This study was undertaken at Sabasaba area of Murang'a County. This is based on a case study that is focused on the Sabasaba water supply project which is domiciled in Murang'a County.

3.3 Research Design

This research deployed predictive correlational design in carrying out the study. Bager-Charleson and McBeath (2020) view correlational research as a design that aims at description of levels of association between both the independent and dependent variables. This research design was used because the study sought to examine the predictive influence of project initiation, project planning, and project implementation and project monitoring on the project performance of output-based funded projects in Kenya.

3.4 Target Population

Malhotra *et al.* (2010) records target population to mean the set of people or items that possesses credible knowledge on the research phenomenon under study. Vanderstoep and Johnson (2009) further view the population as a set of individuals with common traits that are sort after by the researcher. The target population considered in this study was

composed of the departmental heads at Murang’a Water and Sewerage Company (MUWASCO) which is the organization is the implementing agency for Sabasaba water supply project. The study also used the project management staff dealing directly with Sabasaba water supply project and the project contractors as well as the subcontractors for the project. The study thus had a total of 56 population members as shown in Table 1. The study used the census method where all the population members were included during data collection.

Table 1

Target Population

Population	Frequency	Percentage
MUWASCO Senior Management Staff (Head of departments)	11	19.6%
Project Supervisors	15	26.8%
Project Contractors	30	53.6%
Total	56	100.0%

3.5 Instrumentation

The instrumentation relates to the tools as well as the techniques used for the data collection process from the sample members. This study utilized the structured questionnaire for the purposes of collecting data and specifically Likert based questionnaire was chosen due to its inherent capability of measuring opinions and views that can’t be measure directly. The questionnaire was composed of the demographics sections and a section for each of the independent variable and a dependent variable. The variables were measured using the Liker based questions with five response options; 1.No Extent; 2. Small Extent; 3.Moderate Extent; 4.Large Extent and 5.Very Large Extent (Kabay, 2021).

3.5.1 Pilot Study

The study undertook pilot study before the final data collection process. According to Runkler (2020), pilot study refers to a mini study undertaken before the fully fledged study. Amongst the functions of pilot study include verification of research viability, testing of reliability and validity components of the research (Blessing & Chakrabarti, 2009; Pandey, 2016). According to Phillips and Kara (2021), a 10% sample size of the population is recommended for the study. Therefore the pilot study was undertaken utilizing 10% of the respondents within the Output Funded Projects at Nakuru Rural Water and Sanitation Company Limited which have similar funding mechanisms. Structured Likert based scale questionnaire was administered while carrying out the pilot study.

3.5.2 Validity of the Instruments

Cohen, Manion, and Morrison (2007) describe validity as the instruments accuracy during carrying out the research; the capability of the instrument to exactly measure that which intended to measure. According to Pandey, Sharma, and Dutta (2004) content validity refers to the fair representation in coverage of the research phenomenon under study. Tharenou, Donohue, and Cooper (2007) further perceive the content validity to determine on whether instrument items offer adequate coverage to domain of interest. The study measured the content validity capitalizing on those professionals that are experts on the subject; these included university supervisors and members of the pilot study. Content Validity Index (CVI) was used; according to Polit and Beck (2013) the CVI is based on the aggregated rating of the panel of experts in respect to the validity of the research instruments; odd number of respondents is always used, with maximum of ten and minimum of five respondents. For this study, Item Level Content Validity Index

was determined by asking two university supervisors and three members of the pilot study to rate the relevance of the questionnaire using a 4-scale measure which had been populated with; Not Relevant, Somewhat Relevant, Quite Relevant, and Very Relevant. An aggregation of the number of respondents choosing 3 and also the ones who chose 4 divided by the total number of respondents was undertaken with a score of 0.80 signifying content validity of the instrument was sufficient (Polit & Beck, 2010).

3.5.3 Reliability of the Instruments

Instrument reliability speaks to the replicability of the study results (Mugenda & Mugenda, 2019). The study utilized Cronbach alpha coefficient technique in finding out the internal consistency reliability of the research instrument. According to Bernard(2011) the Cronbach alpha coefficient is a statistical examination tool that demonstrates on how well the asked questions in a summated scale are correlated with each other. Bryman and Cramer(1999) noted that 0.7 and above scoring on Cronbach alpha coefficient is deemed sufficient for the purposes of determining the internal instrument reliability used in a study. This is the threshold that was considered and used for this study; with the study registering reliability coefficient of 0.812 deemed acceptable.

3.6 Data Collection Procedures

The process of data collection sequentially started with soliciting the field authorization letter from the institute of the postgraduate studies. The field authorization letter formally communicated the identity of the student as member of the university and the purpose of undertaking the research. The researcher further obtained the authorization from the National Commission of Science, Technology and Innovation (NACOSTI). The researcher then administered consent statement to the potential respondents informing

them the aim and intention of collecting the data and formally request for their involvement in the research study. Drop and pick up later method was utilized to have questionnaires reach the respondent and get the duly filled. This method of self-administration of the questionnaire has been identified with high response rate.

3.7 Data Analysis Procedures

The study collected the quantitative data and thus the SPSS software was utilized to analyze data. Data arrangement and cleaning was done then coded into the SPSS software. The study went ahead to determine statistical measures such as frequencies, standard deviation and mean. The study undertook a multiple linear regression analysis. Consequently, correlation coefficient was done followed by coefficient of determination. Wilson *et al.* (2012) noted that the correlation coefficient talks to the correlation that exists between the independent variables cumulatively and the dependent variable in a regression model. Subsequently, Fox(2010) indicates that the coefficient of determination is utilized for the purpose of showing the variation in the dependent variable that is attributable to the independent variables. The study also carried the F test for the purposes of determining on whether the regression model is good fit for data while the t test was utilized for the purposes of the hypothesis testing as documented in chapter one. The study utilized multiple linear regression analysis to examining the influence of the project initiation, planning, implementation and project monitoring on the project performance.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where:

Y is the Project Performance

X_1 is project initiation

X_2 is project planning

X_3 is project implementation

X_4 is project monitoring

β_0 is the regression constant

β_1 is the regression coefficient of project initiation

β_2 is the regression coefficient of project planning

β_3 is the regression coefficient of project implementation

β_4 is the regression coefficient of project monitoring

ϵ is taken to be the margin of error

3.8 Ethical Considerations

The study undertook measures to make sure that ethical considerations during carrying out of this research were adhered to. According to Saridakis and Cowling(2020), the ethical considerations refer to the values, and norms that govern the research process undertaking. This study ensured the ethical considerations were availed through consent statements which were supplied to the respondents. The respondents' rights included right to confidentiality of the provided data while anonymity implied that the data couldn't be traced to the specific respondent. The principles of confidentiality and anonymity were deployed through the consent statement.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Introduction

The section presents the response rate, reliability and validity analysis, tests of regression assumptions, correlation analysis and finally hypothesis testing. Descriptive statistics are presented using means, standard deviations and percentages. The results and findings are also discussed in this chapter.

4.2 Response Rate

The study distributed 56 questionnaires which required respondents to fill in; the results are illustrated in Table 2.

Table 2

Response Rate

Distributed Questionnaires	Returned Questionnaires	Response Rate
56	50	89.28%

The researcher distributed 56 questionnaires in which 50 questionnaires were returned; indicating a sufficient response rate of 89.3%. Gathii et al., (2019) noted that 80% response rate is considered significant and sufficient enough to carry out a research; therefore having achieved 89.3% rate of response which was beyond the threshold showed a successful data collection process. The high response rate is ideal in a research due to the reduction of non-response bias (Gathii et al., 2019). The high rate of response experienced in this study can be attributable to utilization of drop and pick up later method; this method ensured adequate time and flexibility was given to the respondents to fill up and return the questionnaires.

4.3 MUSWASCO Staff Profile

The respondents were categorized based on their designation levels and their deliverables in carrying out the OBA project; these levels were respectively presented with in the questionnaires; results were as shown in Table 3.

Table 3

MUSWACO Staff Designation

	Frequency	Percentage
MUSWASCO Senior Management Staff (Heads of departments)	8	16%
Project Supervisors	14	28%
Project Contractors	28	56%
Total	50	100%

Data showed that 16% of those participated were heads of department, 28% and 56% were project supervisors, and project contractors respectively.

4.4 Descriptive Statistics

The research study utilized likert-based questionnaires to find out the responses of the targeted respondents in respect to the independent variables and the dependent variable (Project Performance). The Likert scale used comprised of five points namely; No Extent, Small Extent, Moderate Extent, Large Extent, and Very Large Extent. According to Carifio and Perla(2007), the likert scale can be considered to be interval scale in nature which enables the undertaking of operations such as division and addition therefore allowing the calculations of central tendencies such as the means, frequencies and standard deviations. In a scale of 1-5, the means are calculated using equidistance between the points of 0.8 (Carifio & Perla, 2007).

4.4.1 Project Initiation

The project initiation variable was examined using five metrics. These metrics include the project stakeholders who were adequately consulted, project team identification was undertaken satisfactorily, the project feasibility studies were undertaken in satisfactorily manner, the needs assessment procedure was undertaken in an adequate manner, and if there was accurate development of budgets used in the project. The results obtained are shown in Table 4.

Table 4

Descriptive Statistics Project Initiation

	NE	SE	ME	LE	VLE	Total	
	Freq.	Freq.	Freq.	Freq.	Freq.	Mean	Std.
	%	%	%	%	%		Dev.
All the project stakeholders were adequately consulted	0	0	15	23	12	3.94	.740
	0.0%	0.0%	30.0%	46.0%	24.0%		
The project team identification was undertaken satisfactorily	0	1	8	29	12	4.04	.699
	0.0%	2.0%	16.0%	58.0%	24.0%		
The project feasibility studies undertaken in satisfactorily manner	0	2	17	25	6	3.70	.735
	0.0%	4.0%	34.0%	50.0%	12.0%		
The needs assessment procedure was undertaken in an adequate manner	0	2	7	29	12	4.02	.742
	0.0%	4.0%	14.0%	58.0%	24.0%		
There was accurate development of budgets used in the project	0	0	4	31	15	4.22	.582
	0.0%	0.0%	8.0%	62.0%	30.0%		

From the results, to large extent respondents pointed that the project stakeholders were adequately consulted (M=3.94, SD=.740). The consultation of the project stakeholders is critical in enhancing project performance (Gitau & Sang, 2022; Zhang et al., 2022). The stakeholder consultation ensures that key stakeholders are onboard in respect to the project implementation lifecycle enabling the generation of goodwill towards the project, availing of resources such as manpower and financial resources, and enabling adherence

with regulatory requirements for public projects. This is consistent with Aupe and Sagwa (2020) which is in tandem with Musau et al. (2018) who have noted that stakeholder consultation and involvement is associated with the high project performance. The stakeholder consultation is paramount to the output-based projects in making sure that the project deliverables are achieved within set time to unlock the funding process which is based on achievement of specific project outputs. When inquired on whether the project team identification was undertaken satisfactorily, the respondents agreed to a large extent ($M=4.04$, $SD=.699$).

The identification of the project team members is crucial to project performance through ensuring adequate stakeholder needs prioritization (Hirpa, 2022; Maina & Kimutai, 2018), stakeholder needs mapping (Khan et al., 2021), and stakeholder management (Zhang et al., 2022) which are tied to the project performance. Thus, the identification of the right project team members is a crucial element for internal and external stakeholder management. The adequate project team identification also leads to adequate capacity to undertake the output-based projects.

This is done by making sure that the requisite skills set are available during the project implementation phase and that the right experts are available for the project. Amongst the project team members expertise required for the project include procurement expertise, financial management skills (Bagheri, 2020), human resource management skills (Zureehan & Lee, 2022), and team management (Zhang et al., 2021). On whether the project feasibility was carried out in satisfactory manner, there was an agreement to a large extent ($M=3.70$, $SD=.735$). The project feasibility is critical to the project performance aspects. The satisfactory undertaking of the project feasibility ensures that only projects that meet real need on the ground and are sustainable in nature are

undertaken. Scholars such as Njeru and Kabare (2018) found out that the project feasibility were a strong predictor of the project performance. In the OBA funded projects, the project feasibility is critical to avoid the project stalling if critical project deliverables are not meant along the way and thus additional funding are not disbursed. The needs assessment procedure was undertaken in an adequate manner to a large extent ($M=4.02$, $SD=.742$). The undertaking of needs assessment for the water projects is fundamental in ensuring that the intended beneficiaries 'needs are met.

This serves to generate good will towards the project and is critical in stakeholder management aspects. Abijuru and Mulyungi(2018)as well as Ochieng and Odhiambo(2022) have linked the needs assessment to project performance in diverse projects. These studies associated the needs assessment to effective project design, and project initiation processes. The respondents were in agreement to a very large extent that accurate development of budgets was extensively used in the project ($M=4.22$, $SD=.582$). The OBA projects aims to provide the budgets subject to the achievement of pre-agreed project deliverables.

The release of sufficient budgets on the achievement of those project deliverables is critical to the achievement of project objectives. Diverse project budgets components have been mentioned to impact positively on the project performance including budget management (Nsengiyumva & Gitahi, 2021), budget monitoring and control (Liang, 2019) and budget allocation (Zhang & Guan, 2021). Conclusively to very large extend, respondents showed that project initiation had impact on the project performance.

4.4.2 Project Planning

Project planning was examined by considering five metrics. These metrics included project managers who always created a function strategic plan for project execution

aspects, project managers did ensured clarity of project scope, project managers ensured clarity of project deliverables, project managers ensured clarity of project action plans, and project managers always created a project risk management framework. Results obtained from targeted respondents on the variable were provided in Table 5.

Table 5
Descriptive Statistics on Project Planning

	NE	SE	ME	LE	VLE	Total	
	Freq.	Freq.	Freq.	Freq.	Freq.	Mean	Std.
	%	%	%	%	%		Dev.
The project managers always created a functional strategic plan for the project execution aspects	0 0.0%	8 16.0%	14 28.0%	17 34.0%	11 22.0%	3.62	1.008
The project managers always ensured clarity of project scope	1 2.0%	10 20.0%	15 30.0%	16 32.0%	8 16.0%	3.40	1.050
The project managers always ensured clarity of project deliverables	2 4.0%	3 6.0%	22 44.0%	16 32.0%	7 14.0%	3.46	.952
The project managers always ensured clarity of project action plans	2 4.0%	8 16.0%	20 40.0%	11 22.0%	9 18.0%	3.34	1.081
The project managers always create a project risk management framework	1 2.0%	12 24.0%	15 30.0%	12 24.0%	10 20.0%	3.36	1.120

The project managers always created a functional strategic plan for the project execution to a large extent (M=3.62, SD=1.008). The presence of various strategies in the project implementation is important in making sure that the projects are undertaken in an effective and efficient manner. In respect to the OBA projects, there is need for robust strategic planning to ensure timely and effective attainment of the set project milestones to enhance access to funding for the subsequent project phases. Diverse scholars among them Malik et al.(2019) and Horma et al.(2019) found out that deployment of strategies in diverse project operational components such as procurement, financial management,

resources management and team management is fundamental to project performance aspects. In respect to whether the project managers always ensured clarity of project scope, the respondents to a moderate extent agreed ($M=3.40$, $SD=1.050$). Clarity in project scope within the execution of OBA ensures that project team is clear on what they need to do to avoid mission creep. Clarity of the project scope is thus critical to the project performance aspects. This study's results are in tandem with those of Ajmal et al. (2020) and Al-Rubaiei et al. (2018) who found out the importance of the clarity of project scope to avoid the project creep challenges. The elimination of project scope creep is fundamental to the attainment of the project performance. The project managers always ensured clarity of project deliverables to a large extent ($M=3.46$, $SD=.952$). The performance of the OBA funded projects is tied to the achievement of the project deliverables on the specified timelines. The clarity of the project deliverables is thus critical in making sure that the project deliverables are achieved.

The targeted respondents viewed that the project managers always ensured clarity of project action plans to a moderate extent ($M=3.34$, $SD=1.081$). In an OBA funded project, the clarity of the project action plans enables the attainment of the project deliverables and hence project performance. The project managers always created a project risk management framework to a moderate extent ($M=3.36$, $SD=1.120$). The project risk management framework is critical in ensuring that all risks that the project faces are identified, addressed and effectively mitigated. This enables the achievement of the project performance. The research study results on importance of the project risks management impact on the performance of the project were in tandem with those of Yan and Lee, (2021), Igihozo and Irechukwu (2022) and again those of Ndungutse (2021) who noted the role of the project risks management on the project performance. In this context, the project risks management, project risks identification, project risks

assessment, project risks mitigation and project risks monitoring become critical. From the descriptive analysis, respondents agreed to large extent that project planning had influence to project performance.

4.4.3 Project Implementation

The project implementation was examined and analysed using five metrics. These metrics included the adequate resources being availed within time, resources being utilized in a prudent manner during the project implementation phase, presence of adequate scheduling of project activities, presence of sufficient resources mobilization aspects, and sufficient risk management measures deployment aspects. The descriptive statistics results obtained for the project implementation were tabulated as shown in Table 6.

Table 6

Descriptive Statistics for Project Implementation

	NE Freq. %	SE Freq. %	ME Freq. %	LE Freq. %	VLE Freq. %	Total Mean	Std. Dev.
Adequate resources are availed in a timely manner	1 2.0%	1 2.0%	17 34.0%	17 34.0%	14 28.0%	3.84	.934
Resources are utilized in a prudent manner during the project implementation phase	0 0.0%	1 2.0%	23 46.0%	15 30.0%	11 22.0%	3.72	.834
There is adequate scheduling of project activities	0 0.0%	2 4.0%	19 38.0%	18 36.0%	11 22.0%	3.76	.847
There is sufficient resources mobilization aspects	0 0.0%	2 4.0%	22 44.0%	15 30.0%	11 22.0%	3.70	.863
There is sufficient risk management measures deployment aspects	1 2.0%	1 2.0%	21 42.0%	20 40.0%	7 14.0%	3.62	.830

When the targeted respondents were asked as to whether adequate resources are availed within stipulated time or not, the respondents agreed to a large extent as shown in Table 6 ($M=3.84$, $SD=.934$). The resources availability impacts on the OBA project performance through making sure that the deliverables are attained within planned time or expected timeline. The resources availability could ion respect to the financial resources and human resources availability amongst other types of resources. The results were in tandem with those of Songa (2020), Muntu et al. (2021), and Bagheri (2020) who noted the role of human resource, technological resources, and financial resources in the attainment of project performance. On whether the resources were utilized in a prudent manner during the project implementation phase, the respondents agreed that the same was carried out to a large extent ($M=3.72$, $SD=.834$).

The prudent resources utilization is an important ingredient in achieving project performance. In this context, Bagheri (2020) asserts importance of financial management to project performance while Sila and Gakobo (2021) links the materials management to the project performance aspects. The prudent resources management ensures that the resources are used efficiently and effectively leading to the cost efficiency and timeliness of the project implementation aspects within OBA funded projects. The respondents further indicated that there was adequate scheduling of project activities to a large extent ($M=3.76$, $SD=.847$). The OBA funded projects are availed resources after meeting the project deliverables and thus the scheduling of the projects is critical to ensure that these dimensions are met in a timely manner. In this context, Kelly and Ilozor (2020), Feghaly et al. (2021) and Ling et al. (2020) found in their studies the link between the project delivery and project performance through meeting of the project timelines and deliverable milestones. To large extent respondents agreed that there were sufficient resources mobilization aspects ($M=3.70$, $SD=.863$).

The resources mobilization is critical in meeting the project performance of OBA funded projects. The funds mobilization leads to the capacity to hire human resources, purchase project materials, undertake procurement aspects and pay diverse operational bills during project execution. Findings of this study are in tandem with those of Nabulime (2021) who also noted the importance of resources mobilization to the project performance. In respect to whether there were sufficient risks management measures deployment aspects to large extent the respondents agreed (M=3.62, SD=.830). The risks management components impact on the project performance have been raised by Butt et al. (2021) and Aduma *et al.* (2018). These scholars noted that the risks management and specifically risks identification, risks assessment, risk mitigation and risks monitoring as were critical in enhancing project performance. Generally, to large extent, the study found out that project implementation had influence on project performance.

4.4.4 Project Monitoring

The project monitoring was examined using five metrics. These metrics included cost control activities being adequately undertaken, discrepancies from the project action plans always being noted, project monitoring feedback always being incorporated into project execution, frequency of the project monitoring activities being adequate, and project schedules often being monitored. The results were shown in Table 7.

Table 7*Descriptive Statistics for Project Monitoring*

	NE	SE	ME	LE	VLE	Total	
	Freq.	Freq.	Freq.	Freq.	Freq.	Mean	Std. Dev.
	%	%	%	%	%		
Cost control activities are adequately undertaken	2 4.0%	4 8.0%	6 12.0%	20 40.0%	18 36.0%	3.96	1.087
Discrepancies from the project action plan are always noted	3 6.0%	9 18.0%	19 38.0%	12 24.0%	7 14.0%	3.22	1.093
The project monitoring feedback is always incorporated into project execution	2 4.0%	5 10.0%	18 36.0%	16 32.0%	9 18.0%	3.50	1.035
The frequency of the project monitoring activities is adequate	0 0.0%	1 2.0%	19 38.0%	19 38.0%	11 22.0%	3.80	.808
The project schedules are often monitored	2 4.0%	2 4.0%	8 16.0%	26 52.0%	12 24.0%	3.88	.961

The study found that the cost control activities were adequately carried out to a large extent (M=3.96, SD=1.087). The project cost control aspects lead to the achievement of cost efficiency within the projects leading to enhanced project performance. This is critical for the OBA funded projects which are funded based on the project deliverables achievement aspects. The ability thereof to undertake costs controls leads to the achievement of the project deliverables in a timely and effective manner thus enhancing project performance. The study found that the discrepancies from the project action plan were always moderately noted (M=3.22, SD=1.093). The discrepancies from the project action plan could be due to various factors noted between the project plans and aspects that are encountered during implementation process. The study further found that the project monitoring feedback is always incorporated into project execution to a large extent (M=3.50, SD=1.035).

The influence of the project monitoring feedback being incorporated into the project execution has an influence on the project performance. Mulwa and Mbugua (2022) had found in their studies on the importance of the project monitoring feedback being incorporated into the project execution leading to making of appropriate changes in the project execution process. This enhances the achievement of the project implementation process. To a large extent, respondents agreed that the frequency of the project monitoring activities is adequate ($M=3.80$, $SD=.808$). The frequency of the project monitoring ensures that there is adequate monitoring process being undertaken to ensure the achievement of project deliverables.

This is critical in an OBA funded projects such as water projects. The revelations of this study are in tandem with Adebayo et al. (2018) and Maendo et al. (2018) who also found the link between the frequency of the project monitoring and the project performance aspects. The respondents further found that the project schedules are often monitored to a large extent ($M=3.88$, $SD=.961$). Monitoring of the schedules and sequence of activities in a project is essential in ensuring that the achievement of the deliverables is successful. This is especially critical in the OBA funded project in the context that the achievement of the project deliverables is the basis of funding. The achievement of deliverables is critical to allow the project realize its desired goals.

4.4.5 Project Performance

The project performance was measured using five metrics. These metrics included the meeting of the scheduled projects actions in a timely manner, being always on budget in respect to specific project activities, achievement of the stated project scope of activities, ensuring adequate quality on diverse project activities, and diverse stakeholders being agreeable with the project activities. The results were showed in Table 8.

Table 8*Descriptive Statistics for Project Performance*

	NE	SE	ME	LE	VLE	Total	
	Freq. %	Freq. %	Freq. %	Freq. %	Freq. %	Mean	Std. Dev.
We always meet the scheduled project actions in a timely manner	0 0.0%	0 0.0%	19 38.0%	17 34.0%	14 28.0%	3.90	.814
We are always on budget in respect to specific project activities	0 0.0%	1 2.0%	14 28.0%	20 40.0%	15 30.0%	3.98	.820
We always achieve the stated project scope of activities	0 0.0%	1 2.0%	6 12.0%	27 54.0%	16 32.0%	4.16	.710
We always ensure adequate quality on diverse project activities	0 0.0%	0 0.0%	11 22.0%	19 38.0%	20 40.0%	4.18	.774
Diverse stakeholders are satisfied with the project activities	0 0.0%	0 0.0%	10 20.0%	28 56.0%	12 24.0%	4.04	.669

The respondents agreed to a large extent that they always met the scheduled project actions in a timely manner ($M=3.90$, $SD=.814$). The timeliness of meeting the scheduled project action is a critical indicator of the project performance aspects. This is especially critical in OBA funded projects due to the nature of funding. The results of this study are in tandem with those of Liu and Jiang (2020) as well as Kihuga (2018) who also noted the importance of the project schedules meeting timeliness to ensure project performance. The respondents agreed to a large extent that they are always on budget in respect to specific project activities ($M=3.98$, $SD=.820$). The meeting of the project budget is critical component of project performance which implies that there are no project costs escalations. These revelations are in tandem with those of Scheepers et al. (2022) and Nyathi (2021) who found that meeting the project allocated budgets is a critical indicator of the project performance.

The OBA funding model seeks to ensure that the funding is made on the basis of meeting the project deliverables including the project budget allocations. When asked on whether there was achievement of stated project scope of activities, there was agreement to a large extent ($M=4.16$, $SD=.710$). The achievement of the project scope of activities is a fundamental metric of the project performance achievement metric especially for OBA funded projects. Scholars such as Chege Bowa (2020) as well as Kamau and Pedo (2021) have found in their studies that the achievement of the project scope of activities is critical means of measuring project performance. We always ensure adequate quality on diverse project activities ($M=4.18$, $SD=.774$). The achievement of quality metrics is an important measure of project performance for the OBA funded projects.

This implies that the project is able to achieve its intention and is thus useful to the intended project beneficiaries. Diverse stakeholders are satisfied with the project activities to a large extent ($M=4.04$, $SD=.669$). Stakeholder satisfaction dynamics is critical in the OBA funded projects to ensure that diverse stakeholders are satisfied with the manner in which the project has been implemented.

4.5 Correlational Analysis

The study carried out correlational analysis to show the association between the variables of the study. The results were displayed in Table 9.

Table 9
Correlations

		Project Initiation	Project Planning	Project Implementation	Project Monitoring	Project Performance
Project Initiation	Pearson Correlation	1				
Project Planning	Pearson Correlation	.417**	1			
	Sig. (2- tailed)	0.003				
	N	50				
Project Implementat ion	Pearson Correlation	.568**	.719**	1		
	Sig. (2- tailed)	0	0			
	N	50	50			
Project Monitoring	Pearson Correlation	.432**	.433**	.539**	1	
	Sig. (2- tailed)	0.002	0.002	0		
	N	50	50	50		
Project Performance	Pearson Correlation	.523**	0.246	.366**	.591**	1
	Sig. (2- tailed)	0	0.085	0.009	0	
	N	50	50	50	50	50

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

Analysis illustrated that the project planning had a positive and statistically significant correlation with project initiation ($r=0.417$, $sig=0.003$). Other achieved correlations were project implementation and project initiation ($r=0.568$, $sig =0.000$); project monitoring and project initiation ($r=0.432$, $sig = 0.002$); project performance and project initiation ($r=0.523$, $sig=0.000$); project implementation and project planning ($r=0.719$, $sig=0.000$); project monitoring and project planning ($r=0.433$, $sig=0.002$); project performance and project planning ($r=0.246$, $sig=0.085$); Project monitoring and project implementation

($r= 0.539$, $\text{sig}=0.000$); Project performance and project implementation ($r=0.366$, $\text{sig}=0.009$); Project performance and project monitoring ($r=0.591$, $\text{sig}=0.000$). Conclusively, results indicated that apart from project planning all the other independent variables had significant positive correlation with performance with their coefficients as 0.523, 0.366 and 0.591 for project initiation, implementation and monitoring respectively; in a two tailed $p<0.01$.

4.6 Regression Analysis

The regression analysis was undertaken to determine the influence of the independent to the dependent variables. In this context, this study sought to examine the influence or project initiation, planning, implementation and project monitoring on the project performance aspects. The results were illustrated in Table 10.

Table 10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669 ^a	.448	.399	.45487

Note. a. Predictors: (Constant), Project Initiation, Planning, Implementation and Project Monitoring

The study found that the correlation coefficient was 0.669 for the model. According to Maina (2021), correlation coefficient presents the correlation between the independent and the dependent variables. This study thus notes that the correlation between the independent variables and project performance stood at 0.669 indicating a high and strong correlation between the independent variables and dependent variable. The study also achieved a coefficient of determination of 0.448 which indicated that 44.8% of the

variance in the project performance was associated with Project Initiation, Planning, Implementation, and Project Monitoring. This would further indicate that 55.2% of the variance of the project performance was as a result of external factors that the regression didn't take into consideration.

The one-way ANOVA was also undertaken. According to Matloff (2017), the one way ANOVA is used to examine on whether the regression model is good fit for data. The results were presented in Table 11.

Table 11

ANOVA^a

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.554	4	1.888	9.127	.000 ^b
1	Residual	9.311	45	.207		
	Total	16.865	49			

*Note.*a. Dependent Variable: Project Performance; b. Predictors: (Constant), Project Initiation, Project Planning, Project Implementation, Project Monitoring

The study results of the one-way ANOVA were (F=9.127, p=0.000, p<0.05). According to Keith (2014), attaining a p value of less than or equal to the level of significance leads to the conclusion of the regression model being good fit for data. The study achieved a p value of 0.000 which is less than 5% (0.05) which is the level of significance being used for this study. This led to the conclusion that the regression model is good fit for data. The implication of the regression model being good fit for data implied that at least one of the independent variables. The achievement of the regression model being good fit for data led to the undertaking of the t tests with a view of determining the specific independent variables that had statistically significant influence on the dependent

variable. The two tailed t-tests were undertaken with a view of determining the specific independent variables that had a statistically significant influence on the project performance. The results were presented in Table 12.

Table 12

Coefficients^a

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	1.458	.494		2.954	.005
Project Initiation	.404	.148	.374	2.733	.009
Project Planning	-.057	.105	-.088	-.549	.586
Project Implementation	-.040	.149	-.050	-.272	.787
Project Monitoring	.363	.098	.495	3.688	.001

*Note.*a. Dependent Variable: Project Performance

The study used the t tests to test the following hypotheses;

H₀₁: There is no statistically significant influence of project initiation on performance of output-based funded Sabasaba urban water supply project

H₀₂: There is no statistically significant influence of project planning on performance of output-based funded Sabasaba urban water supply project

H₀₃: There is no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project

H₀₄: There is no statistically significant influence of project monitoring on performance of output-based funded Sabasaba urban water supply project

With the regression parameters being;

$$Y = 1.458 + 0.404X_1 - 0.057X_2 - 0.040X_3 + 0.363X_4 + \varepsilon$$

Where:

Y is the Project Performance

X₁ is project initiation

X₂ is project planning

X₃ is project implementation

X₄ is project monitoring

On impact of project initiation on the project performance, the study results found that p value of 0.009 was achieved. Since the achieved p value for the project initiation is less than 5% (level of significance), a conclusion was made that the project initiation had a statistically significant influence on the project performance of the output based projects. The regression coefficient achieved was 0.404 which indicated that a unit change in the project initiation would lead to 0.404 changes in the project performance holding the other independent variables constant. The achieved p value of the project planning and project implementation stood at 0.586 and 0.787 respectively. Being higher than 0.05 significance level it leads to a conclusion that project planning and project implementation were not statistically significant in influencing the project performance.

Due to their failure to achieve the statistically significant influence between an independent variable and dependent variable implies that the regression coefficient was not counted (Rawlings et al., 1999; Sarstedt & Mooi, 2019). In respect to the influence of project monitoring on the project performance, a p value of 0.001 was achieved. The p value of the project monitoring being less than 5% level of significance led to the conclusion that the project monitoring has a statistically significant influence on the project performance. The study further found that the project monitoring had a regression

coefficient of 0.363 which indicated that a unit change of project monitoring led to 0.363 change in the project performance with the other independent variables held constant.

4.7 Hypothesis Testing

This section shows the analysis and results of the hypothesis tests that were carried out using inferential statistics. It further presents the interpretation of the results in relation to the research hypotheses.

4.7.1 Project Initiation and Performance of Output-Based Funded Projects

The study sought to find out the impact of Project initiation and performance of output-based funded Sabasaba urban water supply project. It was hypothesized that there was no statistically significant influence of project initiation on performance of output-based funded Sabasaba urban water supply project.

H₀₁: There is no statistically significant influence of project initiation on performance of output-based funded Sabasaba urban water supply project

In respect to the influence of project initiation on the project performance, the study results found that p value of 0.009 was achieved. According to Matloff (2017), the attainment of the p value of less than 5% leads to the deduction that the independent variable has a statistically significant influence on the dependent variable. Since the achieved p value for the project initiation is less than 5% (level of significance), a conclusion was made that the project initiation had a statistically significant influence on the project performance of the output based projects. This led to the rejection of the H₀₁ and acceptance of the alternative hypothesis. The regression coefficient achieved was 0.404 which indicated that a unit change in the project initiation would lead to 0.404 changes in the project performance holding the other independent variables constant.

4.7.2 Project Planning and Performance of Out-Put Based Funded Projects

The study sought to examine the impact of Project planning and performance of output-based funded Sabasaba urban water supply project. It was hypothesized that there was no statistically significant influence of project planning on performance of output-based funded Sabasaba urban water supply project.

H₀₂: There is no statistically significant influence of project planning on performance of output-based funded Sabasaba urban water supply project

The achieved p value of the project planning stood at 0.586 which was higher than 0.05 leading to a conclusion that project planning was not a statistically significant influencer of the project performance. According to Matloff (2017), the failure to achieve the a statistically significant influence between an independent variable and dependent variable implies that the regression coefficient are not counted. The achieved p value of the project implementation stood at 0.787 which was higher than 0.05. This led to the conclusion that the project implementation was not a statistically significant influencer of project performance for the output based projects. This thus led to the acceptance of the **H₀₂** that the project planning had no statistically significant influence on the project performance of the OBA funded water projects.

The results of this study were found to be different from those of diverse empirical literature such as Malik et al. (2019) and Horma et al. (2019) amongst others. These scholars had found that the project planning was noted to have a statistically significant influence on the project performance. The study of this results could be explained by the fact the project planning within the context of the output based funded projects compared to the project initiation is often largely undertaken by the funding agents and subject to the diverse rules that are designed by the funding body.

4.7.3 Project Implementation and Performance of Output-Based Projects

The study sought to examine the impact of Project implementation and performance of output-based funded Sabasaba urban water supply project. It was hypothesized that there was no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project.

H₀₃: There is no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project.

The project implementation was examined on whether it had statistically significant influence on the performance of output-based funded Sabasaba urban water supply project. The study achieved a p value of 0.787 leading to the conclusion that the project implementation did not have a statistically significant influence on the performance of out-based funded Sabasaba water supply project. This led to the acceptance of **H₀₃** that the project implementation did not have a statistically significant influence on the project performance aspects.

The results of this study on the lack of statistically significant influence of the project implementation on the project performance are different from other studies on the subject matter. The results could be attributed to the project performance dynamics largely controlled by the funding organization hence acting to standardize the same.

4.7.4 Project Monitoring and Performance of Output-Based Projects

The study sought to find out the impact of Project monitoring and performance of output-based funded Sabasaba urban water supply project. It was hypothesized that there was no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project.

H₀₄: There is no statistically significant influence of project monitoring on performance of output-based funded Sabasaba urban water supply project.

In respect to the influence of project monitoring on the project performance, a p value of 0.001 was achieved. The p value of the project monitoring being less than 5% level of significance led to the conclusion that the project monitoring has a statistically significant influence on the project performance. This led to the rejection of the null hypothesis **H₀₄** that the project monitoring did not have a statistically significant influence on the project performance aspects. The study further found that the project monitoring had a regression coefficient of 0.363 which indicated that a unit change of project monitoring led to 0.363 change in the project performance with the other independent variables held constant.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section summarizes findings and presents conclusions, implications and recommendations of the research study. The chapter also discusses hypotheses testing outcomes and the implication of these results to the management of Water projects in Kenya done under OBA. Finally, the chapter gives the directions for future research.

5.2 Summary of the Major Findings

This research study sought to find out the effect of the project lifecycle management on performance of output based aid funded water projects in Kenya with a focus on Sabasaba urban water supply project. In this context, the study delved into finding out whether project initiation, planning, implementation and project monitoring influenced the performance of Sabasaba urban water supply project. The study deployed a structured questionnaire on a sample size of 56 composed of heads of departments at MUWASCO, project management staff and project contractors.

5.2.1 Project Initiation

The project initiation variable was examined using five metrics. These metrics included if the project stakeholders were adequately consulted, project team identification was undertaken satisfactorily, the project feasibility studies were undertaken in satisfactorily manner, the needs assessment procedure was undertaken in an adequate manner, and if accurate development of budgets was done. The respondents to a large extent were in agreement that the project stakeholders were adequately consulted ($M=3.94$, $SD=.740$). When the study inquired if the project team identification was undertaken satisfactorily,

the respondents agreed to a large extent (M=4.04, SD=.699). In respect to whether the project feasibility was undertaken in a satisfactory manner, there was an agreement to a large extent (M=3.70, SD=.735). The needs assessment procedure was undertaken in an adequate manner to a large extent (M=4.02, SD=.742). The respondents to a very large extent were in tandem that adequate budget development was carried out (M=4.22, SD=.582).

The study initially claimed that there was no statistically significant influence of project initiation on performance of output-based funded Sabasaba urban water supply project. The research found that the project initiation had a positive and statistically significant influence on the project performance.

5.2.2 Project Planning

The project planning was weighed taking advantage of five metrics. These metrics included project managers always created a function strategic plan for project execution aspects, project managers ensured clarity of project scope, project managers ensured clarity of project deliverables, project managers ensured clarity of project action plans, and project managers always created a project risk management framework. The project managers always created a functional strategic plan for the project execution aspects to a large part (M=3.62, SD=1.008). In respect to whether the project managers always ensured clarity of project scope, the respondents agreed to a moderate extent (M=3.40, SD=1.050). The project managers always ensured clarity of project deliverables (M=3.46, SD=.952). The respondents noted that the project managers always ensured clarity of project action plans to a moderate extent (M=3.34, SD=1.081). The project managers always created a project risk management framework to a moderate extent (M=3.36, SD=1.120).

A hypothesis was fronted that there was no statistically significant influence of project planning on performance of output-based funded Sabasaba urban water supply project. The research unraveled that the project implementation was not a statistically significant influencer of project performance for the output based projects.

5.2.3 Project Implementation

The project implementation was examined using five metrics. These metrics included the adequate resources being availed in a timely manner, resources being utilized in a prudent manner during the project implementation phase, presence of adequate scheduling of project activities, presence of sufficient resources mobilization aspects, and presence of sufficient risk management measures deployment aspects. When the study inquired if adequate resources were availed timely, to a large extent respondents affirmed positively (M=3.84, SD=.934). On whether the resources were used prudently during the project implementation phase, the respondents ruled to a large extent that the same was done (M=3.72, SD=.834). The participants further affirmed that there was adequate scheduling of project activities to a large extent (M=3.76, SD=.847). On if there were sufficient resource mobilization, the research participants affirmed to a large extend (M=3.70, SD=.863). In respect to whether there were sufficient risks management measures deployment aspects, the respondents were in agreement for the larger part (M=3.62, SD=.830). The research initially claimed that there was no statistically significant influence of project implementation on performance of output-based funded Sabasaba urban water supply project. The study found that the project implementation was not a statistically significant influence on the performance of out-based funded Sabasaba water supply project.

5.2.4 Project Monitoring

The project monitoring was examined using five metrics. These metrics included cost control activities being adequately undertaken, discrepancies from the project action plans always being noted, project monitoring feedback always being incorporated into project execution, frequency of monitoring activities being adequate, and project schedules often being monitored. The study realized that the cost control activities are adequately undertaken to a large extent ($M=3.96$, $SD=1.087$). The research unraveled that the discrepancies from the project action plan are always noted to a moderate extent ($M=3.22$, $SD=1.093$). The study further realized that the project monitoring feedback is always incorporated into project execution to a large extent ($M=3.50$, $SD=1.035$). The participants were in tandem to a larger part that the frequency of the project monitoring activities is adequate ($M=3.80$, $SD=.808$). The respondents further found that the project schedules are often monitored to a larger part ($M=3.88$, $SD=.961$). The study initially claimed that there was no statistically significant influence of project monitoring on performance of output-based funded Sabasaba urban water supply project. The research found that the project monitoring had a positive and statistically significant influence on the performance of output based funded Sabasaba urban water supply project.

5.2.5 Project Performance

Project performance was weight using five metrics. These metrics included the meeting of the scheduled projects actions in a timely manner, being always on budget in respect to specific project activities, achievement of the stated project scope of activities, ensuring adequate quality on diverse project activities, and diverse stakeholders being satisfied with the project activities. The respondents were in agreement to a larger part that they always met the scheduled project actions in a timely manner ($M=3.90$,

SD=.814). The respondents were in agreement to a large part that they are always on budget in respect to specific project activities (M=3.98, SD=.820). When inquired if there was achievement of stated project scope of activities, there was agreement to a large extent (M=4.16, SD=.710). We always ensure adequate quality on diverse project activities (M=4.18, SD=.774). Diverse stakeholders are satisfied with the project activities to a large extent (M=4.04, SD=.669).

5.3 Conclusions

The research sought to find out whether the project lifecycle management had an effect on the performance of output-based funded Sabasaba urban water supply project. The research study concluded that;

The project initiation process was found to have a statistically significant influence on the performance of the output-based funded Sabasaba urban water supply project. This was attributed to the project initiation being a critical component of output based funded project that enables the setting of the project objectives and the required resources into considerations. The study found that amongst the elements of project initiation process that were critical in project performance included satisfactory project team identification, undertaking of the needs assessment procedure in an adequate manner and the presence of adequate developmental budget for the project.

The study concluded that both project planning and project implementation did not have a statistically significant influence on the project performance of the output-based funded Sabasaba urban water supply project.

The study concluded that the project monitoring had a statistically significant influence on the project performance of the output-based Sabasaba urban water supply project.

This was attributed to the project monitoring enabling the achievement of the project schedules and project deliverables in a timely and effective manner. The study further concluded that funding agencies should adequately enhance the project initiation and project monitoring that were found to have statistically significant influence on the project performance. The particular components that the implementing agents need to implement and consider include satisfactory project team identification, undertaking of the needs assessment procedure in an adequate manner and the presence of adequate developmental budget for the project. Further, other elements that should be considered during implementation are the cost control activities which should be adequately undertaken and the frequency of the project monitoring activities which should also be adequately done.

5.4 Recommendations

The study made the following recommendations that should be implemented for the efficiency of the output-based funded projects. The funding agencies should adequately enhance project initiation and project monitoring that were found to have statistically significant influence on the project performance. The particular components that the implementing agents need to implement and consider include satisfactory project team identification, undertaking of the needs assessment procedure in an adequate manner and the presence of adequate developmental budget for the project.

5.4.1 Policy Recommendations

OBA in water sector has always involved third party contracting with private sector service providers. Nonetheless, it is perceived that OBA can attain tremendous results if undertaken with greater levels of autonomy. For OBA to realize an increased frequency of project monitoring, satisfactory project team identification, and to adequately develop

budget for water projects; respective governments and funding agencies should implement policies that will enable OBA be applied to existing forms of public-private partnerships.

5.4.2 Recommendations for Further Research

The study recommends that further studies can be done to determine why project planning and project implementation phases did not have a significant influence on the performance of Output Based Aid funded water projects.

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APPENDICES

Appendix I: Cover Letter

Titus Towett,
School of Business and Economics,
Kabarak University,
Nakuru, Kenya.

Dear Respondent,

Re: Masters' Level Thesis Data Collection Process

The aim of writing this letter is to formally request you to assist me fill in the attached questionnaire for the purpose of collecting data for the herein stated study.

I am Titus Towett, a Master's of Science Project Management student at Kabarak University, Kenya. I am in my final year and currently undertaking a research project titled **“Effect of Project Management Lifecycle on Performance of Output-Based Aid Projects in Kenya: A Case of Sabasaba Water Project”**

The researcher will not make your identity known during the report writing. The collected data will be used for the purposes of compiling an academic thesis only.

I take this earliest time to thank you for your participation in the study.

Yours faithfully,

Titus Towett.

Appendix II: Questionnaire

Effect of Project Life Cycle Management on Performance of Output-Based Aid Funded Water Projects in Kenya; A Case of Sabasaba Urban Water Supply Project

Instructions to the Respondents:

Kindly do fill in the below questions to the best of your knowledge.

Part A: Demographic Characteristics

- I. Which of the following best describes your designation? MUSWACO senior Staff-Head of department()Project Supervisor () Project Contractor ()

Part B: Project Initiation

This subsection examines the influence of the project initiation on the project performance aspects. Kindly do indicate on the ways in which the following project initiation elements were applied in the Output-Based Aid funded Sabasaba water project. Use response options of 1.No Extent (NE), 2.Small Extent (SE), 3.Moderate Extent (ME), 4. Large Extent (LE), and 5.Very Large Extent (VLE).

No	Statement	1	2	3	4	5
2.	All the project stakeholders were adequately consulted					
3.	The project team identification was undertaken satisfactorily					
4.	The project feasibility studies were undertaken in satisfactorily manner					
5.	The needs assessment procedure was undertaken in an adequate manner					
6.	There was adequate development of budgets to be used in the project					

Part C: Project Planning

This subsection examines the influence of the project planning on the project performance aspects. Kindly do indicate on the ways in which the following project planning aspects were done during the carrying out of Output-Based Aid funded water project. Use response options of 1.No Extent (NE), 2.Small Extent (SE), 3.Moderate Extent (ME), 4. Large Extent (LE), and 5.Very Large Extent (VLE).

No	Statement	1	2	3	4	5
7.	The project managers always created a functional strategic plan for the project execution aspects					
8.	The project managers always ensured clarity of project scope					
9.	The project managers always ensured clarity of project deliverables					
10.	The project managers always ensured clarity of project action plans					
11.	The project managers always create a project risk management framework					

Part D: Project Implementation

This subsection examines the influence of the project implementation on the project performance aspects. Kindly do indicate on the ways in which the following project implementation elements impacted the Output-Based Aid funded waterproject. Use response options of 1.No Extent (NE), 2.Small Extent (SE), 3.Moderate Extent (ME), 4. Large Extent (LE), and 5.Very Large Extent (VLE).

No	Statement	1	2	3	4	5
12.	Adequate resources are availed in a timely manner					
13.	Resources are utilized in a prudent manner during the project implementation phase					
14.	There is adequate scheduling of project activities					
15.	There is sufficient resources mobilization aspects					
16.	There is sufficient risk management measures deployment aspects					

Part E: Project Monitoring

This subsection examines the influence of the project implementation on the project performance aspects. Kindly do indicate on the ways in which the following project monitoring aspects did impacted monitoring activities during the Output-Based Aid funded waterproject. Use response options of 1.No Extent (NE), 2.Small Extent (SE), 3.Moderate Extent (ME), 4. Large Extent (LE), and 5.Very Large Extent (VLE).

No	Statement	1	2	3	4	5
17.	Cost control activities are adequately undertaken					
18.	Discrepancies from the project action plan are always noted					
19.	The project monitoring feedback is always incorporated into project execution					
20.	The frequency of the project monitoring activities are adequate					
21.	The project schedules are often monitored					

Part F: Project Performance

This subsection examines the influence of the project implementation on the project performance aspects. Kindly do indicate on the ways in which the following project performance aspects influenced the Output-Based Aid funded water project activities. Use response options of 1.No Extent (NE), 2.Small Extent (SE), 3.Moderate Extent (ME), 4. Large Extent (LE), and 5.Very Large Extent (VLE).

No	Statement	1	2	3	4	5
22.	We always meet the scheduled project actions in a timely manner					
23.	We are always on budget in respect to specific project activities					
24.	We always achieve the stated project scope of activities					
25.	We always ensure adequate quality on diverse project activities					
26.	Diverse stakeholders are satisfied with the project activities					

Appendix III: Institution Authorization Letter



KABARAK UNIVERSITY
OFFICE OF THE DIRECTOR
INSTITUTE OF POST GRADUATE STUDIES

Private Bag - 20157
KABARAK, KENYA
<http://kabarak.ac.ke/institute-postgraduate-studies/>

E-mail: directorpostgraduate@kabarak.ac.ke

28th June 2022

The Director General
National Commission for Science, Technology & Innovation (NACOSTI)
P.O. Box 30623 – 00100
NAIROBI

Dear Sir/Madam,

RE: TITUS TOWETT – GMPM/NE/0522/05/19

The above named is a student at Kabarak University. He is carrying out a research entitled “*Effect of Project Life Cycle Management on Performance of Output-based AID Funded Water Projects in Kenya: A Case of Sabasaba Urban Water Supply Project*”.

The student has been granted ethical clearance by Kabarak University Research Ethics Committee and is ready to undertake field research.

Kindly provide the student with a research permit to enable him to undertake the research.

Thank you.



Dr. Wilson O. Shitandi
DIRECTOR, POSTGRADUATE STUDIES

Kabarak University Moral Code

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord. (1 Peter 3:15)



Kabarak University is ISO 9001:2015 Certified

Appendix IV: NACOSTI Approval

REPUBLIC OF KENYA
Ref No: 643854

RESEARCH LICENSE



This is to Certify that Mr. Timu Tawett of Kabarak University, has been licensed to conduct research in Maranga on the topic: EFFECT OF PROJECT LIFE CYCLE MANAGEMENT ON PERFORMANCE OF OUTPUT-BASED AID FUNDED WATER PROJECTS IN KENYA: A CASE OF KABASABA URBAN WATER SUPPLY PROJECT for the period ending : 18 July 2023.

License No: NACOSTI/P/22/18785

Applicant Identification Number: 643854

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



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Appendix V: Conference Participation Certificate



KABARAK UNIVERSITY

Certificate of Participation

Awarded to

Titus Towett

for successfully participating in the Kabarak University International Research Conference on Business and Economics held from 11th -12th October 2022 and presented a paper entitled *“Effect of Project Monitoring on Performance of Output-Based Aid Funded Water Projects in Kenya: A Case Of Sabasaba Urban Water Supply Project.”*

Conference Theme

Global Trends in Trade Investments and Growth

Dr. Patrick Kibati
Dean, School of Business and
Economics

Dr. Miriam Muga
Ag. Director Research, Innovation
and Outreach

Kabarak University Moral Code

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord.

(1 Peter 3:15)



Kabarak University is ISO 9001:2015 Certified



**IMPACT OF PROJECT INITIATION ON
PERFORMANCE OF OUTPUT-BASED FUNDED
SABASABA URBAN WATER SUPPLY PROJECT**

Titus Towett¹,

Geoffrey Kamau²,

Richard Nyaoga³

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Kenya

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Kabarak University,
Kenya

³Faculty of Commerce,
Egerton University,
Kenya

Abstract:

Sabasaba urban water supply project was undertaken in order to increase the number of people in low-income areas within Murang'a County with access to improved water supply; to enable them to have clean water at their doorstep. In carrying out the project, World Bank employed Output-Based Aid scheme to make sure the project achieves its goals. Output-Based Aid funds predetermined project outputs unlike the conventional way of funding inputs. It serves to ensure prudent utilization of funds by shifting performance risk to the organization mandated to deliver services; it also does so by linking outputs to the ultimate payments; hence transparency during project implementation. The study sought to examine the influence of project initiation, project planning, project implementation, and project monitoring on the project performance of Output-Based Aid funded Sabasaba urban water supply project. The study adopted value chain and resource-based theories. A predictive correlation design was used. The target population was 56 employees drawn from Murang'a South Water and Sewerage Company which is the implementing agency for Sabasaba water supply project. A structured questionnaire was used to collect data from the respondents. The study results were analysed using SPSS. The study found that the project initiation had a statistically significant influence on the project performance. The findings revealed that a unit change in the project initiation would lead to 0.404 changes in the project performance holding the other independent variables constant.

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