ORGANIZATIONAL CAPACITY AND IMPLEMENTATION OF WATER PROJECTS IN HOMA BAY COUNTY, KENYA

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DECLARATION

This research project is my original work and has not been presented to any other institution or University.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this research project to my family for the support they gave me in my studies.

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ABSTRACT

Water projects face susceptibility to diverse challenges, potentially resulting in cost overruns, construction delays, and adverse alterations in scope. Despite the obstacles, enhancing organizational capacity could potentially alleviate some of these challenges. The purpose of the study was to determine the influence of organizational capacity on implementation of water projects in Homa Bay County, Kenya. Specifically, the study was on the influence of project planning, technical, human resources, and financial management capacities on water project implementation in Homa Bay County, Kenya, drawing on the theory of constraints and prospect theory. Adopting a descriptive research design, the study population was 336 individuals comprising 42 Contractors, 42 Project Engineers, 42 Project Managers, and 210 Project Management Committee members. Using Slovin's formula, the sample size was determined as 183. Proportionate stratification was carried out for each group to determine the distribution of participants across the four groups. Pilot testing was done using 34 persons drawn from 5 water projects in Kisumu. This small sample of participants was similar to the target population. Self-administered questionnaires were used for data collection, with analysis conducted through descriptive statistics. The study indicated that project planning capacity positively contributes to the implementation of water projects. Further, technical and financial management capacities were identified as having a positive influence in the successful implementation of water projects in Homa Bay County, Kenya. However, the study notes that human resource management capacity, while positive, had an insignificant effect on project implementation. The study recommends that project implementers should enhance employees' technical skills and recommends comprehensive training, development, performance management, recruitment, and selection processes. It also recommends prioritizing proper budgeting, procurement, internal controls, and improved managerial practices, including thorough needs assessment, project design, and stakeholder engagement, to optimize the implementation of water projects in Homa Bay County, Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Access to safe and clean water is an essential requirement for human survival. If people do not have access to clean drinking water, they are at a higher risk of acquiring illnesses like typhoid, cholera, hepatitis A, diarrhoea, and amoebic dysentery (Rainey & Harding, 2005). The issue of inadequate access to clean water and sanitation is especially significant in developing countries, where polluted water, water scarcity, and unhygienic living conditions are widespread (Aliyu & Abdallah, 2022). Despite the efforts of governments and non-governmental organizations to address the issue, many communities still face challenges like poor-quality water, insufficient water supply, and a lack of sanitation facilities (Omarova, Tussupova, Hjorth, Kalishev, & Dosmagambetova, 2019).

Stakeholders have legitimate concerns about how projects are implemented. The concerns arise from the fact that many previously implemented initiatives have fallen short of their targets (Taherdoost, 2018). Some projects have stalled out during development, while others have failed to produce the desired financial, social, economic, physical, or even institutional effect. According to Serrador and Turner (2015), if a project is completed on schedule, within budget, and meets customer expectations, then the project may be deemed a success. According to Andersen (2016), only around 34% of all projects are completed on schedule and on budget. From this statistic, it is inevitable that a majority of projects will encounter difficulties, regardless of who is leading it.

Project implementation failure can occur due to various factors, and lack of public participation during the project formulation stage is one such factor. When stakeholders are not adequately involved in the project's design and planning, it can lead to a mismatch between project goals and user needs. As a result, the project may not achieve its intended objectives, leading to wasted resources and unsatisfied stakeholders (Raulta, Vreugdenhilb, & Jeffrey, 2013). The case of the ground water conservation scheme in Maharashtra, India is an example of how lack of public participation can result in project implementation

failure. Despite the government's investment of millions of Rupees into the project, many of the villages in Maharashtra continue to face severe water shortages. This could be attributed to the fact that the end users were not consulted during the project's feasibility and design phases, and the project was not tailored to their specific needs and circumstances (BBC, 2019).

In developing countries, the implementation of water projects encounters numerous challenges. Weak market demand and uncertain return on investment create a difficult environment for the introduction and adoption of new environmental technologies (Patrik, 2020). Technological lock-in to existing infrastructure further complicates matters, as it poses a barrier to implementing innovative water management solutions. Moreover, developing countries often suffer from a lack of technical skills and capacity necessary to adopt, maintain, and manage advanced water technologies. Intellectual property protection, which is crucial for technology investors, may be weak or ineffective in some countries, deterring investment in water projects (Raju, 2018). Further, local communities may exhibit resistance to new technologies due to past negative experiences with foreign investment or the perception that these technologies could disrupt cultural traditions or societal norms. This resistance, coupled with cultural and societal barriers, significantly hampers the successful implementation of water projects in these regions (Tonda & Susan, 2015).

In many countries, water allocation is governed by outdated laws and regulations that do not reflect current water management practices. This can result in inefficient and ineffective water allocation, which can lead to a range of environmental, economic, and social issues (Salman & Bradlow, 2006). Consequently, lack of a legal framework for water allocation can be a significant challenge for the implementation of water projects, particularly in regions where multiple countries have competing interests (Mbaku, 2020). The case of the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile is an example of how such a challenge can lead to conflicts that can hinder project implementation. The ongoing conflict over the GERD project is likely to result in delays, increased costs, and a deviation from the original scope and timeline of the project. This highlights the

importance of having a legal framework in place for water allocation that can help avoid conflicts and ensure equitable distribution of water resources (Bearak, 2021).

Globally, corruption has a detrimental impact on the state by diminishing the effectiveness and resilience of public institutions worldwide (Matthew Jenkins, 2017). Corruption has led to public works projects being completed with the explicit intention of rewarding certain people or political factions with "commissions" or providing preferential treatment to certain communities or persons. Consequently, initiatives that would not have been justified using objective criteria of investment selection, including cost-benefit analysis, have been funded (Forte, 2019). Looking at Arror and Kimwarer dam projects in Kenya, we get a glimpse of projects whose costs were inflated to cater for “kickbacks” to those involved (Mwai & Mwangi, 2022). This shows that the organizational structures meant to protect public funds countries like Kenya are still susceptible to abuse and are not robust enough to safeguard public interests.

Projects initiated without a comprehensive plan and understanding of constraints may be at risk of failure. According to Pinto (2013), a lack of clear deliverable outlines during the planning phase can lead to project failure. In fact, projects are vulnerable to various challenges such as biased economic analyses, cost overruns, construction delays, and changes in environmental conditions (LeRoy, et al., 2016). Common factors contributing to these failures include inadequate project formulation, poor planning during implementation, and insufficient project management during execution.

Choosing the wrong technology for a water project can have serious consequences, including wasted resources and potential harm to the environment and community (Okafor, 2020). The Hippo Water Roller project in Zimbabwe was hailed as a project designed to ease the burden of fetching water in rural communities. The roller could be filled with water and then rolled along the ground, allowing people to transport larger quantities of water more efficiently (Marrone, 2016). However, the technology proved unsuitable for the rough terrain and long distances typical of many rural communities in Zimbabwe, and

it was difficult for some users, particularly the elderly and children, to maneuver the heavy rollers (Directorate - Technology, Research and Development, 2012).

Water projects also fail to meet the intended objectives due to bad governance. In Tanzania's Temeke Municipality Water Supply system, water provision faces significant infrastructural challenges, with around 50% of the delivered water lost through leaks, illegal connections, and the remaining losses being unaccounted for (Rugemalila & Gibbs, 2015). This issue of water loss is not unique to Dar es Salaam but rather a persistent challenge worldwide for cities in developed and developing countries

Implementation of water projects also face the problem of resource allocation, which is heavily influenced by intra-organizational relationships. This is because managers have the last say over how their subordinates share the limited resources under their control (John, 2019). Managers may strive to further their own interests by diverting resources from more productive uses. In the long term, such behavior may be untenable. When projects are not given resources as required, chances are high that timelines will occasionally not be met. In the local Kenyan context, a number of water projects have not been completed within the required timeframes and has thus led to extensions of times at additional costs to the projects. An example is the ongoing Kenya Towns Sustainable Water Supply and Sanitation Programme funded by the African Development Bank (AfDB) and the Government of Kenya. In one of the mission visits in Kenya between 5th and 22nd June 2022, it was reported in the *Aide Memoir* dated 22nd June 2022, that AfDB was concerned by the delayed implementation of the Programme due to inadequate counterpart funding by the Government of Kenya (GoK).

Although there are various obstacles to implementing water projects, enhancing organizational capacity could potentially alleviate some of these issues. Ultimately, it may be imperative to have robust organizational capacity to attain the objective of providing access to safe water and sanitation to millions of individuals in developing nations.

1.2 Statement of the Problem

Kenya's Vision 2030 Development Plan is designed to transform the country into an industrializing, middle-income nation, with a specific focus on extensive infrastructure development, including critical water projects. These projects are not merely isolated endeavors, but integral components for facilitating economic growth and elevating the standard of living for all Kenyan citizens. However, it is imperative to acknowledge that the successful realization of these water projects is not guaranteed, and if they are not implemented effectively, it could have far-reaching and detrimental consequences.

The core problem lies in the potential failure to achieve project objectives due to inadequate implementation. When water projects fail to meet their intended goals and objectives, nations face the prospect of economic stagnation as these projects are pivotal for providing essential resources for industries, agriculture, and urban centers. Moreover, the opportunity cost of ineffective implementation becomes significantly higher, as not only financial resources but also valuable time and efforts are expended without yielding the desired outcomes. Additionally, the loss of confidence in the government and the institutions responsible for project implementation becomes a pressing concern. The citizens' trust in the organisations' ability to carry out critical development initiatives, like water projects, can diminish if they perceive repeated failures or suboptimal outcomes. This erosion of confidence can lead to social unrest and discontent among the populace.

Therefore, this research explored how enhancing organizational capacity can improve the implementation of water projects to achieve sustainable outcomes. Ultimately, this research aimed to provide insights and recommendations that can inform policy and practice to enhance the capacity of implementing organizations and improve the implementation of water projects in Homa Bay County and beyond.

1.3 Purpose of the Study

The purpose of the study was to determine the influence of organizational capacity on implementation of water projects in Homa Bay County, Kenya.

1.4 Objectives of the Study

1. To establish the influence of project planning capacity on implementation of water projects in Homa Bay County
2. To establish how technical capacity affect implementation of water projects in Homa Bay County
3. To determine the effect of human resources management capacity on implementation of water projects in Homa Bay County
4. To establish how financial management capacity affect implementation of water projects in Homa Bay County

1.5 Research Questions

1. How does project planning capacity influence implementation of water projects in Homa Bay County?
2. What is the effect of technical capacity on implementation of water projects in Homa Bay County?
3. Does human resources management capacity influence the implementation of water projects in Homa Bay County?
4. What is the effect of financial management capacity on implementation of water projects in Homa Bay County?

1.6 Value of the Study

This study's significance lies in the fact that it sheds light on a pressing problem shared by many third-world nations, Kenya included. Inadequate organizational capacity might threaten the effective execution and long-term sustainability of water projects, despite the fact that such access is vital for the health and wellbeing of communities. This study shed light on the difficulties encountered by water project implementers in developing countries and highlight the factors that contribute to successful project implementation by examining the connection between organizational capacity and the implementation of water projects in Homa Bay County.

The findings of this research have practical implications for policymakers, water project implementers, and other stakeholders involved in improving access to water and sanitation services in Homa Bay County and other developing regions. The research will also provide guidance on how to build organizational capacity in the context of water projects and identify the critical factors that need to be addressed, including funding, technical expertise, staff training, and efficient management systems.

Further, the research informs policy decisions and improve the design, implementation, and sustainability of water projects, leading to improved access to safe and reliable water sources for communities in Homa Bay County and other similar regions.

1.7 Limitations of the study

Descriptive research methodology was adopted. However, the researcher acknowledges the shortcomings of the research methodology such as the fact that the research can only describe what is happening, but it cannot make any inferences about why it is happening or predict what will happen in the future. Further, the adopted methodology often lacks control over variables that may be influencing the phenomenon being studied. This means that researcher may not determine the cause-and-effect relationships between variables.

1.8 Delimitation of the study

Research focused on water-related initiatives undertaken by the County Government of Homa Bay and other organizations between 2018 and 2022.

1.9 Basic Assumptions of the Study

It was assumed that the participants cooperated fully and provided honest, objective answers in order for this study to have merit. Research also presupposed that whatever was being evaluated can be quantified reliably by the tools being used.

1.10 Definition of Significant Terms used in this Study

Organisational Capacity: As used in this study entails project planning capacity, human resources management capacity, financial management capacity and technical capacity.

Implementation of Water Projects: In the context of this analysis, means how well the project meets its goals of being timely, affordable, efficient, and popular among its intended audience.

Project Planning Capacity: Refers to an organization ability to effectively plan and manage a project from start to finish. This includes the ability to define project goals, identify required resources, estimate time and cost requirements, develop project schedules and timelines, identify potential risks and constraints, and develop strategies to mitigate these risks

Human Resources Management Capacity: An organisation's ability to manage its employees well determines how effective it can carry out its mission. Workforce planning, hiring the right people, evaluating their performance, helping them grow professionally, paying them fairly, and maintaining positive relationships with them are all part of this.

Financial Management Capacity: The term describe an organization's skill in controlling its revenue, expenditures, and investments to meet its objectives. This involves a range of activities, such as budgeting, financial forecasting, financial reporting, risk management, and financial analysis.

Technical Capacity: This refers to an organization's ability to effectively apply technical knowledge, skills, and expertise to accomplish tasks, solve problems, and achieve objectives. This includes understanding and utilizing appropriate tools, equipment, and technologies, as well as keeping up-to-date with the latest developments in water projects.

Project Performance: Refers to the extent to which a project is meeting its objectives, goals, and requirements. It is an evaluation of the success or effectiveness of a project, based on predetermined criteria or standards.

1.11 Organization of the Study

The research is divided into five sections. The first Chapter provides a summary of the study's context, a discussion of the dependent and independent variables (in this case, organizational capacity and project implementation), a statement of the problem, objectives, research questions, the study's significance, assumptions, limitations and definitio of significant terms used in the study. The Literature Review is discussed under Chapter Two of the research project, as are the two theories employed in the study (Theory of Constraints and the Theory of Prospects). Summary of the literature, research gaps, and the theoretical underpinnings of the study are also included in this section. Research strategy, population of interest, sample size and sampling methodology, data collecting techniques, tools and processes, validity and reliability of the tool, and method of data analysis are discussed in Chapter Three. In Chapter Four, the section focuses on presentation of the findings, data analysis and interpretation as well as discussion of the results in relation to the research questions and objectives. Finally, Chapter Five has a summary of the main findings, implications of the findings for theory, practice, and policy, limitations of the study and recommendations for future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Organizational capabilities and project execution is assessed in this section. The theoretical review will address the theory that explains the organizational capability and project execution. In addition, a critical assessment of the study, a conceptual framework, a review of the relevant literature, and a discussion of the gaps in that literature are provided in this chapter.

2.2 Theoretical Framework

According to Tromp and Kombo (2000), the term "theoretical framework" refers to a set of interconnected concepts based on theories that aim to shed light on the factors that cause an observed phenomenon. Theories aid in the introduction of a new observation of a study issue, the grasp of the problem's reals, the conceptualization of the subject in its whole, and the recognition of the problem from a more objective perspective. Theory of Constraints and Prospect Theory will serve as theoretical guides for this investigation.

2.2.1 Theory of Constraints

Eliyahu M. Goldratt's (1984) Theory of Constraints (TOC) is a management concept that emphasizes fixing the link(s) in the chain that are causing the most problems. The theory assumes that every organisation has at least one bottleneck that prevents it from achieving its goals at any given moment (Pegels & Watrous, 2005).

Goldratt (1984) claims that restrictions in procedures and systems are what really influence an organization's performance. The TOC emphasizes the importance of identifying and managing constraints that limit the system's ability to achieve its goals. By application of this theory, organisations can identify and remove the most serious restrictions impeding their processes. In the case of water projects in Homa Bay County, the organizational capacity of the implementing organizations may be a constraint that limits the effectiveness of the implementation process. By identifying this constraint, the organizations can focus

their efforts on improving organizational capacity in a way that maximizes the overall effectiveness of the implementation process.

The TOC stresses the importance of ongoing improvement and problem-solving to keep the system functioning at its optimal level over time. In the context of water projects in Homa Bay County, this means that the organizations involved should continuously evaluate their performance and identify opportunities for improvement. By continuously improving their processes and addressing any constraints that arise, the organizations can increase efficiency in the implementation of water projects.

The TOC also promotes a system thinking approach, which recognizes that decisions made in one part of the system can have unintended consequences in other parts of the system. In the case of water projects in Homa Bay County, decisions made by implementing organizations regarding organizational capacity can have significant impacts on the implementation process and the achievement of project goals. By taking a systems thinking approach, the organizations can consider the broader impacts of their decisions and ensure that they are optimizing the overall effectiveness of the implementation process.

2.2.2 Prospect Theory

Tversky and Kahneman first introduced this concept in 1979. Fundamental to Prospect Theory is the premise that individuals weigh potential benefits and drawbacks while making choices. An individual's resistance to change, as predicted by Prospect Theory (Kahneman, 2011), is greater when the stakes of a potential job loss are higher than those of any potential benefits. Tversky and Kahneman's (1983) theory implies that individuals are generally prejudiced and untrustworthy in their judgements and that they are reluctant to losing what they have previously achieved.

The theory emphasizes the role of risk perception in decision-making, which is relevant to the implementation of water projects in Homa Bay County. When organizations are deciding whether to invest in water projects, they must weigh the potential gains against the potential losses, which may include financial costs, reputational risks, and operational

challenges. By understanding how people perceive risks and make decisions in uncertain situations, organizations can make better decisions about how to allocate resources and manage risks associated with water projects.

The theory also emphasizes the role of reference points in decision-making, which is relevant to the organizational capacity variable. Organizations may have different reference points for what constitutes adequate organizational capacity, which can influence their decisions about how to allocate resources and manage their capacity. By understanding how reference points influence decision-making, organizations can ensure that they are taking an appropriate and effective approach to building and managing their organizational capacity.

The theory further emphasizes that people evaluate outcomes in terms of gains and losses relative to a reference point, which is relevant to the implementation variable. The success of water projects can be evaluated in terms of gains or losses, depending on the reference point. By understanding how people evaluate outcomes, organizations can better communicate the potential benefits of water projects and build stakeholder support for implementation.

Overall, the prospect theory provides a useful framework for understanding how people make decisions and evaluate outcomes, which can help organizations improve their decision-making processes and manage risks associated with water projects.

2.3 Empirical Studies

2.3.1 Concept of Organizational Capacity

Organizational capacity denotes the competence of an entity to effectively employ its resources, such as personnel, monetary assets, and technological innovations, to realize its targets and aspirations. It encompasses the entity's ability to acclimate to evolving circumstances, innovate, and maintain competitiveness in its industry (Douglas, 2021). The four fundamental components of organizational capacity are human capital, financial

capital, infrastructure and technology. Human capital signifies the knowledge, proficiencies, and aptitudes of an entity's employees, whereas financial capital signifies the financial resources accessible to the entity. Infrastructure encompasses the physical amenities and equipment employed by the entity, while technology comprises the software, hardware, and other technological tools adopted by the entity (Rahi, 2019).

To cultivate and sustain organizational capacity, organizations must consistently assess, strategize, and refine their approaches. This process entails regular evaluations of capacity across these dimensions, pinpointing areas for growth or enhancement, and executing strategies to address these needs. As a result, organizations can become more resilient, agile, and effective in achieving their goals and accomplishing their missions (Rahi, 2019).

The term "capacity building" refers to a method of solving organizational problems that emphasizes developing people's abilities while giving them more freedom to make decisions on their own (Baillie, Bjarnholt, Gruber, & Hughes, 2009). It is essential for organizations to understand and enhance their capacity to ensure long-term success and sustainability. Emphasizing factors such as technological assets, employee training, coordination of new management capabilities, and adaptable organizational designs is crucial for fostering innovation, creating value, and maintaining a competitive edge in today's fast-paced business landscape.

2.3.2 Project Planning Capacity and Implementation of Water Projects

Creating a project plan is a management commitment to pursuing the arrangement of operations in the growth of the business, attracting and satisfying customers, competing effectively, leading duties, and enhancing the company's financial and market performance. Control mechanisms are put into a well-planned project to ensure that all required actions are taken to maximize the project's success in accordance with the plan. According to Shenhar (2008), controls ensure that the steps used to put plans into action are appropriate, feasible, and in line with their stated goals.

Plans for projects, as recommended by Taherdoost (2018), may help mitigate risks. While it is true that well-thought-out plans increase the likelihood of a project's success from the get-go, it is just as crucial to have stakeholders' involvement at various phases. According to Badewi (2016), a well-planned project is more likely to meet its deadlines and be carried out in a coordinated fashion across its various stages. In addition, thorough planning ensures that the project team stays on track and that all the appropriate parties are kept abreast of the project's development.

Similarly, Kerzner (2012) argued that planning aids in problem identification, the development of a strategy for addressing those problems, the description of the measurable positive effects of the project on its recipients, and the estimation of the resources and funding required for the project's actual implementation. Samset and Volden (2016) provided more evidence that in order to achieve a community plans, then well sequenced steps must be undertaken.

Kibet (2021), conducted research on Stakeholder Consultation and Implementation Water Projects: A Case of Machakos County, Kenya. The study targeted 172 water projects implemented in Machakos County with respondents being water committee members from each project. Questionnaires were employed to gather information from 120 participants overseeing 17 water initiatives. The quantitative data obtained was examined using both descriptive (averages, standard deviations, frequency, and percentages) and inferential (correlation) statistical methods. The research determined a substantial positive association ($r = 0.652$) between engaging with stakeholders and the successful execution of water projects. The study concluded that stakeholder consultation as a project planning and management process was a major factor in the successful implementation of water projects.

2.3.3 Human Resources Management Capacity and Implementation of Water Projects

The factors that affect worker productivity were analyzed by Belout and Gauvreau (2004) for their impact on project success. Staff members from a variety of initiatives were the focus of this descriptive analytic research. Human resource planning was proven to have a favourable effect on the success of projects. Based on the findings, it was suggested that businesses institute employee participation programs that give employees a voice in shaping an organisation's culture and direction. On the other hand, Wright et al., (2009) conducted research on the relationship between project success and the Human Resources (HR) procedures of 190 petrochemical refineries in the United States. The results of this research corroborated the hypothesis that an organization's leadership and management practices, including their approach to hiring and training new staff members have a direct impact on the level of motivation amongst its workers. HR approaches such as selection, training, leadership, and management styles were shown to positively correlate with project success in highly participatory systems.

Authors Sampson, Isaac, and Braimah found that 75% of technical personnel in Ghana's WASH sector are according to a study published in 2015 and titled "Human resources capacity in Ghana's water, sanitation, and hygiene: analysis of capacity gaps and policy implications," the majority of workers in Ghana are employed in the public water supply sub-sector, particularly in urban utilities. In contrast, the sanitation sub-sector is dominated by social development personnel, with only 2% of workers holding technical positions. According to the research, there is a huge gender gap in the industry, with women making up just 22% of the entire workforce. In addition, they advocated for the creation of quotas, financial assistance, mentorship, and gender-sensitive recruiting procedures to increase the number of women working in the field (Sampson, Isaac, & Braimah, 2014).

In a study conducted by the International Water Association (IWA) in 2014, human resource capacity gaps in the Water, Sanitation, and Hygiene (WASH) sector across 15 developing countries were examined to establish a baseline understanding of the crisis that

faced human resources in the sector. Key findings included a lack of appropriately skilled water professionals, poor data availability, and significant underrepresentation of women in the sector. The IWA suggested creating national capacity development initiatives with political support from the top down and input from a variety of stakeholders, highlighting the significance of coordinated efforts at both the regional and international levels to amass useful information on human resources and bolster the proof foundation for action plans and strategies (IWA, 2014).

2.3.4 Technological Capacity and Implementation of Water Projects

The impact of technology on the long-term viability of community-based water projects in rural Narok County, Kenya, was studied by Achieno and Mwangangi (2021). The research used a descriptive survey with a sample size of 85 participants drawn at random from 15 community water facilities serving the study's target population of 163. Open-ended questions were not included in the analysis. Community engagement and project management techniques were shown to have a positive and substantial association with sustainability, whereas the usage of technology and post-implementation assistance had a low link.

Idoro and Patunola-Ajayi (2009) conducted research in Nigeria and found that the public sector is slow to adopt modern project management tools, approaches, and techniques. This, in turn, causes public institutions and their contractors to fall short of meeting the projects' expected outcomes in terms of cost, scope, and schedule. Lack of financial backing, cultural barriers, and established political and social structures have all been identified in studies as obstacles to the successful execution of public sector initiatives in Nigeria (Idoro & Patunola-Ajayi, 2009).

The influence of technical elements and capacity on water accessibility was also studied by Yator and Kwasira (2020). A high positive association between technical elements and water accessibility was identified using a descriptive research methodology and correlation analysis, with technological factors accounting to 41.3% of water accessibility. The research also found that technical capability significantly influenced water availability in a

beneficial way. Water supply has been enhanced, new water sources without fluoride have been made accessible, and water delivery has become more efficient and sustainable thanks to technological improvements, according to the report. The study's authors determined that technical capability had an immediate impact on water project rollout, and that the participation of local beneficiaries was similarly important. Given its potential advantages, the research concluded that the County Government of Baringo should include technology and increase its technical capability in water delivery projects (Yator & Kwasira, 2020).

Eliab and Kisimbii did a study in 2020 utilizing Mji wa Kale in Mombasa County to determine what factors affect the success of water projects in densely populated areas. Seventy people were surveyed using a descriptive method; these people were drawn from the local community, purified water service providers, and water supply regulators. Questionnaires and interviews were used to compile the data, which was then analyzed using descriptive and inferential statistics. According to the results, technological intervention improved the efficiency of water projects in densely populated areas (Eliab & Kisimbii, 2020).

2.3.5 Financial Management Capacity and Implementation of Water Projects

According to research conducted by the Standish Group in the USA (CHAOS report 2009), only 32% of projects are able to meet their planned delivery time successfully. Budget constraints have put 44% of these projects at risk, with 24% expected to fail or be cancelled altogether. Research by Nakagami, Kubota, and Setiawan (2016) has shown that factors such as adequate funding to cover maintenance and repair costs, as well as skilled service providers to design and deliver high-quality water projects, are necessary for achieving project sustainability. Fielmua (2019) investigations in Tanzania verified this, finding that just 46% of rural water points were functional, and 25% of newly built systems broke after two years of operation. A shortage of funds, particularly for operation and maintenance, was cited as the cause of this unreliability.

Hassan, Osore, and Ong'ayo (2020) discovered that the main factors determining the capacity and sustainability of water projects were the availability of financial resources and

technical factors. During the financial planning phase of a project, which involved cost budgeting and estimating, they emphasized the critical importance of finishing the project within the allocated funds. Keeping track of and documenting expenses associated with the various work packages that made up the project was also essential. Creating a detailed and comprehensive budget was necessary to ensure the completion of a project within its timeframe and budget.

Antvik and Sjöholm (2013) looked at how finances affect the success of a project. The research concluded that cost estimates should be based on the project's scope, the Work Breakdown Structure, and be related to the project's plan. The research also indicated that accurate project estimation requires estimating the cost of each activity based on the unique activity circumstances. It is prudent to set aside some project funds for high-risk tasks for which there is insufficient information to make an accurate cost estimate.

In research conducted by Poonam Rani and Sangeeta Dharyan (2022), the focus was on the implications of budgeting on contemporary project management. The study aimed to explore the different approaches to project budget estimation, the steps for cost control, and the impact of budgeting on a company's financial feasibility. The researchers reviewed existing literature and conducted interviews with project managers to collect data on the topic. The study found that project budgeting plays a critical role in cost control and risk management, with two types of reserves identified - contingency reserve for identified risks and management reserve for unidentified risks. The study also emphasized the importance of project managers being aware of existing policies, guidelines, and procedures for resource acquisition.

2.3.6 Implementation of Water Projects

Contributing factors to a project's success include meeting project goals and satisfying stakeholder wants; having access to specialized tools and training; taking into account social and ethical considerations; adopting a unique perspective; and working within a reasonable budget (Sanvido, 2012). From the viewpoint of the many parties involved in a project, there is a direct link between thorough planning and the final product's quality

(Dvir and Lechler, 2014). The two researchers noted that a more certain likelihood of successful project implementation may be achieved by the precise description of technical and functional requirements in project planning. They also found that the advantages to the project's stakeholders are proportionate to how well the planning processes are implemented. Therefore, the level of preparation that has gone into a project is directly proportional to its likelihood of success.

Kariungi (2014) examined the advantages gained from the best possible scheduling and planning, as well as the dedication and expertise of project managers and stakeholders. Despite several theoretical arguments on the value of project planning, actual study on the efficiency with which it is allocated in projects is lacking. The effects of technology on the long-term viability of rural water systems were investigated in Tonga (2020). The research confirms the widespread lack of adherence to policy in the rural water delivery sector in many developing countries like Tanzania. Poor corporate governance in decision making and execution of sustainable and quality water service provision has historically plagued public sector entities in Tanzania. In addition, the inability of donors and government agencies to effectively collaborate with local populations means that rural water supply projects cannot be sustained by the use of water technology.

In the research, Kerzer (2012) cited the presence of an organizational contingency as one of the main benefits of creating an implementation technique. Integrated project management leads to a rise in the number of interdependent departments and functions within a company. When an organization's management is properly informed on the project's overarching objectives, it can better steer the project toward success. This allows for input from the top down, the bottom up, and inside functional units, which in turn helps lower resistance to change. This allows for communication between different levels of management and also between different functional units, which in turn helps lessen resistance to change.

Tafara (2013) investigated the impact of rural community-based water projects on sustainability in Mtito Andei, Kibwezi County, Kenya. Those who were engaged in the

projects' conception and administration were interviewed, as were water experts and residents of the communities where the programs were implemented. The research also found that elements of the project, such as education, technology, cost, and construction quality, had a direct impact on the longevity of rural water delivery systems. According to the results, the absence of information management systems, automated systems, adequate tools and equipment, technological expertise, and replacement parts all have a role in disrupting the regular delivery of water to homes.

In 2017, researchers Muniu, Gakuu, and Rambo looked at how community involvement in decision making affected the long-term viability of community water projects in Nyeri County, Kenya. A total of 290 recipients of the water project's benefits, 8 participants in focus groups, and 10 water officers provided information for this study. The authors discovered that community engagement significantly influenced the durability of community water initiatives, and that higher levels of participation led to longer-lasting programs. Muniu, Gakuu, and Rambo (2017) argued that in order for community initiatives to be sustainable, they need engage beneficiaries in all phases of project execution and administration.

Abdi Adan Hagarsu, Luketero Stephen Wanyonyi, and Reuben Wambua Kikwatha did research in the Saku sub-county of Marsabit County, Kenya in 2020 on the primary factors of success in community water projects. The study used a descriptive research approach informed by theories of Community Development to investigate how choices regarding management planning, financing, community engagement, and project governance affected project outcomes. The research concluded that the success of community water projects was significantly affected by factors such as stakeholder engagement and planning, as well as skilled human resources. Community involvement was shown to have the least effect on project success, while financing and governance regulations were second and third, respectively, in the research. According to the research (Hagarsu, Wanyonyi, & Kikwatha, 2020), the government should take efforts to avoid corruption during project execution and advocate for inclusive planning at all stages of the project life cycle.

Machakos County in semi-arid Kenya was the topic of a research by Mutuku, Mueke, and Mwangi (2021), who looked at how resource planning affected the completion of water projects in the region. A total of 648 beneficiaries, members of water management committees, sub-county water officials, and local coordinators participated in the study, and 241 of them were surveyed. Using both descriptive and inferential statistics, we were able to draw a correlation between forethoughtful resource allocation and the timely conclusion of water infrastructure projects. The research urged policymakers to raise statutory provision to speed up the construction of water projects.

2.4 Conceptual Framework

The conceptual framework emphasizes the interdependence of the factors. Project planning capacity, technical capacity, human resources management capacity and financial management capacity are independent variables, while project implementation performance is the dependent variable, with project delivery timeliness, attainment of established goals, budget management, and overall client satisfaction as important performance indicators.

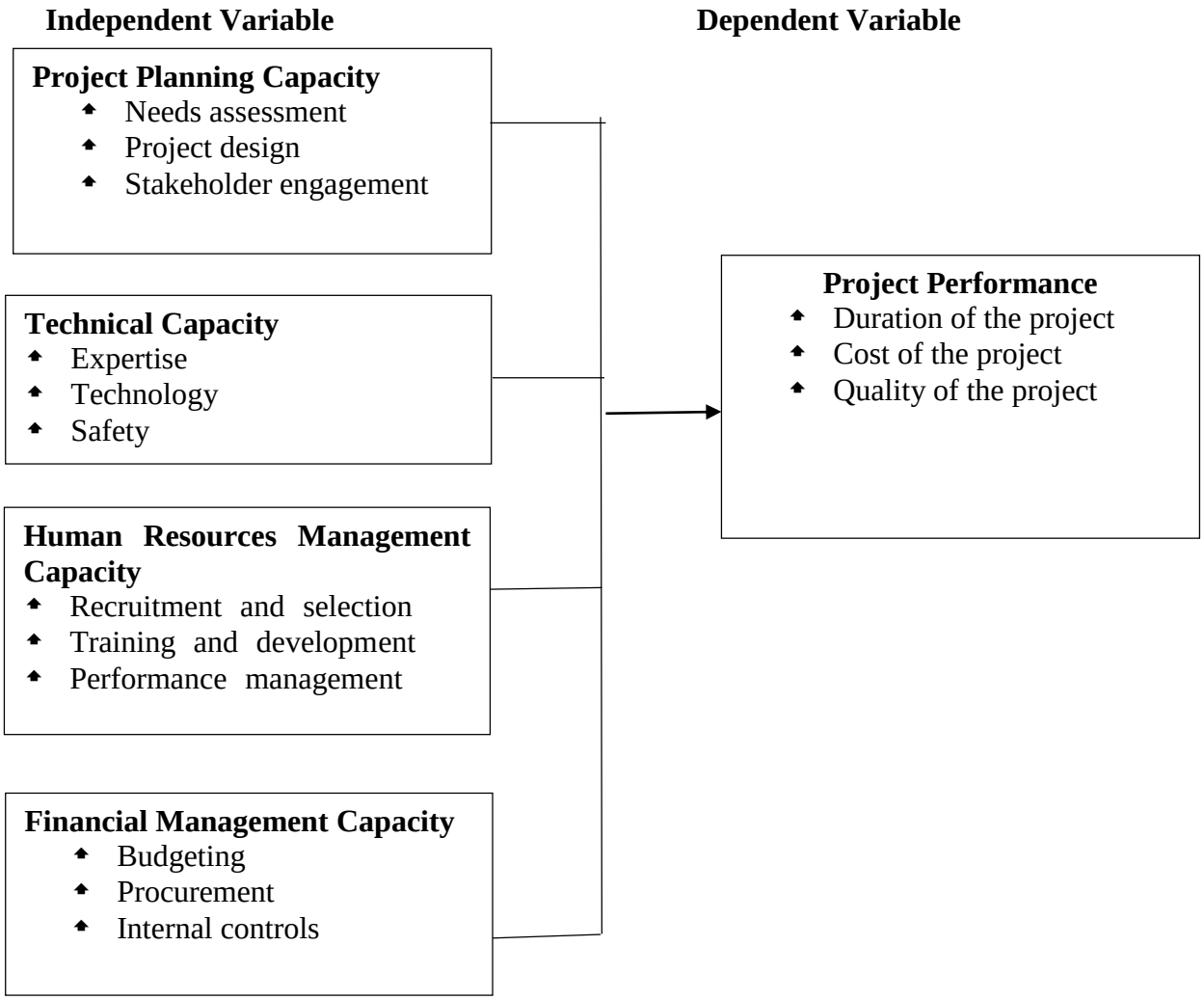

Figure 2.1 Conceptual Framework

Source: (Researcher, 2023)

2.5 Summary of Literature Review and Research Gaps

The review draws on a range of research studies to identify the factors that contribute to successful project implementation. These include effective project planning, technical capacity, human resource management, and financial management capacity. The review highlights the interdependence of these factors and the importance of continuous improvement in project management processes.

Research studies discussed in the review reveal that effective financial management is essential for achieving project sustainability. Inadequate funding for maintenance and

repair costs, as well as a lack of skilled service providers, contribute to project failure. The review also highlights the importance of accurate project budgeting and cost estimation, as well as the need for effective communication and collaboration among different levels of management and functional units. Theoretical frameworks such as the Theory of Constraints and Prospect Theory are also discussed in the review as useful guides for understanding factors that cause observed phenomena and improving decision-making processes.

The review highlights the importance of effective project planning, technical capacity, human resource management, and financial management capacity in achieving successful implementation of water projects. The review provides useful insights for organizations involved in the implementation of water projects and other similar settings, emphasizing the need for careful planning, efficient resource allocation, and ongoing evaluation and improvement

Based on the literature review, there are several research gaps that need to be addressed in future studies. While there is a significant body of literature on the technical aspects of water project implementation, there is a need for more research on the organizational capacity of implementing organizations. Specifically, studies are needed to explore how organizational capacity affects the effectiveness of water project implementation and how organizations can improve their capacity to maximize the impact of water projects.

While studies have highlighted the importance of adequate funding and financial planning for water project sustainability, there is a need for more research on how organizations can effectively manage project budgets and how they can ensure that adequate resources are available for operation and maintenance.

Third, there is a need for more research on the implementation of water projects, particularly in terms of stakeholder engagement and participation. Studies are needed to explore how organizations can effectively engage with stakeholders and ensure that their needs and preferences are taken into account in project planning and implementation.

Finally, there is a need for more research on the impact of water projects on the broader social, economic, and environmental contexts in which they are implemented. While studies have highlighted the importance of considering the broader impacts of water projects, there is a need for more research on how water projects can be designed and implemented in a way that maximizes their positive impacts and minimizes any negative consequences.

Overall, the literature review highlights several research gaps that need to be addressed in future studies to improve the effectiveness and sustainability of water project implementation. These include a need for more research on the organizational capacity of implementing organizations, financial management, stakeholder engagement, and the broader impacts of water projects. Addressing these research gaps can help to improve the design and implementation of water projects and ensure that they are able to achieve their intended goals and contribute to sustainable development.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This Chapter, comprises of the study's methodology, demographic, sampling strategy, sample size, data collection techniques, and analytic methodologies.

3.2 Research Design

Descriptive research design was adopted in this study. Cozby (2005) defines descriptive research as the process of acquiring information on the present status of a phenomena via in-depth interviews and surveys. The research design was chosen since it is useful in providing a detailed description of a phenomenon as well as to help quantify data and identify patterns and trends.

3.3 Target Population

The target population was 336 participants composed of Project Contractors, Project Management Members including Project Engineers, Project Managers, Project Management Committee. The population is in charge of the 42 projects in Homa Bay County. The target population distribution is shown in Table 3.1.

Table 3.1: Population Distribution

S/No.	Description	Population
1	Contractors	42
2	Project Managers	42
3	Project Engineers	42
4	Project Management Committee	210
5	**Total**	**336**

3.4 Sample Size and Sampling Procedure

3.4.1 Sample Size

The term "sampling unit" refers to the size of the population being sampled (Patten & Newhart, 2017). The chosen representational sample members are included (Kothari, 2014). According to Sekaran and Bougie's (2010) recommendations, an adequate sample

size for most studies is between 30 and 500 people. The following is an example of the use of Slovin's formula (1960):

$n = N/ (1+Ne^2)$,

Where;

n = Sample Size

N = Total Population

e = Error of Tolerance with a confidence level of 95% (giving a margin error of 0.05)

n = 336 / (1+ 336*0.05*0.05) = 183

Hence, the sample size in this study was determined as 183.

However, proportionate stratification was carried out for each group to determine the distribution of participants across the four groups. This was done by dividing the sample size for each group by the total population size:

Contractors: (42 / 336) x 183 ≈ 22

Project Managers: (42 / 336) x 183 ≈ 22

Project Engineers: (42 / 336) x 183 ≈ 22

Project Management Committee: (210 / 336) x 183 ≈ 117

Based on Slovin's formula, the sample included 22 Contractors, 22 Project Managers, 22 Project Engineers, and 117 members of the Project Management Committee.

3.4.2 Sampling Procedure

After determining the sample size for each stratum using proportionate stratification, a simple random sampling was carried out within each stratum. Random Number Table was utilised.

3.5 Data Collection

Data was gathered from a representative sample of the target population (Contractors, Project Managers, Project Engineers, and Project Management Committees) using

structured questionnaires. The questionnaire included both closed and open-ended questions so that quantitative and qualitative information was be gathered. Respondents were given a scale from 1–5 on which to score their replies.

3.6 Instrument Pre-Testing

3.6.1 Pilot Test

Pilot testing was done using 34 persons drawn from Project Engineers, Project Managers, Project Management Committee (PMC) members, from 5 water projects in Kisumu. This small sample of participants is similar to the target population. Pilot tests are described by Kombo and Tromp (2009) and Kothari (2014) as a "dry run" of the actual survey. Polit and Beck (2013) state that a pilot test's primary function is to evaluate study procedures, data-collecting tools, sample recruitment tactics, and other components before launching a full-scale study.

3.6.2 Validity

Validity refers to whether the instrument measures what it intends to measure. The experts in the field were requested to review the instrument and provide feedback on whether the items were relevant and comprehensive.

3.6.3 Reliability

Reliability, as defined by Moskal and Leydens (2000), is the degree to which evaluation instrument yields consistent and reliable findings. All respondents were asked the same questions in the surveys to ensure consistency. Cronbach's alpha, a correlation coefficient, was used in conjunction with SPSS to examine the internal consistency of the questionnaire (Saunders et al., 2016). Data collected from the pilot test was coded on SPSS software, and Cronbach computed. A reliability alpha of 0.70 or higher was considered satisfactory (Saunders *et al*., 2016).

3.7 Data Analysis

The collected data was analyzed using descriptive statistics. To comprehend the impact of organizational capability and the execution of water projects in Homa Bay County, an

analytical approach was needed. The collected data was reviewed to verify questionnaires for typos, logical mistakes, and missing information. Data analysis was performed using Stata 16 and descriptive statistics for quantitative data. The data was stored in a database following coding, labeling, and input.

3.8 Ethical Consideration

Bryman and Bell's (2007) principles provide a comprehensive guide for ensuring ethical considerations in research. Researchers must prioritize the rights and dignity of research participants throughout the research process to avoid any harm, respect their privacy, and ensure full and informed consent. Adhering to these principles ensured that the research was conducted ethically and contributed to the credibility and validity of the research findings.

The researcher approached NACOSTI for a formal approval letter. The researcher used information collected only for academic purposes. Confidentiality was maintained by ensuring anonymity. The researcher gave the research objectives in detail to the respondents, and the confidentiality of the data collected was guaranteed to them.

CHAPTER FOUR: PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

4.1 Introduction

This chapter presents data analysis, results interpretation, presentation, and discussion of the study findings. The Chapter covers response rate, pilot test results, demographic information, and descriptive statistics. The Chapter also encompasses inferential statistics, including correlation and regression analyses. This study sought to examine the role of organizational capacity and implementation of water projects in Homa Bay County, Kenya. Specifically, the study sought to examine the role of Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, and Financial Management Capacity on the performance of water projects in Homa Bay County.

4.2 Response Rate

The study's sampling frame was 183 respondents comprising Project Contractors, Project Engineers, Project Managers and Project Management Committee members drawn from 42 projects in Homa Bay County. The researcher administered each respondent a questionnaire. The results are shown in Table 4.1

Table 4.1 Response Rate

Sample Size	No. of Respondents	Response Rate
183	164	89%

From the 183 questionnaires, 164 were filled and returned, hence a response rate of 89%. The response rate was considered suitable for making inferences from the collected data. Metsamuuronen (2017) indicates that a response rate above 50% is considered adequate for data analysis and reporting, while a response rate above 70% is classified as excellent. Hence, the response rate of this study was within acceptable limits for drawing conclusions and making recommendations.

4.3 Pilot Test Results

Kothari (2004) noted that conducting a pilot study of the questionnaires is always advisable before using a questionnaire as a data collection method. This helps to bring into light the weaknesses (if any) of the questionnaires, and the experience gained in this way can be used to effect improvement. Tayie (2005) suggests that samples of 25-50 are commonly used for pretesting measurement instruments. For this study, the pilot study was done using 10% of the population, giving 34 respondents in 5 water projects in Kisumu County.

4.3.1 Reliability

The reliability of a measure, concerns its ability to produce similar results when repeated measurements are made under identical conditions. The more variability is observed, the less reliable the measure is (Kenneth & Bordens, 2010). The reliability of a scale indicates how free it is from random error. Variables derived from test instruments are declared reliable only when they provide stable and reliable responses over a repeated test administration (Santos, 1999). The reliability coefficient (alpha = α) ranges from 0 to 1, with 0 representing an instrument full of error and 1 representing the total absence of error. A reliability coefficient (alpha) of 0.70 or higher is considered acceptable reliability (Groves, 1987). Nevertheless, the study did not include data acquired from the pilot test. The researcher ensured that all the Cronbach alpha values of the variables under investigation were above 0.7.

From the findings, the performance of water projects in Homa Bay County had an average Cronbach's reliability alpha of 0.789; Project Planning Capacity had a Cronbach's reliability alpha of 0.803. Technical Capacity had an average Cronbach's reliability alpha of 0.805, Human Resources Management Capacity had a Cronbach's reliability alpha of 0.813 and Financial Management Capacity had a Cronbach's reliability alpha of 0.827. This shows that the study questionnaire met the reliability criteria ($\alpha > 0.7$).

Table 4.2: Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Performance of water projects	0.789	Reliable
Project Planning Capacity	0.803	Reliable
Technical Capacity	0.805	Reliable
Human Resources Management Capacity	0.813	Reliable
Financial Management Capacity	0.827	Reliable

4.3.2 Validity

According to Creswell and Creswell (2017), validity indicates the degree to which an instrument measures what it is supposed to measure. It is the extent to which differences found with a measuring instrument reflect actual differences among those being tested. Bryman and Bell (2011) highlighted that validity is the most significant criterion for research. The study collected data from 5 water projects in Kisumu County and the questionnaire's test face, content, and construct validity were conducted. Content validity in this investigation was increased by obtaining expert opinions in this specific field of study, more so the supervisors. In addition, the research instrument's face validity was increased by conducting a pilot test and altering ambiguous and indistinct questions.

4.4 Demographic Information

The respondents' demographic information comprised gender, age, level of education, experience, and stakeholder group of the respondents in the water projects in Homa Bay County. The distribution of the demographic characteristics of the respondents is shown in Table 4.3.

Table 4.3: Distribution of Demographic Characteristics of Respondents

Demographic Description		**Frequency**	**Percentage**
Gender	Male	133	81.1%
	Female	27	16.5%
	Prefer Not to Say	4	2.4%
	Total	**164**	**100.0%**
Participant's Age	Below 25	3	1.8%
	26-35	41	25.0%
	36-45	77	47.0%
	46-55	39	23.8%
	Above 56	4	2.4%
	Total	**164**	**100.0%**
Highest Education Level	Doctorate	0	0.0%
	Master's Degree	3	1.8%
	Bachelor's Degree	39	23.8%
	Diploma	30	18.3%
	Certificate	54	32.9%
	Others	38	23.2%
	Total	**164**	**100.0%**
Experience in Water Projects	Below 1 year	3	1.8%
	Between 1-5 years	23	14.0%
	Between 5-10 years	114	69.5%
	Above 10 years	24	14.6%
	Total	**164**	**100.0%**
Stakeholder Group	Project Manager	18	11.0%
	Contractor	19	11.6%
	Project Engineer	17	10.4%
	Project Management Committee	110	67.1%
	Total	**164**	**100.0%**

4.4.1 Gender of the Respondents

The breakdown of gender among the study participants indicates a notable predominance of males, comprising 81.1% of the respondents, while females represent a comparatively smaller proportion at 16.5%, with a minor 2.4% opting not to disclose their gender. In the context of the study focused on organizational capacity and the execution of water projects in Homa Bay County, this gender disparity is noteworthy. It highlights the significance of acknowledging gender diversity and equity within organizations involved in water

projects, given its potential influence on the array of viewpoints, experiences, and insights brought to the forefront. Striving for gender balance becomes essential to foster inclusiveness, which, in turn, has the potential to enhance an organization's effectiveness in addressing water projects. Moreover, recognizing and addressing gender-specific considerations and challenges in project planning and execution plays a critical role in ensuring equitable outcomes and the prosperous realization of projects.

4.4.2 Age of the Respondents

The age distribution of the participants in the study shows a wide-ranging demographic composition within the group. A small proportion (1.8%) is below the age of 25, with a more significant contingent falling within the 26-35 (25.0%) and 36-45 (47.0%) age groups, suggesting a substantial presence of individuals in their late twenties to mid-forties. Additionally, 23.8% are in the 46-55 age range, while only 2.4% are above the age of 56. This diversity in age is pertinent to the study on organizational capacity and the implementation of water projects in Homa Bay County. It suggests that the study's participants come from different age cohorts, each potentially offering distinct perspectives, experiences, and capabilities that can influence the capacity of organizations involved in water projects. Younger participants may bring fresh ideas and technological expertise, while older participants might contribute valuable experience and institutional knowledge. Managing this age diversity effectively can enhance the organization's capacity for successful project implementation, ensuring a well-rounded approach that considers the needs and insights of various age groups.

4.4.3 Level of Education

The gender composition of the study's participants indicates a substantial majority of males, accounting for 81.1% of the respondents, while females represent a smaller percentage at 16.5%, and a minority (2.4%) opted not to disclose their gender. In the context of the study concerning organizational capacity and the execution of water projects in Homa Bay County, this gender imbalance is worth noting. It underscores the importance of recognizing gender diversity and equity within organizations engaged in water projects, as it can potentially affect the range of perspectives, experiences, and insights that

contribute to the study. Striving for gender balance is essential for fostering inclusivity and has the potential to enhance the organization's effectiveness in addressing water projects. Additionally, acknowledging and addressing gender-specific considerations and challenges in project planning and execution is crucial to ensuring fair and successful project outcomes

4.4.4 Experience

The data on respondents' experience in water projects illustrates a diverse range of expertise among the participants. A small percentage (1.8%) is relatively new to the field, with less than one year of experience, while 14.0% have gained moderate experience with 1 to 5 years. The majority (69.5%) fall within the 5 to 10 years category, signifying a significant level of expertise and likely indicating involvement in numerous water-related projects over an extended period. Moreover, 14.6% of the respondents possess over 10 years of experience, reflecting a group of seasoned professionals with substantial knowledge in the realm of water projects. This distribution of experience levels offers valuable insights into the composition of the surveyed participants in the context of water-related projects.

4.4.5 Stakeholder Group

The data on stakeholder groups reveals a diverse composition of respondents' roles and responsibilities in the context of water projects. The majority (67.1%) are part of Project Management Committees, emphasizing the importance of collaborative governance and decision-making in the oversight of water projects. Additionally, Project Managers (11.0%), Contractors (11.6%), and Project Engineers (10.4%) represent key roles involved in different phases of project planning, execution, and technical aspects. This distribution underscores the multifaceted nature of water project management, with various stakeholders contributing to different aspects of project success and implementation.

4.5 Descriptive Statistics Analysis

This section presents descriptive statistics on Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, Financial Management Capacity, and the performance of water projects in Homa Bay County.

4.5.1 Performance of water projects in Homa Bay County.

The respondents were requested to indicate their level of agreement on various statements relating to the performance of water projects in Homa Bay County. A 5-point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree, and 5 symbolized strongly agree. The scores of disagreeing have been taken to represent a variable with a mean score of 0 to 2.4 on the continuous Likert scale (0≤ Mean<2.4). The scores of 'Undecided have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous Likert scale (2.5≤Mean<3.4), and the scores of both agree and strongly agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; (3.5≤ S.A. <5.0). The results are presented in Table 4.4.

Table 4.4: Performance of water projects in Homa Bay County

Variables	Mean	Std. Dev.	Skew.	Kurt.
Projects are carried out within the stipulated budget	1.823	1.05	1.281	3.882
Projects are carried out within the stipulated time schedule	2.183	1.179	.746	2.624
Projects executed to specifications	1.909	1.252	1.245	3.357
Projects carried out address the needs of customers	4.519	1.291	.92	2.704
Projects will continue to generate revenues to ensure it continues to operate long after the donor has stopped giving major project and technical support	2.067	1.016	.746	2.91
Projects met the original goal and business intent (scope)	2.232	1.341	.888	2.572
Project results met stakeholder expectations	2.232	1.332	.867	2.549

From the results, the respondents disagreed that projects met the original goal and business intent (scope). This is supported by a mean of 2.232 (std. dv = 1.341). This variable is positively skewed, suggesting that there may be instances where projects do not fully meet their original goals and business intent (skw. 0.888). The positive kurtosis indicates the

presence of potential outliers in the study (Kurt 2.572). In addition, as shown by a mean of 2.232 (std. dv = 1.332), the respondents disagreed that project results met stakeholder expectations. Further, the respondents disagreed that the projects are carried out within the stipulated time schedule. This is shown by a mean of 2.183 (std. dv = 1.179).

With a mean of 2.067 (std. dv = 1.016), the respondents disagreed that the projects will continue generating revenues to ensure they continue operating long after the donor has stopped giving major project and technical support. In addition, as shown by a mean of 1.909 (std. dv = 1.252), the respondents disagreed that, generally, projects are executed to specifications. Further, the respondents disagreed that the projects were within the stipulated budget. This is shown by a mean of 1.823 (std. dv = 1.05).

4.5.2 Project Planning Capacity and Performance of water projects in Homa Bay County

The first specific objective of the study was to examine the role of Project Planning Capacity on the performance of water projects in Homa Bay County. The respondents were requested to indicate their level of agreement on statements relating to Project Planning Capacity and Performance of Water Projects in Homa Bay County. A 5-point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutrals, 4 symbolized agree, and 5 symbolized strongly agree. The scores of disagreeing have been taken to represent a variable with a mean score of 0 to 2.4 on the continuous Likert scale (0≤ Mean<2.4). The scores of 'Undecided have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous Likert scale (2.5≤Mean<3.4), and the scores of both agree and strongly agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; (3.5≤ S.A. <5.0). The results are presented in Table 4.5.

Table 4.5: Project Planning Capacity and Performance of water projects in Homa Bay County

Variables	Mean	Std. Dev.	Skew.	Kurt.
The project planning process for water projects in Homa Bay County is thorough and comprehensive	2.274	1.293	.897	2.689
The project planning phase includes thorough feasibility studies and assessments to identify potential risks, challenges, and opportunities	2.341	1.195	.508	2.257
Stakeholders are actively engaged and involved in the project planning phase of water projects in Homa Bay County	2.64	1.374	.324	1.905
Adequate resources (financial, human, and technical) are allocated during the project planning phase to ensure successful implementation	2.226	1.367	.845	2.436
The project planning documentation, such as project projects and implementation plans, are well-prepared and detailed in Homa Bay County	2.177	1.218	.823	2.743
Project planning in Homa Bay County incorporates clear timelines, milestones, and performance indicators to monitor and evaluate project progress	2.457	1.23	.545	2.454

From the results, the respondents were undecided whether the stakeholders were actively engaged and involved in the project planning phase of water projects in Homa Bay County. This is supported by a mean of 2.64 (std. dv = 1.374). In addition, as shown by a mean of 2.457 (std. dv = 1.23), the respondents were undecided whether project planning in Homa Bay County incorporates clear timelines, milestones, and performance indicators to monitor and evaluate project progress. Further, the respondents disagreed that the project planning phase includes thorough feasibility studies and assessments to identify potential risks, challenges, and opportunities. This is shown by a mean of 2.341 (std. dv = 1.195).

The respondents also disagreed that the project planning process for water projects in Homa Bay County is thorough and comprehensive. This is shown by a mean of 2.274 (std. dv = 1.293). With a mean of 2.226 (std. dv = 1.367), the respondents disagreed that adequate resources (financial, human, and technical) are allocated during the project planning phase to ensure successful implementation. The respondents also disagreed that the project planning documentation, such as project projects and implementation plans, are well-prepared and detailed in Homa Bay County. This is shown by a mean of 2.177 (std. dv = 1.218).

4.5.3 Technical Capacity and Performance of water projects in Homa Bay County

The second specific objective of the study was to determine the role of technical capacity on the performance of water projects in Homa Bay County. The respondents were requested to indicate their level of agreement on technical capacity and the performance of water projects in Homa Bay County. The results were as shown in Table 4.6

Table 4.6: Technical Capacity and Performance of water projects in Homa Bay County

Descriptive Statistics

Variables	Mean	Std. Dev.	Skew.	Kurt.
The availability of qualified engineers and technicians is sufficient to support the implementation of water projects in Homa Bay County	4.054	1.121	1.080	3.016
The technical personnel involved in water projects demonstrate a high level of expertise and knowledge	4.074	1.169	.763	2.624
The equipment and tools necessary for implementing water projects are adequately provided and maintained in Homa Bay County.	2.067	1.204	.941	2.79
Technical resources, such as laboratories and testing facilities, are available and accessible for conducting assessments and quality control	4.881	1.151	.956	3.027

There is a well-defined process for technical evaluation and selection of water project projects in Homa Bay County	4.371	1.212	1.005	3.057
There is effective coordination and communication between technical personnel and other stakeholders involved in water project implementation	2.091	1.155	.922	3.004
The technical knowledge and skills of the personnel are regularly updated and upgraded	4.079	1.367	.845	2.436

From the findings, the respondents strongly agreed that technical resources, such as laboratories and testing facilities, are available and accessible for conducting assessments and quality control (Mean=4.881, SD= 1.151). They agreed that there is a well-defined process for technical evaluation and selection of water project projects in Homa Bay County (Mean=4.371, SD=1.212), the availability of qualified engineers and technicians is sufficient to support the implementation of water projects in Homa Bay County (Mean=4.054, SD=1.121). They also agreed that the technical personnel involved in water projects demonstrate a high level of expertise and knowledge (Mean=4.074, SD=1.169), and that the technical knowledge and skills of the personnel are regularly updated and upgraded (Mean=4.079, SD=1.367). They however disagreed that the equipment and tools necessary for implementing water projects are adequately provided and maintained in Homa Bay County (Mean=2.067, SD=1.204), and that there is effective coordination and communication between technical personnel and other stakeholders involved in water project implementation (Mean=2.091, SD=1.155).

4.5.4 Human Resources Management Capacity and Performance of Water Projects in Homa Bay County

The third specific objective of the study was to establish the role of Human Resources Management Capacity on the Performance of Water Projects in Homa Bay County. The respondents were requested to indicate their level of agreement on various statements relating to Human Resources Management Capacity and the performance of water projects in Homa Bay County. A 5-point Likert scale was used where 1 symbolized strongly

disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree, and 5 symbolized strongly agree. The results are presented in Table 4.7.

Table 4.7: Human Resources Management Capacity and Performance of water projects in Homa Bay County

Variables	Mean	Std. Dev.	Skew.	Kurt.
Our organisation trains project teams to ensure that projects run within the allocated time schedule	4.329	1.38	.773	2.294
The highest professional training on the implementation of water projects has been given	2.183	1.179	.746	2.624
An appropriate criterion for appointment is practiced	1.909	1.252	1.245	3.357
Trainings are frequently scheduled for project implementation	4.244	1.249	.801	2.642
Appropriate leadership style for the implementation of projects is practiced	3.098	1.209	1.002	3.063
There is the encouragement to experiment with new approaches/ideas and to take calculated risks	2.043	1.115	.928	3.054
A general culture of continuous improvement in all activities throughout the organization is present	4.104	1.17	.973	3.072
The organization has recruited competent top management teams, which is vital to meeting our strategic goal	4.159	1.291	.92	2.704

From the results, the respondents agreed that the organisation trains project teams to ensure that projects run within the allocated time schedule (Mean=4.329, SD=1.438), and that trainings are frequently scheduled for project implementation (Mean= 4.244, SD=1.249). They also agreed that there is encouragement to experiment with new approaches/ideas and to take calculated risks (Mean=2.043, SD=1.115), and a general culture of continuous improvement in all activities throughout the organization is present (Mean=4.104, SD=1.17),. In addition, they agreed that the organization has recruited competent top management teams, which is vital to meeting our strategic goal (Mean=4.159, SD=1.291).

Further, the respondents were undecided whether appropriate leadership style for the implementation of projects is practiced (Mean=3.098, SD=1.209). They disagreed that the highest professional training on the implementation of water projects has been given (Mean =2.183, SD=1.179) and appropriate criterion for appointment is practiced (Mean=1.909, SD=1.252).

4.5.5 Financial Management Capacity and Performance of Water Projects in Homa Bay County

The fourth specific objective of the study was to examine the role of Financial Management Capacity on the Performance of Water Projects in Homa Bay County. The respondents were requested to indicate their level of agreement on various statements relating to Financial Management Capacity and performance of water projects in Homa Bay County. A 5-point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree, and 5 symbolized strongly agree. The results are presented in Table 4.8.

Table 4.8: Financial Management Capacity and Performance of water projects in Homa Bay County

Variables	Mean	Std. Dev.	Skew.	Kurt.
The insurance premiums on the project are paid regularly	2.329	1.38	.773	2.294
Our organization has a system that ensures risk is transferred to minimize financial stress	2.183	1.179	.746	2.624
Maintenance of cost according to budget	1.909	1.252	1.245	3.357
Systems have been put in place to reduce wastage of resources and materials	2.244	1.249	.801	2.642
Costs are allocated to rectify any defects	2.098	1.209	1.002	3.063
Costs are allocated for training the project team	2.043	1.115	.928	3.054

We have access to financing from financial agencies	2.104	1.17	.973	3.072
The insurance premiums on the project are paid regularly	2.159	1.291	.92	2.704

From the results, the respondents disagreed that the insurance premiums on the project are paid regularly. This is supported by a mean of 2.329 (std. dv = 1.38). In addition, as shown by a mean of 2.244 (std. dv = 1.249), the respondents disagreed that systems had been implemented to reduce the wastage of resources and materials. Further, the respondents disagreed that the impelementing entities have a system that ensures risk is transferred to minimize financial stress. This is shown by a mean of 2.183 (std. dv = 1.179).

Further, the respondents disagreed that project insurance premiums are paid regularly. This is supported by a mean of 2.159 (std. dv = 1.291). In addition, as shown by a mean of 2.104 (std. dv = 1.17), the respondents disagreed that they have access to financing from financial agencies. Further, the respondents disagreed that costs are allocated to rectify any defects. This is shown by a mean of 2.098 (std. dv = 1.209). With a mean of 2.043 (std. dv = 1.115), the respondents also disagreed that costs are allocated for training the project team. Further, from the results, the respondents disagreed that cost maintenance is done according to budget. This is supported by a mean of 1.252 (std. dv = 1.909).

4.6 Diagnostic Tests

Diagnostic tests were performed to test the assumptions of linear regression. The assumptions tested were linear and normality relationship. In case of violation of the regression assumptions, the confidence intervals, as well as other scientific insights derived from the regression model, may be regarded as misleading, biased, or inefficient. Therefore, the inferences derived are incapable of being generalizable on other data.

4.6.1 Linearity Test

When the value of sig. Deviation from the linearity > 0.05, then in the multiple regression model, it can be said that the predictor variables significantly affect the response variable.

If the value sig. Deviation from linearity is < 0.05, then the relationship between the predictor and the response variable is partially significant. In Table 4.9, the sig. value of Project Planning Capacity = 0.663; Technical Capacity = 0.555; Human Resources Management Capacity = 0.563; and Financial Management capacity. Concerning these results, the appropriate basis for decision-making in our multiple linear regression model analysis can be concluded that there is a significant linear relationship between the dependent and the independent variables. Thus, increasing the effect of the predictors improves the response variable.

Table 4.9: Coefficients of Linearity Test

Model	**Sig.**	**95.0% Confidence Interval for B**		**Collinearity Statistics**	
		Lower Bound	**Upper Bound**	**Tolerance**	**VIF**
Project Planning Capacity	.663	-13.627	11.412	.551	1.816
Technical Capacity	.555	-19.784	23.728	.192	5.200
Human Resources Management Capacity	.563	-21.061	18.506	.163	6.136
Financial Management Capacity	.674	-10.159	11.100	.600	1.665

4.6.2 Normality Test

A normality test determines whether a dataset is modeled for normal distribution. A normal or nearly normal distribution is a fundamental condition of many statistical functions. Normally distributed data assumes a symmetrical or bell-shaped curve with a higher frequency of scores in the midpoint and lower frequencies towards the extremes.

There are two main methods of assessing normality: graphically and statistically. Tests for normality include skewness and Kurtosis, Kolmogorov-Smirnov Test, and the Shapiro-Wilk. This research adopts the Shapiro-Wilk test due to the study's small sample size. The null hypothesis for this test is that the data are normally distributed. The Prob < W value listed in the output is the p-value. If the chosen alpha level is 0.05 and the p-value is less than 0.05, then the null hypothesis that the data are normally distributed is rejected. If the

p-value is more significant than 0.05, then the null hypothesis is not rejected. As tabulated in Table 4.10, the p-values of all the study variables are more significant than 0.05, thus confirming that the data is normally distributed.

Table 4.10: Normality Test

Variable	Obs	W	V	z	Prob>z
Project Planning Capacity	164	0.92223	1.299	0.510	0.30494
Technical Capacity	164	0.92945	1.179	0.321	0.37427
Human Resources Management Capacity	164	0.96644	0.561	-1.127	0.87020
Financial Management Capacity	164	0.96727	0.547	-1.176	0.88023

4.7 Inferential Statistics

Inferential statistics in the current study focused on correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship. In contrast, regression analysis was used to determine the relationship between the dependent variable (performance of water projects in Homa Bay County) and independent variables (Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, and Financial Management Capacity).

4.7.1 Correlation Analysis

This study used Pearson correlation analysis to determine the strength of the association between independent variables and the dependent variable. Pearson correlation coefficient ranges between zero and one, where the strength of association increases with the correlation coefficients' value increase. The current study employed Taylor's (2018) correlation coefficient ratings where 0.80 to 1.00 depicts a strong relationship, 0.60 to 0.79 is strong, 0.40 to 0.59 is moderate, and 0.20 to 0.39 is weak.

Table 4.11: Correlation Coefficients

Variables	(1)	(2)	(3)	(4)	(5)
(1) Performance of water projects	1.000				
(2) Project Planning Capacity	0.412***	1.000			
(3) Technical Capacity	0.501***	0.916***	1.000		
(4) Human Resources Management Capacity	0.982***	0.318***	0.424***	1.000	
(5) Financial Management Capacity	1.000***	0.419***	0.517***	0.981***	1.000

**** p<0.01, ** p<0.05, * p<0.1*

The results showed a positive relationship between project planning capacity and the performance of water projects in Homa Bay County (r = 0.412). The findings are in line with Kibet (2021) who found a substantial positive association (r = 0.652) between project planning capacity and the successful execution of water projects in Machakos.

Moreover, the results revealed a positive relationship between technical capacity and the performance of water projects in Homa Bay County (r = 0.501). These findings resonate with a study by Achieno and Mwangangi (2021), who found a positive correlation between technology and the long-term viability of community-based water projects in rural Narok County, Kenya.

Further, the results revealed a positive relationship between human resource management capacity and the performance of water projects in Homa Bay County (r = 0.982). The relationship was significant since the p-value was less than a 1% significance level. These findings contrast Belout and Gauvreau (2004), who found that human resource planning, had a proven and favorable effect on the successful implementation of projects.

The results also revealed a strong positive relationship between Financial Management Capacity and the performance of water projects in Homa Bay County (r = 1.00). These findings are in line with Antvik and Sjöholm's (2013) study, who found a positive correlation between financial management capacity and the successful implementation of

projects. The research concluded that cost estimates should be based on the project's scope and the Work Breakdown Structure and be related to the project's plan.

4.7.2 Regression Analysis

Multivariate regression analysis assessed the relationship between dependent variables (performance of water projects in Homa Bay County) and independent variables (Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, and Financial Management Capacity).

Table 4.12: Stepwise Regression

	(1) Performance of water projects	(2) Performance of water projects	(3) Performance of water projects	(4) Performance of water projects
Project Planning Capacity	-0.284***	0.204*	-0.083***	-0.029***
	(0.000)	(0.081)	(0.000)	(0.000)
Technical Capacity		0.312***	-0.004	-0.025***
		(0.000)	(0.744)	(0.000)
Human Resources Management Capacity			-2.154***	0.018
			(0.000)	(0.293)
Financial Management Capacity				0.969***
				(0.000)
_cons	-35.569***	-19.147***	-4.656***	-0.335***
	(0.000)	(0.000)	(0.000)	(0.000)
Observations	164	164	164	164
R-squared	0.169	0.266	0.975	0.9980

P-values are in parentheses

**** p<.01, ** p<.05, * p<.1*

The model summary was used to explain the variation in the dependent variable that the independent variables could explain. The r-squared for the relationship between the independent and dependent variables was 0.9980. This implied that 99.80% of the variation in the dependent variable (performance of water projects in Homa Bay County) could be explained by independent variables (Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, and Financial Management Capacity).

Table 4.13: Regression Coefficients

Performance of water projects	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
Project Planning Capacity	.029	.002	13.23	0	.033	-.024	***
Technical Capacity	.025	.001	18.71	0	.027	-.022	***
Human Resources Management Capacity	.018	.017	1.05	.293	-.016	.052	
Financial Management Capacity	.969	.008	128.85	0	.954	.983	***
Constant	.335	.088	3.79	0	.509	-.16	***

Mean dependent var	-48.384	SD dependent var	21.010
R-squared	0.9980	Number of obs	164
F-test	168739.533	Prob > F	0.000
Akaike crit. (AIC)	103.154	Bayesian crit. (BIC)	118.653

**** p<.01, ** p<.05, * p<.1*

The ANOVA was used to determine whether the model fit the data well. The Prob > F value was 0.000. Since the F-calculated was greater than the F-critical and the P-value 0.000 was less than 0.05, the model was considered a good fit for the data. Therefore, the model can predict the influence of Project Planning Capacity, Technical Capacity, Human Resources Management Capacity, and Financial Management Capacity on the performance of water projects in Homa Bay County.

The regression model was as follows:

$Y = 0.335 + 0.029\ X_1 + 0.025X_2 + 0.018X_3 + 0.969X_4 + \varepsilon$

According to the results, Project Planning Capacity has a positive significant effect on the Performance of Water Projects in Homa Bay County $\beta_1=0.029$, which is significant at a 1% significance level. The findings are in line with Kibet (2021) who found a substantial positive association ($r = 0.652$) between project planning capacity and the successful execution of water projects in Machakos.

The results also revealed that Technical Capacity has a positive significant effect on the performance of water projects in Homa Bay County, $\beta1=0.025$, which is significant at a 1% significance level. These findings are in line with a study by Achieno and Mwangangi (2021) who found a positive correlation between technology and the long-term viability of community-based water projects in rural Narok County, Kenya.

Furthermore, the results revealed that Human Resources Management Capacity has a positive insignificant effect on performance of manufacturing SMEs in Kenya $\beta1=0.018$, which is insignificant at a 5% significant level. These findings align with Belout and Gauvreau (2004), who found that human resource planning, had a proven and favourable effect on the successful implementation of projects.

In addition, the results revealed that Financial Management Capacity has a positive significant effect on the performance of water projects in Homa Bay County $\beta1=0.969$, which is significant at a 1% significance level. These findings align with Antvik and Sjöholm (2013) study, who found a positive correlation between Financial Management Capacity and successful implementation of projects.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the discussion of a summary of the research findings, conclusion, and recommendations. The general objective of this study was to examine the role of organizational capacity on implementation of water projects in Homa Bay County, Kenya. Specifically, the study sought to determine the influence of Project Planning Capacity, Technical Capacity, Human Resource Management Capacity, and Financial Management Capacity on the Implementation of Water Projects in Homa Bay County, Kenya.

5.2 Summary of Findings

5.2.1 Project Planning Capacity and Implementation of Water Projects in Homa Bay County, Kenya

The respondents were undecided whether the stakeholders were actively engaged and involved in the project planning phase of water projects in Homa Bay County. This is supported by a mean of 2.64 (std. dv = 1.374). In addition, as shown by a mean of 2.457 (std. dv = 1.23), the respondents were undecided whether project planning in Homa Bay County incorporates clear timelines, milestones, and performance indicators to monitor and evaluate project progress. Further, the respondents disagreed that the project planning phase includes thorough feasibility studies and assessments to identify potential risks, challenges, and opportunities. This is shown by a mean of 2.341 (std. dv = 1.195).

5.2.2 Technical Capacity and Implementation of Water Projects in Homa Bay County, Kenya

The study found that Technical Capacity has a positive significant effect on the implementation of water projects in Homa Bay County, $\beta 1=0.025$, which is significant at a 1% significance level. From the findings, the respondents strongly agreed that technical resources, such as laboratories and testing facilities, are available and accessible for conducting assessments and quality control (Mean=4.881, SD= 1.151). They agreed that there is a well-defined process for technical evaluation and selection of water project projects in Homa Bay County (Mean=4.371, SD=1.212), the availability of qualified

engineers and technicians is sufficient to support the implementation of water projects in Homa Bay County (Mean=4.054, SD=1.121). They also agreed that the technical personnel involved in water projects demonstrate a high level of expertise and knowledge (Mean=4.074, SD=1.169), and that the technical knowledge and skills of the personnel are regularly updated and upgraded (Mean=4.079, SD=1.367). They however disagreed that the equipment and tools necessary for implementing water projects are adequately provided and maintained in Homa Bay County (Mean=2.067, SD=1.204), and that there is effective coordination and communication between technical personnel and other stakeholders involved in water project implementation (Mean=2.091, SD=1.155).

5.2.3 Human Resource Management Capacity and Implementation Of Water Projects In Homa Bay County, Kenya

The study found that Human Resources Management Capacity has a positive insignificant effect on implementation of water projects in Homa Bay County, Kenya $\beta 1=0.018$, which is insignificant at a 5% significant level. From the results, the respondents agreed that the organisation trains project teams to ensure that projects run within the allocated time schedule (Mean=4.329, SD=1.438), and that trainings are frequently scheduled for project implementation (Mean= 4.244, SD=1.249). They also agreed that there is encouragement to experiment with new approaches/ideas and to take calculated risks (Mean=2.043, SD=1.115), and a general culture of continuous improvement in all activities throughout the organization is present (Mean=4.104, SD=1.17),. In addition, they agreed that the organization has recruited competent top management teams, which is vital to meeting our strategic goal (Mean=4.159, SD=1.291).

Further, the respondents were undecided whether appropriate leadership style for the implementation of projects is practiced (Mean=3.098, SD=1.209). They disagreed that the highest professional training on the implementation of water projects has been given (Mean =2.183, SD=1.179) and appropriate criterion for appointment is practiced (Mean=1.909, SD=1.252).

5.2.4 Financial Management Capacity and Implementation of Water Projects in Homa Bay County, Kenya

The study found that Financial Management Capacity has a positive significant effect on the implementation of water projects in Homa Bay County $\beta 1=0.969$, which is significant at a 1% significance level. From the results, the respondents disagreed that the insurance premiums on the project are paid regularly. This is supported by a mean of 2.329 (std. dv = 1.38). In addition, as shown by a mean of 2.244 (std. dv = 1.249), the respondents disagreed that systems had been implemented to reduce the wastage of resources and materials. Further, the respondents disagreed that there was a system that ensures risk is transferred to minimize financial stress. This is shown by a mean of 2.183 (std. dv = 1.179).

Further, the respondents disagreed that project insurance premiums are paid regularly. This is supported by a mean of 2.159 (std. dv = 1.291). In addition, as shown by a mean of 2.104 (std. dv = 1.17), the respondents disagreed that they have access to financing from financial agencies. Further, the respondents disagreed that costs are allocated to rectify any defects. This is shown by a mean of 2.098 (std. dv = 1.209). With a mean of 2.043 (std. dv = 1.115), the respondents also disagreed that costs are allocated for training the project team.

5.3 Conclusions

The study's conclusions regarding Project Planning Capacity and its influence on the implementation of water projects in Homa Bay County, Kenya, indicates that Project Planning Capacity has a positive effect on the implementation of water projects. This means that the ability to plan projects effectively, including conducting needs assessments, designing projects well, and engaging stakeholders, contributes to the successful execution of water projects in Homa Bay County.

Properly conducted needs assessments are crucial in identifying the specific requirements and challenges that a water project should address. This helps ensure that the project is aligned with the community's needs and priorities. Likewise, well-designed projects take into account technical requirements, environmental considerations, and cost-effectiveness. A sound project design is essential for the successful implementation of water projects.

Further, engaging stakeholders, such as local communities, government agencies, and NGOs, is vital for project success. Collaboration and communication with stakeholders can lead to better project outcomes and long-term sustainability.

The study also concludes that Technical Capacity has a positive and significant effect on water project implementation. This means that having the necessary technical expertise and access to appropriate technology plays a critical role in project success. Having skilled professionals and experts who understand the technical aspects of water projects, such as engineering and water treatment, is essential for ensuring that the project is executed correctly. Moreover, access to appropriate technology and equipment is crucial for the efficient and effective implementation of water projects. This might include water treatment facilities, distribution systems, and monitoring tools.

The study's findings regarding Human Resource Management (HRM) capacity and its influence on the implementation of water projects in Homa Bay County, Kenya, indicate a positive effect, but insignificant. This means that having a skilled and capable workforce, along with effective HRM practices, can contribute to project success. However, the term "insignificant" means that the observed effect, while positive, may not be statistically significant. In other words, the relationship between HRM capacity and project implementation might exist, but it may not be strong enough to draw definitive conclusions from the data.

Further, it is implied that enhancing HRM capacity, specifically in the areas of recruitment and selection, training and development, and performance management, could potentially lead to improved water project implementation in Homa Bay County, Kenya. By focusing on these aspects, organizations and agencies involved in water projects may be better equipped to assemble capable teams, provide necessary training, and manage performance effectively.

The study also concludes that Financial Management Capacity has a positive and significant effect on the implementation of water projects in Homa Bay County, Kenya.

This suggests that having skilled personnel and effective financial systems in place can contribute to the successful execution of these projects. Effective budgeting appears to be a crucial factor in the success of water projects in Homa Bay County. This could involve accurately estimating project costs, allocating resources efficiently, and monitoring expenditures to ensure they align with the budget.

The study also highlights that procurement practices also play a significant role. Proper procurement processes that are transparent, fair, and efficient can contribute to the successful implementation of water projects. This might involve selecting qualified suppliers and ensuring that goods and services are delivered as planned. The study also suggests that having strong internal controls in the financial management of water projects can positively impact their implementation. Internal controls safeguard assets, ensure accuracy and reliability of financial information, and promote compliance with policies and regulations. The implication drawn from these findings is that improving financial management capacity, including better budgeting, procurement practices, and internal controls, can lead to more successful and efficient implementation of water projects in Homa Bay County, Kenya. This could potentially translate into better access to clean water and improved living conditions for the local population.

5.4 Recommendations

The study found that project planning capacity and technical capacity have a positive effect on the implementation of water projects in Homa Bay County, Kenya. Therefore, this study recommends that the implementers of water projects in the Homa Bay County should formulate and implement effective strategies of project planning and technical capacity to enhance the implementation of water projects in Homa Bay County. The study also found that human resource capacity and financial management capacity have a positive effect on the implementation of water projects in Homa Bay County. This means that effective management in both human resources and financial management leads to an increment in the performance of water projects in Homa Bay County in Kenya.

This study concludes that project planning capacity (needs assessment, project design, and stakeholder engagement) influence implementation of water projects in Homa Bay County, Kenya. Therefore, this study recommends that the management of water projects in Homa Bay County, Kenya should ensure they have an effective project planning capacity to improve on implementation of water projects.

In addition, the study found that technical capacity has a positive and significant effect on the implementation of water projects in Homa Bay County, Kenya. Therefore, this study recommends that project implementers should formulate effective strategies to equip their employees with adequate technical skills to enable them to perform their duties effectively.

Further, the study found that human resource management capacity has a positive and insignificant effect on the implementation of water projects. Therefore, this study recommends that the management of water projects in Homa Bay County, Kenya should ensure they have adequate training and development, performance management and recruitment and selection to enable their employees to improve their productivity.

The study also found that financial management positively influences the implementation of water projects in Homa Bay County. This study, therefore, recommends that the management of water projects in Homa Bay County, Kenya should promote budgeting, procurement and internal controls.

5.5 Suggestions for Further Studies

This study focused on examining the influence of organizational capacity on the implementation of water projects in Homa Bay County, Kenya. Having been limited to the implementation of water projects in Homa Bay County, Kenya, the findings of this study cannot be generalized to the implementation of other water projects. The study, therefore, suggests comparative studies with other regions or counties in Kenya or similar contexts to see if the findings regarding the importance of project planning, technical capacity, and financial management hold true in different settings. This could help identify best practices and variations in implementation factors.

Further, there is need to evaluate existing policies and regulations related to water project implementation in Homa Bay County and identify areas where policy adjustments or enhancements may be needed.

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APPENDIX I: QUESTIONNAIRE

TITLE: ORGANIZATIONAL CAPACITY AND IMPLEMENTATION OF WATER PROJECTS IN HOMA BAY COUNTY, KENYA.

Kindly tick the most appropriate answer (s) or fill in the information required. Your response will go a long way in making this study a success. This information will be treated with utmost confidence and will be used for the purposes of research only.

SECTION A: Background Information

1. What is your gender? Male [ ] Female [ ] Prefer not to Say [ ]
2. How old are you?

Age (years)	Below 25	26-35	36-45	46-55	Above 56
Response					

3. What is your highest level of education?

   Doctorate [ ] Masters [ ] Degree [ ] Diploma [ ] Certificate [ ]
   Others Specify ……

4. How many years of experience do you have in this water project?

   Below 1 year [ ] between 1-5 [ ] between 5-10 [ ] above 10 years [ ]

5. Which stakeholder group do you represent in the water project?

   Project Manager [ ] Contractor [ ] Project Engineer [ ] Project Management Committee [ ] Other (Specify)……

SECTION B: Project Planning Capacity and Project Implementation

Indicate the extent to which you agree with the following statements in relation to the influence of Project Planning Capacity on implementation of water projects in Homa Bay County. The following scale will be applicable: **5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly Disagree**

No.	Project Planning Capacity	1	2	3	4	5
1.	The project planning process for water projects in Homa Bay County is thorough and comprehensive					
2.	The project planning phase includes thorough feasibility studies and assessments to identify potential risks, challenges, and opportunities					
3.	Stakeholders are actively engaged and involved in the project planning phase of water projects in Homa Bay County					
4.	Adequate resources (financial, human, and technical) are allocated during the project planning phase to ensure successful implementation					
5.	The project planning documentation, such as project proposals and implementation plans, are well-prepared and detailed in Homa Bay County					
6.	Project planning in Homa Bay County incorporates clear timelines, milestones, and performance indicators to monitor and evaluate project progress					

7. What are the main factors that contribute to effective project planning in the context of water projects in Homa Bay County? (Select all that apply)

a. Inclusive stakeholder engagement [ ]

b. Comprehensive needs assessment [ ]

c. Robust feasibility studies and risk assessment [ ]

d. Adequate resource allocation (financial, human, and technical) [ ]

e. Clear timelines, milestones, and performance indicators [ ]

f. Other (Please specify): _____

8. Are there any specific areas of project planning capacity that you think need improvement to enhance the implementation of water projects? (Select all that apply)

a. Stakeholder engagement processes [ ]
b. Needs assessment methodologies [ ]
c. Feasibility study and risk assessment approaches [ ]
d. Resource allocation strategies [ ]
e. Project timeline and milestone setting [ ] Other (Please specify): _____

SECTION C: Technical Capacity and Project Implementation

Indicate the extent to which you agree with the following statements in relation to the influence of technical capacity on implementation of water projects in Homa Bay County. The following scale will be applicable: **5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly Disagree**

No.	Technical Capacity	1	2	3	4	5
1.	The availability of qualified engineers and technicians is sufficient to support the implementation of water projects in Homa Bay County					
2.	The technical personnel involved in water projects demonstrate a high level of expertise and knowledge					
3.	The equipment and tools necessary for implementing water projects are adequately provided and maintained in Homa Bay County.					
4.	Technical resources, such as laboratories and testing facilities, are available and accessible for conducting assessments and quality control					

5.	There is a well-defined process for technical evaluation and selection of water project proposals in Homa Bay County					
6.	There is effective coordination and communication between technical personnel and other stakeholders involved in water project implementation					
7.	The technical knowledge and skills of the personnel are regularly updated and upgraded					

8. What do you believe are the main factors influencing the technical capacity for water project implementation in Homa Bay County? (Select all that apply)

a. Lack of qualified personnel [ ]
b. Insufficient training and development opportunities [ ]
c. Inadequate funding for technical resources [ ]
d. Limited access to modern equipment and technology [ ]
e. Lack of coordination and collaboration among stakeholders [ ]
f. Other (Please specify): _____

9. Are there any specific areas of technical capacity that you think need improvement to enhance the implementation of water projects? (Select all that apply)

a. Recruitment and retention of skilled personnel [ ]
b. Training and professional development programs [ ]
c. Investment in modern equipment and technology [ ]
d. Strengthening partnerships and collaboration with technical institutions [ ]
   Enhancing quality control and assurance measures [ ]
e. Other (Please specify): _____

SECTION D: Human Resources Management Capacity and Project Implementation

Indicate the extent to which you agree with the following statements in relation to influence of Human Resources Capacity on implementation of water projects in Homa Bay County. The following scale will be applicable: **5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly Disagree**

No.	Human Resources Capacity	1	2	3	4	5
1.	Our organisation trains project team to ensure that projects run within the allocated time schedule					
2.	Highest professional training on implementation of water projects have been given					
3.	Appropriate criterion for appointment is practiced					
4.	Trainings are frequently scheduled for project implementation					
5.	Appropriate leadership style for implementation of projects is practiced					
6.	There is the encouragement to experiment with new approach/ideas and to take calculated risks					
7.	A general culture of continuous improvement in all activities throughout the organization is present					
8.	The organisation has recruited competent top management teams which is vital to meeting our strategic goal					

SECTION E: Financial Management Capacity and Project Implementation

Indicate the extent to which you agree with the following statements in relation to influence of financial capacity on implementation of water projects in Homa Bay County. The following scale will be applicable: **5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly Disagree**

No.	Financial Capacity	1	2	3	4	5
1.	The insurance premiums on the project are paid regularly					
2.	Our organisation has a system that ensures risk is transferred to minimize financial stress					
3.	Maintenance of cost according to budget					
4.	Systems have been put in place to reduce wastage of resources and materials					
5.	Costs are allocated to rectify any defects					
6.	Costs are allocated for training the project team					
7.	We have access to financing from financial agencies					

SECTION F: Project Implementation

Indicate the extent to which you agree with the following statements in relation to the influence of organizational capacity and implementation of water projects in Homa Bay County. The following scale will be applicable: **5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly Disagree**

No.	Organizational Capacity and Project Implementation	1	2	3	4	5
1.	Projects are carried out within the stipulated budget					
2.	Projects are carried out within the stipulated time schedule					
3.	Projects executed to specifications					
4.	Projects carried out address the needs of customers					

5.	Projects will continue to generate revenues to ensure it continues to operate long after the donor has stopped giving major project and technical support					
6.	Projects met the original goal and business intent (scope).					
7.	Project results met stakeholder expectations					

8. What challenges do you think your organisation faces in implementing water projects? (Select all that apply)
    a. Insufficient funding [ ]
    b. Lack of skilled workforce [ ]
    c. Inadequate technology [ ]
    d. Poor management [ ]
    e. Inadequate planning and coordination [ ]
    f. Other (specify)_____

9. What measures do you think can be taken to improve implementation of water projects? (Select that apply)
    a. Increase funding for water projects [ ]
    b. Improve capacity building for project implementers [ ]
    c. Address political interference [ ]
    d. Improve security in water project areas [ ]
    e. Other (specify)_____

APPENDIX II: LIST OF WATER PROJECTS

S/No.	Project Name	Constituency
1	Achego Water Supply	Rangwe
2	Rehabilitation of Komune Pan	Hom Bay Central
3	Rehabilitation of Oseno Dam	Mbita
4	Orimba Water Project	Kasipul
5	God Bura Secondary School Water Project	Suba South
6	Kotieno Gumba Pri School Water Supply Project	Karachuonyo
7	Rainwater Harvesting for Apuko Primary School	Karachuonyo
8	Ambassador Pamela Secondary School Water Supply Project	Mbita
9	Drilling And Equipping of Nyatwere Primary School Borehole	Kasipul
10	Drilling And Equipping of Osuri Primary School Borehole	Kasipul Kabondo
11	Nyakwadha Primary School Water Supply Project	Rangwe
12	Karabok Primary School Water Supply Project	Kasipul
13	Gogo Katuma Secondary Water Supply Project	Rangwe
14	Aluor Mix Secondary School Water Supply Project	Ndhiwa
15	Kochia Water Pipeline Extension Project	Rangwe
16	Disilting and Expansion of Tweta Water Pan Project	Suba North
17	Disilting and Expansion of Ondiegi Water Pan Project	Suba North
18	Disilting and Expansion Rakera Water Pan Project	Suba North
19	Soko Kawino Springs Water Supply Project	Kasipul
20	Kamiere Water Project	Kasipul
21	Mawira Primary School Water Supply Project	Kasipul
22	Nyabera Secondary School Water Supply Project	Suba North
23	Min Arot Water Supply Project	Suba North
24	Ongoro Primary School Water Supply Project	Suba North
25	Mawego Primary School Water Supply Project	Karachuonyo
26	Kotieno Primary School Water Supply Project	Kasipul
27	Atemo Kimonge Orinde/God Agak Water Supply Project	Kabondo Kasipul
28	Koga Primary School Borehole Water Supply Project	Gwasi
29	Mbani Water Supply Project	Ndhiwa
30	Got Kabok Water Supply Project	Rangwe
31	Nyamos Water Supply Project	Ndhiwa
32	Oyugis Water Supply and Sanitation Project	Kasipul, Kabondo Kasipul

33	Kendu Bay Water Supply and Sanitation Project	Rachuonyo
34	West Karachuonyo Water Supply Project	Rachuonyo
35	Homa Bay Cluster Water Supply Project	Hom Bay Central
36	Kitare Water Supply Project	Suba North
37	Rangwe Water Supply Project	Rangwe
38	Magunga Water Supply Project	Suba South
39	Kamato Water Supply Project	Suba North
40	Ogongo Water Supply Project	Suba North
41	Pipeline Extension to Mbita Hospital Project	Suba North
42	Rehabilitation of Akonya Pan	Suba North