

**FACTORS INFLUENCING AUGMENTATION OF WATER TREATMENT PROJECTS
BY COUNTY GOVERNMENTS IN KENYA: A CASE OF MERU WATER AND
SEWERAGE SERVICES, MERU COUNTY**

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Award of the Degree of Master of Arts in Project Planning and Management of the
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DECLARATION

I declare that this research project report is my original work and has not been submitted for an award in any other university or college.

Signed.....

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L50/10478/2018

This research project report is submitted with my approval as supervisor.

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DEDICATION

This work is dedicated to my dear wife Faith Kagendo, my son Aciita Junior, my parents Mr. and Mrs. M' Acieta M' Amuri for their support and encouragement during my busy schedule as I was working on this research project.

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ABBREVIATIONS AND ACRONYMS

CBO-	Community based organization
CECM-	County Executive Committee member
CGM-	County Government of Meru
IWASCO-	Isiolo Water and Sewerage Company
MCA-	Member of County Assembly
MDGs-	Millennium Development Goals
MEWASS-	Meru Water and Sewerage Services
SPA-	Service Provision Agreement
SPSS-	Scientific Package of Social Sciences
UNEP-	United Nations Environmental Program
WHO-	World Health Organization

ABSTRACT

Provision of water services is squarely a devolved function and counties have the bigger role of ensuring their residents have access to clean and safe water. In this regard many strategies have been put in place to ensure water available is adequate. These efforts have faced a myriad of challenges which has greatly affected service delivery. Water is one of the most important natural resource and the availability of safe water is critical not just for health reasons, but also for social and economic development. The purpose of the study was to establish the factors influencing implementation of augmentation of water treatment projects by county government in Kenya; a case of Meru Water and Sewerage Services. The specific objectives of this research project were to determine the influence of financial resources, leadership, staff competency and political factors on the augmentation of water treatment projects by county governments in Kenya. The study adopted a descriptive research design and the target population was 135 management and heads of sections which included county executive committee members (CECM), Chief officers, county directors, MEWASS management/technical staff and Members of County Assemblies (MCA's). The study adopted a census which allowed all the 135 respondents to participate in the study, however only 109 respondents returned their questionnaires representing an approximate response rate 81%. Data was collected using a questionnaire. To test reliability of this questionnaire Split half method was applied in Isiolo water and Sewerage Company. Descriptive statistics such as frequencies, percentages and multiple regression were used to test the significance of the overall model at 95% level of significance. Data analysis was done by use software program-SPSS version 22. The analyzed data was presented using tables. Data collected indicated that majority of the respondents were male at 75.5% while 24.5% were women. In addition, majority of the respondents had a bachelor's degree at 60.6%. This illustrated that employees had skills which could be utilized to transform the water sector. The findings revealed that the respondents strongly agreed that there were several sources that finance water augmentation projects in Meru County as indicated by a mean of 4.68 and that the funds received for water augmentation projects in Meru County are not adequate to undertake the projects to completion which was indicated by a mean of 2.11. It was also established that the funds allocated for water augmentation projects in Meru County are not reliable and that they are not timely which was indicated by a mean of 2.93. As per the findings at 95% confidence level political factors had the greatest effect, followed by financial resources, then staff competency while leadership had the least effect on augmentation of water projects. The study concludes that financial resources, leadership, political factors and staff competency have a positive and significant influence on augmentation of water projects. The study recommends that the county governments should hold trainings on public governance and provide more resources in the strategy management process on matters water. In future studies, researchers should also consider exploring other variables that may influence the augmentation of water treatment projects such as technology and community participation.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to UNICEF (2015) water is one of the most important natural resource. The availability of safe water is critical not just for health reasons, but also for social and economic development. The UN Millennium Declaration, 2000, set a target to halve the percentage of world's population without access to sustainable safe drinking water by 2015. This was a stepping stone towards full global coverage by 2025 as in the Global Water Partnership Framework for Action and the African Water Vision (ADB, 2007) and in the Kenya Vision 2030 which aims to ensure water availability and access to all by 2030. About 2.8 billion people (more than 40%) of the world live in river basins faced with some form of water scarcity and 1.6 billion people live in areas of economic water scarcity, where even though water is available, human, institutional and financial capital limit access to water (WHO, 2010).

Water projects require that their activities be sustained over time to ensure continued flow of outputs and hence achievement of the desired change which could be social, cultural or economic. Implementation of most projects may be successful but their sustainability may be a challenge (Ofuoku, 2011). According to (Water Supply & Sanitation Collaborative Council, 2012) water is the most important natural resource, indispensable for life and at the same time the backbone for growth and prosperity for mankind. The General Assembly of the United Nations drew critical attention to the importance of water to sustainable development and poverty alleviation by declaring 2003 The International year of Fresh water with one of its aims being to reassert the Millennium Development Goals (MDGs) target for water of reducing by half the proportion of people without the access to safe drinking water and stop the unsustainable exploitation of water resources (UNDP-WSP, 2006).

Globally, water scarcity has been a major challenge. Western countries have the lowest total water supply coverage of any region. Currently about 300 million people in western countries do not have access to safe water and about 313 million have no access to proper water and sanitation facilities (Akinola, 2013). This situation exacts a heavy toll on the health and

economic progress of western countries. The Africa water vision was presented at the second world water forum in Hague, 2000, as part of the world water vision and represents efforts at addressing the impending water crises.

In Africa, water shortage is related to both under-development of potentially available water resources and their uneven distribution. This is coupled up with an unrelenting population growth rate of 3 % per year, which is a major factor in on-going water and sanitation 3 problems. In South Africa, despite the significant input of human and financial resources, many fall short of expectation. Many failed to meet the priority needs of target beneficiaries, costs escalated, stated outputs were not achieved or if achieved were not sustained, implementation dates slipped by or adverse outcomes were not anticipated (Batten, 2011). Projects are influenced by a multiple of factors which can be external or internal to the organization responsible for its management and execution. These include poor project management, inadequate opportunities for potential beneficiaries to participate in project identification and design, poor linkages between project activities and project purpose, insufficient attention to external environment during project design, among others.

It has also been recognized that projects were likely to succeed when account was taken of socio-economic context in which they operated (World Bank, 2010). In Rwanda, the water supply and sanitation infrastructure is insufficient, especially in rural areas and concerning sanitation. There are substantial discrepancies between access data from various sources, partially because of different definitions being used by different institutions that are providing access data. The share of non-functional water supply systems in Ghana is estimated at almost one third, with many others operating substantially below designed capacity. However, according to the multi-donor Africa, assessment access to an improved water sources is much lower (56%) and access to improved sanitation is higher (35%) (Buller, 2012). Moreover, domestic water supply competes with a rising demand for water by the expanding industry and agriculture sectors. Ghana aimed at achieving 85% coverage for water supply and sanitation by 2015, which would exceed the Millennium Development Goals' target of 78% (Water Facts, 2013a).

According to Green and Haines, (2008), one estimate only one quarter of the residents in Accra receives a continuous water supply, whereas approximately 30% are provided for 12 hours each day, five days a week. Another 35% are supplied for two days each week. The remaining 10%

who mainly live on the outskirts of the capital are completely without access to piped water and other water services. The lack of clean drinking water and sanitation systems is a severe public health concern in Ghana, contributing to 70% of diseases in the country. Consequently, households without access to clean water are forced to use less reliable and hygienic sources, and often pay more (Batten, 2011).

In Kenya, rural water supply remains critical for socio-economic development in Kenya. Promotion of rural water supply improves the quality of life, increases productivity, food security and alleviates poverty. The Kenyan government made an effort to achieve the Millennium Development Goals (MDGs) and Kenya Vision 2030 by halving the population without access to safe drinking water by 2015 and ensuring water availability and access to all by 2030 respectively. It is also when many rural areas are experiencing serious water scarcity. Community participation is an important factor in ensuring water availability for rural development.

According to Nerubucha (2011), Kenya is a water scarce country and it is therefore important to ensure that water resources are continuously monitored, assessed and evaluated in order to plan for water security. It is important to understand the climate and identify trends. It is clear that the water resources (both surface and underground water) are unevenly distributed spatially in the country and hence the need for proper management. Failure to adequately manage water resources imposes huge costs on Kenya's economy as observed by (Kinoti, 2010). According to the Ministry of Water and Irrigation, there are approximately 680 piped water systems that provide over 740,000 water connections throughout the nation. Additional 350 community run water schemes exist in the country. A great percentage of these connections are however inactive due to poor management and maintenance (Republic of Kenya, 2007)

Water projects failure possess a problem that can be self-perpetuating. According to Thematic group (2005) among the 24 million rural dwellers in Kenya about 10 million have access to improved water supply either through piped water or point source systems. Of those with access 30% of them are served by community-based water supply schemes which are developed by self-help 3 groups through donor support and government institutions. The groups study further revealed that most of these community-based water supply schemes are inactive yet the

government has continued to establish more water projects with little regard to rehabilitating the non-functioning ones.

1.2 Statement of the Problem

Every citizen is entitled to a clean and safe water for domestic and industrial use. Water supply in Kenya is characterized by low levels of access as well as poor service quality in the form of intermittent water supply. The Kenyan water sector underwent far-reaching reforms through the Water Act No. 8 of 2013. In addition, Water and sanitation sector in Kenya is characterized by institutional fragmentation that led to numerous inefficiencies within water agencies. The government of Kenya has provided legal framework and entered into collaboration with donors such as JICA and African Development Bank (ADB) to ensure that the water systems in Kenya are functioning properly and sanitation is improved especially in the urban poor who lack basic water and sanitation services.

A large percentage of Meru County residents lacks access to adequate and reliable drinking water and this situation is particularly worse in urban areas during rainy season due lack of proper storage and cleaning water systems by the water service provider (MEWASS, 2015).

Despite the various efforts to implement augmentation water treatment project by county governments in Kenya, there is a lot of politics that has entrenched into water projects management all over the country and this has worsened the situation. The Meru Water and Sewerage Services Board (MEWASS) which is the registered trustees in Meru town has been facing numerous challenges due to massive urban sprawl and encroachment into agriculture and water catchment areas in Meru; rapid urbanization and population growth; high unemployment rate and low income, haphazard urban and rural development; inadequate infrastructure and utility services; poor transport services, environmental degradation and poor sanitation and uncoordinated water management governance which has led to poor water supply in the County (MEWASS Technical report (2014)).

All these challenges have increased pressure on water and its catchment in Meru County and hence this calls for augmentation of water treatment project to ensure there is clean and adequate water throughout the seasons. Water sector reforms is a collective activity by both public and private entities in partnership with the local communities in ensuring that this scarce resource is utilized well.

1.3 Purpose of the study

The main purpose of this study was to establish factors that influence augmentation of water treatment projects by county governments in Kenya; a case of Meru water and sewerage services (MEWASS) Meru County.

1.4 Objectives of the Study

The specific objectives of this study were to;

- i) Determine the influence of financial resources on the implementation of augmentation of water treatment projects by county governments in Kenya.
- ii) Examine how leadership influences the implementation of augmentation of water treatment projects by county governments in Kenya.
- iii) Find out the influence of staff competency on augmentation of water treatment projects by county governments in Kenya
- iv) Analyze how political factors influence the implementation of augmentation of water treatment projects by county governments in Kenya.

1.5 Research Questions

The study was guided by the following research questions;

- i) How does financial resources influence augmentation of water treatment projects by county governments in Kenya?
- ii) To what extent does leadership influence augmentation of water treatment project by county governments in Kenya?
- iii) How does staff competency influence augmentation of water treatment projects by county governments in Kenya?
- iv) To what extent do political factors influence augmentation of water treatment projects by county governments in Kenya?

1.6 Significance of the Study

These study findings may be of great benefit to the Meru Water and Sewerage services (MEWASS), the entire Meru county government and Kenya at large in that they can find out the causes of its poor performance in water service delivery and thus review their water policies in order to improve their service delivery and performance. The senior managers in the County

governments could be able to know how they can help the water companies in their respective counties to streamline the water system and help them improve the water performance in the County through water augmentation projects. The study finding may add to the existing literature in relation to water projects. Other researchers in the same field may use this study finding to come up with other findings and conclusions.

1.7 Delimitation of the Study

The scope of this study was limited to Meru County and in particular Meru town and its environs where MEWASS has an approximate coverage area of 140 square kilometers (MEWASS 2019) which includes the five wards of North Imenti Sub County namely; Municipality, Nyaki West, Nyaki East, Ntima West and Ntima East.

1.8 Limitations of the Study

Some respondents were unwilling to provide the required information since they were not aware why this data was required. But in order to overcome this problem the researcher explained the importance of this study and promised confidentiality of individuals interviewed as well as the information provided. The research also assured the respondents that this study was purely academic and none other purpose.

There were time and financial limitations in carrying out this study.

1.9 Assumptions of the Study

The study assumed that the respondents chosen answered the questions correctly and truthfully. It also assumed that the data collection instruments had validity and that they measured what the researcher intended to measure.

1.10 Definition of significant terms

Augmentation of water treatment projects; this entails the process of increasing efficiency in the way in which water is harnessed and utilized for distribution to customers. This means boosting the water intake in a treatment plant to ensure that water is available in all seasons. This is an expensive undertaking at times undertaken by county government in collaboration international organizations such as JICA and Africa Development Bank (ADB).

Financial resources; this refers to monetary resources, funds and especially those that are used by county government in the implementation of water projects.

Leadership; this refers to the support that stakeholders are required to offer to the county projects for better coordination of the activities in the department in accordance with certain policies and in achievement of defined objectives of water projects implementation.

Political factors; this refers to the political influence on the implementation of projects initiated by county government. Politics in the county government plays a role in deciding what is to be done with the money actually available. Since most of the available resources are committed by approval of county assembly.

Staff competency; these are the professional training and skills requirements for the employees in order to effectively implement the projects started by the county government. The knowledge on project management and information communication technology and others are required for this project to be fully implemented.

1.11 Organization of the study

This study is organized into five chapters which captured various components of the research project report. Chapter one captured the introduction, the research objectives and research questions that this study strived to address. It also defined significant terms as well as limitation and delimitation of this study.

Chapter two is the literature review. It focused on what other scholars have observed so far in particular concerning variables (independent and dependent) in this research study. It also entailed the conceptual framework which formed the spine of the research.

Chapter three outlined the specific methodologies that the researcher applied in this study. These included the research design, target population, sampling procedure, data collection methods and methods of data analysis that were applied in the field during data collection.

Chapter four dealt with an in-depth analysis and interpretation of data collected.

Chapter five outlined the summary of the findings, conclusions and recommendations on the factors that influence the implementation of augmentation of water treatment projects by county governments in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covered other related works by different scholars, assessed so as to give a theoretical and empirical foundation to the study. It also discussed the variables in order to give the study a more detailed understanding of how these variables influence the augmentation of water treatment projects by county governments in Kenya.

2.2 Augmentation of water treatment projects

According to Renzetti and Dupont (2004) the diversity of water service sector makes it difficult to make useful generation concerning the management of service organization. Water and sewage services have certain special features not necessarily typical of other infrastructure services. They are exceptionally capital intensive compared with other public services. According to Pickford (2001) many water utilities depend mainly on the water sold. This has a profound effect on the structure of rates and charges. Consumers have to pay the services commonly through consumption related charges. Sometimes by other means like taxation (Parda 2007). Lack of proper cost recovery policy has been one of the key problems in many counties.

Water and sewage services infrastructure is a natural monopoly a concept first introduced by John Sturt Mill in 1848 (Perkins, 2008).

A study by WHO (2010) recommended that augmentation of water treatment projects involves a process of putting a decision and plan into effect in terms of the carrying capacity of the ecosystem. The unsustainable water problems can be accommodated by both developing sustainable operations and providing adequate resources required. In practice water companies mostly aim towards implementing augmentation by increasing efficiency in the way in which resources are utilized. It is the core of organizational effectiveness and connected to all other key components.

A study by Water Supply and Sanitation Collaborative Council (2012) on augmentation of water treatment projects implementation found that there is need for strategies to be considered in the areas of strategic direction, governance, management practices, human resources, impact of service delivery, financial resources and external relations. Water companies that were found to

have implemented augmentation of water treatment projects had a clear mission and strategic direction, the necessary skills to attract resources from a variety of local and international sources, skills and ability to manage resources effectively and efficiently and any effort at organizational regeneration (Water Supply & Sanitation Collaborative Council, 2012).

According to Pickford (2001) he noted that adequate water is absolutely necessary to support the population and economic life of a city or town. Critical shortages of water not only inhibit or stop economic development but also directly damage the health of the city's people.

2.3 Financial Resources and Augmentation of water treatment Projects

Water augmentation projects are that unreliable and inadequate funds on their own are a major factor hindering the implementation of government funded projects in devolved governments which has led to dissatisfaction on the county heads. Devolved governments need access to finances to enable them to develop and implement their projects. Historically devolved governments have been relying on a single source which revenue to the government as a source of funds to implement their projects. However, over time their capacity to build up internal sources from revenue became eroded, partly by government policies and partly by poor performance resulting from declining margins (Muchemi, 2009).

Mwaura (2013) noted that County government increasingly relies on national government support for finances and from their limited revenues. Although given out for recurrent and development expenditure, these are very often not repaid. Devolved government became trapped in a dependency parasitic relationship with national government which seriously weakened their ability to develop sustainable activities on water treatment. This dependency also weakened management strategies that would make the implementation of water augmentation projects successful. Rebuilding's devolved governments as effective member-owned business requires a clear break from this unfortunate historical legacy. Viable devolved government today suffer from this legacy in a number of ways; many private organizations still view devolved governments as inherently not creditworthy. Many devolved governments are weighted down by the presence on their balance sheets of accumulated debts dating back many years form the previous municipal councils.

Sambu (2014) claims that county governments have not catered for the needs of their society in providing clean and reliable water. County governments are compounded by governance and

financial constraints which leads to delay in financing implementation of water augmentation projects. This has tainted the county governments and the ministry of water and irrigation. Up to the mid-2013, a fundamental character of the Kenyan devolved government movement was its close association with the state to the point of developing a dependent relationship. This was partly due to historical evolution of this organization in the country. According to development countries recommendation No. 127, the ILO called for government to develop a comprehensive and planned development project in which one central body would be the instrument for implementing a policy of aid and encouragement to public sectors.

Saunders (2009) argued that where government obtains their finances free of interest from the bank will be able to. These practices put the government in greater financial strains as they incur large debts by way of interest on the loans. He concludes that it would appear that the crucial factor in the financial difficulties of the government is mismanagement of funds available rather than the inability of the organization to raise money from elsewhere. The Swedish public sector faces a similar problem especially as the number of the organizations belonging to the government is diminishing, owing to the relative decline of the services from other sectors of the economy. The financial problem of the Uganda government is tied up with the general low levels of per-capital income of their citizens. Although the government is severely handicapped in having ways of raising funds of their own to meet their needs such as project implementation, they are in a privileged position in matters of government financial assistance. The government has started to see the need to diversify in order to survive in a liberalized environment. This is leading to interesting partnership (Saunders 2009).

2.4 Leadership and Augmentation water treatment Projects

Reaching a satisfactory level of project implementation necessarily requires more than just securing funds from diversified sources. It requires as much strengthening government and operational capacities. There exists a causal relationship between project implementation and certain factors associated with government public organization management, leadership, public image, service provision and community participation. These factors could contribute to, or impede financial viability of given government public organization (Bray, 2010).

According to Bray (2010), there is increasingly awareness of up-to-date information about an organization's operations and finances as a way of ensuring return on their investment. Engaging in evaluation of government activities that outline financial and programmatic outcomes as a result of funding and this support implementation of government projects. Additionally, clearly and consistently communicating evaluation efforts and findings to funders and investors demonstrates accountability. Cultural differences between the leadership and staff of the government public organizations and CBOs and the communities they serve may pose additional challenges for implementation of government projects.

In the study of Mulory (2013) the government having a physical presence in the community as well as a consistent track record of service accountability to its residents the management employees should ensure that community benefits from the programs initiated. The government projects need well versed management teams in order to establish partnering relationship which will help in developing a implementation strategy that clearly defines the social mission of the project. It is important that management clearly and consistently communicates the mission and services provided by the organization specifically cater to the unique needs of the projects.

It is noteworthy that according to Bray (2010), low capacity staff for government's projects implementation at the sub-national level such as provincial and regional governments is one of the main challenges in the implementation of all government projects in developing countries. This factor according to him is very pertinent to the South African context with its nine provinces and the consequent demand that the duplication of efforts creates for skills and knowledge, of which a shortage already exists. Farelo and Morris (2009) further contend that the personnel development issue within government needs prioritization in order to have management that will support development projects of the government. He noted that the education system needs to be aligned with the project management demands of the country and scarce monitoring and evaluation skills need to be attracted and retained particularly within the government.

It is noted that the effective implementation of government projects required personnel with the required knowledge and expertise. Diamond and Khemani (2010) posted that lack of capacity is regarded as one of the primary causes for the of government projects implementation process in Ghana. On the other hand, the emphasis on capacity building through training was one of the

major contributing factors to the success of major government projects in Tanzania. Chene (2009) adds that absence of staff with the requisite project management knowhow and experience cannot be mitigated with ease through training and hiring. The salary structure and terms of employment in the public sector are more often than not unable to compete at par with the private sector. Needless to say, candidates possessing skills are not incentivized to join the public sector. To aggravate the situation, many trained personnel leave the public service for better job opportunities elsewhere.

For the government projects to be successful, in addition to internal resources, great care should be taken when outsourcing especially in terms of technical assistance during different phases of the project design and implementation since in most cases the management skills is not satisfactory. The external consultant should have extensive experience in the public sector financial management. The consultant should essentially be an expert in design, implementation, management and operation of government accounting, budget and financial management systems especially in a developing country's environment. He or she must have experience in the management and operation of modern computerized financial systems in a government budgeting and accounting environment (Wong, 2010).

In their study, Kirk and Nolan (2010) that management has failed in project implementation and this has led to weak projects governance, technical areas of development, and poor leadership that cannot be entrusted with implementation of projects. Complementary experience in training, management development, human resource management and organizational change in developing countries ought also to be a prerequisite. The consultant, finally, should also have experience in project management and implementation, working in the advisory and training capacity in developing countries.

2.5 Staff Competency and Implementation of Augmentation of water treatment Projects.

A study done by Tshitangoni (2010) found that in some projects, members do not have any formal education which is critical in ensuring project sustainability because educated members may easily grasp and implement skills that they receive during training. The community development support project established in Kayes and Koulikoro had as one of its objectives addressing high level of illiteracy affecting mainly women (Nzau-Muteta et al, 2005). Staff

competency capacity is important in implementation of water augmentation and includes actions designed to improve the skills, knowledge and competencies of the project team. For example, general project management skills are important for implementing projects (Knipe, 2010).

In the United States of America, the new Indian Education Centre was established to provide facilitator leadership training to the Native American communities in the field-based mode, with the capacity to link existing service delivery systems to resulting exemplary local projects to provide technical assistance (Miller, 2010). The aims of the Centre were to provide leadership development, to provide training for local community members, to provide technical assistance to local communities and to provide information and dissemination services. The main focus was to develop the capacity of local communities and the creation of employment.

Knowledge and skills are paramount in running of youth training centers. Very minimal results will be achieved if projects are not run systematically and necessary skills applied in maximizing output. Project leaders and members require trainings to enable them understand issues at the level of commonness and proven result-oriented procedures. Bandele and Faremi (2012) investigated the challenges facing the implementation of Technical College curriculum in South West, Nigeria. The study revealed that 65.83 % of the staff were professionally qualified to teach in Technical College while the others were not. Despite this finding, the cited study did not examine whether the teacher's professional qualifications influenced the implementation of Technical and Vocational curriculum in Technical Colleges in Nigeria. Thus the influence of teacher's professional qualification on the implementation of Artisan and Craft curriculum in community colleges in Nairobi, region was investigated in the current study.

On the contrary, an analysis of the qualifications of the staff in a case study in Zambia conducted by UNESCO (2003) found that private institutions faced a shortage of qualified staffs. The survey showed that out of 159 organizations staff, only 36 % had a certificate qualification. This implied that a large proportion of the staff were not qualified to professionally deliver thereby posing a major challenge to the effective implementation of projects in the country.

However, Farstad (2012) and Koech (2009) also cited lack of qualified technicians as one of the constraints that prohibit the effective implementation of water projects. This finding corroborates Sharma's (2008) and Fietz, Reglin and Mouillour's (2009) studies that showed that employees

are inadequately prepared to discharge the task of water augmenting. Given that the water company policy prescribes that for quality water, employees should be trained from artisan and craft with minimum requisite qualifications to handle water projects.

2.6 Political factors and Implementation of Augmentation of water treatment Projects

According to Gordon et al., (2010), most of government projects are politically influenced and this influences their implementation. Expenditure items by the county governments is divided according to department to departments and the various activities undertaken within each department. Governments have been accused of incurring expenditures in ways that bear little relationship to their ability to raise the revenues required to finance the expenditure commitment and fail to result in improved or expanded service delivery which is influenced politically. The Local Authority Transfer Fund requirements for publication of information is helping to build local accountability: national publication in the press of county allocations and allocation formula, local publishing of available resources as part of the county governments process and local publishing of both the planned and actual use of resources (IEA 2013).

Bozzo (2010) noted that the process which government acquires funds to implement projects is political through informing citizens of the resources available and involving them in prioritization of expenditures, helps to build local accountability for actual resource use, since those who have participated can be expected to demand to know what actually happened to the money. Government also requires, as a condition for part of the transfer to produce abstracts of accounts for auditing. Before this was introduced, hardly any County governments were producing accounts; now, as a result of county conditions, all County government are producing abstracts of accounts and submitting them to the Controller and Auditor-General. However, it remains to be seen whether there is the capacity for these accounts to be properly audited (IEA 2011).

Politics dominates during budgets making and controls the process by which projects are implemented, evaluated and adjusted to help ensure the realization of pre-determines targets. This process is facilitated by monthly, quarterly or other short interval reports from each departmental head and the treasury which is politically influenced. These reports should indicate how closely actual performance matches budgetary projections and it should evaluate deviations and their causes as a basis for developing corrective action programs. Is such efforts are to

succeed; the reports must be prepared immediately after the end of the reporting period. This process is therefore depended on the prompt recording of financial transactions and the maintenance of up-to-date accounts. The treasurer in collaboration with the departmental heads is required to report and explain to the appropriate standing committee any variances (Pandey 2009).

Ramanathan (2011) did a study and found that there are factors which are beyond an elected leader affects the implementation of water augmentation projects. Inflationary trends, abolition of a revenue source control since costs by central government, natural catastrophes, droughts and diseases are some of the factors affecting the ability of local authority to implementation its budget as planned. If a Council learns that its original budget estimates are no longer tenable, it has to revise them and come up with a supplementary budget. It is important to remember that the budget is only as good as the local manager using it. If the manager ignores the budget, then it serves no useful purpose in improving the performance of a local authority in meeting the needs of its constituents.

It was found by Basel, Williams & Klak (2011) that for government projects to succeed there is need to have political support. They noted that government leaders identified the interference of local politicians and civic leaders as a major hindrance to projects implementation. Where government public organizations are involved in sensitive issues, such as land disputes, local leaders can threaten government public organizations with de-registration. Politicians are not aware that the board - and potentially the Council are there to protect them from such intimidation. Program evaluation or outcome assessment data is one tool that can speak to important questions of whether progress is being made on key agency objectives.

2.7 Theoretical framework

This section discussed the various theories that are used to support the study. This study adopted the commitment trust theory and agency theory. These are the theories to guide the study on augmentation of water treatment projects by County government in Kenya.

2.7.1 Commitment-Trust Theory

This study was based on commitment-trust theory by Morgan and Hunt (1994). This theory proposed that relationship commitment and trust are key variables for successful relationships because they promote cooperative behaviors between relationship partners and encourage them

to maintain long-term relationships. They suggest that relationships characterized by trust and commitment allow partners to be more accepting of high-risk situations because each party believes that the other party will be inclined to engage in activities that are in the long-term best interests of both partners. Morgan and Hunt tested their theory on business relationships between automobile tire retailers and their suppliers and concluded that it was clearly supported by the data.

The commitment-trust theory proposes that trust and commitment are key constructs that function in an organization. Conceptualize trust as confidence in an exchange partner's reliability and integrity. They propose that trust is enhanced when partners share similar values and when partners communicate. Trust is decreased when partners are perceived to engage in opportunistic behavior. Shared values, which were already described as antecedent to commitment, are also antecedent to trust. Perceptions of shared values between partners increase the perceived ability of partners to predict the other's motives and behavior and, therefore, increase trust. Communication is the sharing of meaningful and timely information between partners. Professors who communicate with students about what to expect in a course and on exams might enhance student trust. Additionally, communication between professors and students can prevent misunderstandings and allow the resolution of conflicts. Opportunistic behavior is a violation of implicit or explicit role behaviors. Trust affects every outcome either directly or indirectly in the Commitment/Trust Model. Trust has direct effects on cooperation, functional conflict, and decision-making uncertainty and indirect effects on acquiescence and propensity to leave through its effect on commitment.

Functional conflict is a disagreement that leads to an improvement in a relationship. Disagreements can have a way of strengthening relationships because they can lead to opportunities to communicate and readjust expectations. In this study, there is need for county government to ensure there is trust since trust encourages partners to treat conflicts as functional and find win-win solutions. Decision-making uncertainty is the extent to which partners perceive they have sufficient information to make decisions with confidence. This will have a direct effect on commitment between management and the employees. Trust permits partners to take a long-term view of relationships. The relationship itself becomes a goal instead of the result of each transaction between partners.

It can be concluded that this theory will help the county government to create an enabling environment that will help in improving the implementation of water projects. If the county government will use this theory, it will help create a good relationship between the community, and other stakeholders for better performance.

2.8.2 Agency theory

According to Bowie et.al (1992) an agency relationship arises when one or more individuals, called principals, hire one or more other individuals, called the agents, to perform some service and then delegate decision making authority to the agents. The primary agency relationships in business are those between shareholders and management. This relationship is not always harmonious and the theory is concerned with conflicts of interest between agents and principals. This has implications on how the organization affairs are conducted. When agency occurs it also tends to give rise to agency costs, which are expenses incurred in order to sustain an effective agency relationship like offering management performance bonuses to encourage managers to act in the shareholders' interests.

Bowie et.al (1992) argues that agency theory suggests that, in imperfect labor and capital markets, managers will seek to maximize their own utility at the expense of shareholders. Managers have the ability to operate in their own self-interest rather than in the best interests of the organization because of asymmetric information. Managers know better than shareholders on whether they are capable of meeting the shareholders' objectives or not, and they are also aware of uncertainty in the market.

In this study, the principals are the management of the county government who acts on behalf of community. The agency theory assumes both the shareholders and the agents are motivated by self-interest. Thus, if both parties are motivated by self-interest, management is likely to pursue self-interested objectives that deviate and even conflict with the goals of the shareholders. Yet, agents are supposed to act in the sole interest of their shareholders. It is the responsibility of management to ensure that members are able to access to wildlife facility in order to earn interest that shareholders can use to pay dividend and also to expand the operations of the enterprises. The problem of performance of the county government water projects can be attributed to the management which is county government not acting in the best interest of shareholders which is the community since they should come up with strategies that will help to improve the performance of these projects

2.9 Conceptual Framework

The following conceptual framework outlined the factors that influence the implementation of augmentation of water treatment projects by county governments in Kenya. Specifically, the framework underlined financial resources, staff competency, leadership and political factors as independent variables that influence augmentation of water treatment projects which is the dependent variable with government policy as the moderating variable.

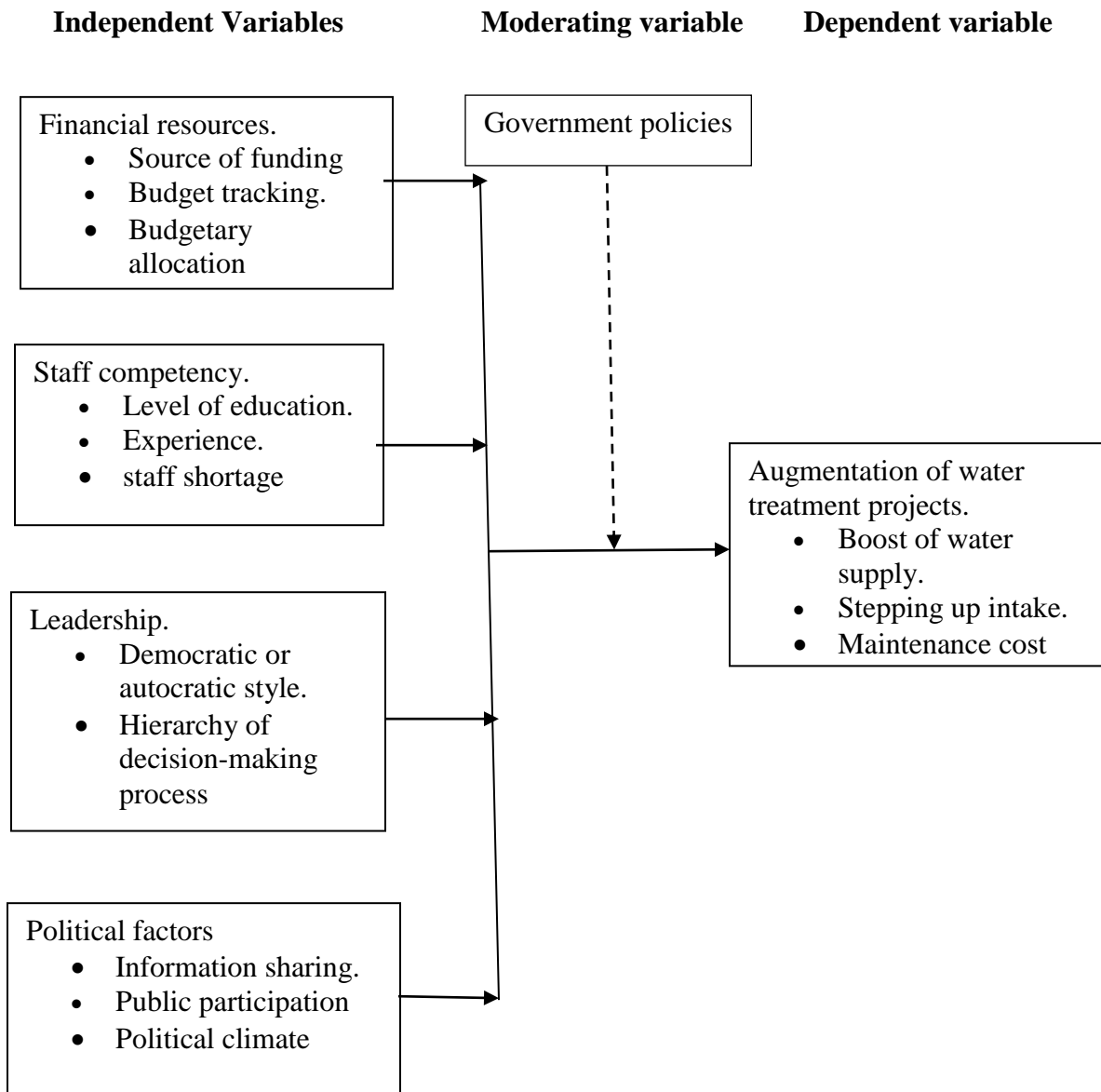


Figure 1: Conceptual framework

2.10 Knowledge gaps

Studies on the adverse factors that influence augmentation of water treatment projects by county governments had not been covered extensively. Therefore, there existed knowledge gaps on the access of information on this concept of augmentation of water projects.

Variable	Source of literature	Findings	Knowledge gap
Financial Resources	Muchemi (2009)	-Unreliable and inadequate funds	Resources for water management not enough
	Mwaura (2013)	-County government increasingly relies on national government support for finances and from their limited revenues.	
	Sambu (2014)	-County governments are compounded by governance and financial constraints	
Leadership	Bray (2010)	- there is low leadership	There is no such study in MEWASS, Meru County.
	Mulory (2013)	-County government management having a lack a consistent track record of service accountability	
	Farelo and Morris (2009)	Management that will support development projects of the government	
Staff Competency	Asian Centre for Tourism and Poverty Reduction (2008)	-organizing training courses for the local community	Lack of competent staff in water augmentation projects
	Tshitangoni (2010)	-projects, members do not have any formal education level of illiteracy affecting mainly women.	

Variable	Source of literature	Findings	Knowledge gap
	Nzau-Muteta et al, 2005	-project management skills are important for implementing projects	
Politics	Gordon et al., (2010)	- most of government projects are politically influenced	
	Bozzo (2010)	-projects are political through informing citizens	There is no such study in MEWASS, Meru County.
		-	

2.11 Summary of Literature Review.

This chapter reviewed the literature on the factors that influence the implementation of augmentation of water treatment projects both locally and globally. Financial resources, leadership, staff competency and political factors are the factors that were reviewed. A conceptual framework was included to sum up the relationships between the independent variables and dependent variable (augmentation water treatment project by county government in Kenya.). A case in question, Meru water and sewerage services (MEWASS), Meru County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduced and described the research design and methodology which were used to carry out the study. The methodology outlined the techniques, methods and tools used in data analysis and how to arrive at the sample size (Kothari, 2005). It outlined the sampling design techniques that were used to select the sample of study. It also described the data collection procedures and the tools to be used in obtaining data, the process of data analysis, the study design and the target population.

3.2 Research Design

This study adopted a descriptive research design which was concerned with describing the characteristics of a particular individual, or groups (Kothari 2009). A research design is a master plan for the collection and analysis of data which aids in answering the research question. Kothari 2004, stated that the main purpose of such studies was that of formulating a problem for a more precise investigation. This method was suitable since it allowed flexible data collection and the respondents were not manipulated. Descriptive research design applies when the problem is known and well designed as it was evident in this study.

3.3 Target Population

According to Kothari (2009), a population refers all the items in any field of inquiry. In addition, Lavrakas (2008) defines population as any finite or infinite collection of individual elements of the entire collection of things in which you are interested in. In this study, the target population was 135 respondents whose distribution is given in Table 3.1

Table 3.1 Target Population

Category	Frequency
County Executive Committee (CECM)	10
Chief officers	15
County Directors	25
MEWASS Management	15
MEWASS technical staff	20
Project Supervisors	5
MCA's	45

Total	135
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Source; (Meru County Government 2019)

3.4 Sample Size and Sampling Procedure

The number of respondents who took part in the study and the procedure of picking them is given in this section.

3.4.1 Sample size

Lavrakas (2008) describes a sample in a survey research context as a subset of elements drawn from a larger population. Kombo and Tromp (2009) and Kothari (2004) also describe a sample as a collection of units chosen from the universe to represent it. The study adopted a census which allowed all the 135 respondents interviewed.

3.4.2 Sampling Procedure

The study adopted a census which allowed all the 135 respondents be covered. This is due to the fact that the target population was manageable and the respondents were within the county government of Meru systems whom were accessed easily. According to Kothari (2014), census is a complete enumeration of all items in the population. It is presumed that in a census inquiry, all the respondents are covered and there is no element of chance which is left and the highest accuracy is obtained especially when the population is manageable.

3.5 Research Instruments

Data was collected using questionnaires. The questionnaire had both open ended and closed ended questions. The questions were simple, logical and straight forward directions for the respondents so that they did not feel any difficulty in answering the questions. The method was inexpensive, it was free from bias of the interviewer and the respondents were given adequate time to give well thought out answers that are dependable and reliable.

3.5.1 Pilot Testing of the Instrument

The questionnaire was pretested to ensure reliability and content validity prior to them being administered by use of split half method. The questionnaire was pilot tested using 13 employees from Isiolo Water and Sewerage Company. This represented 10 % of the accessible population (sample size) that is generally recommended by social researchers, according to Mugenda and Mugenda (2009). In choosing the 13 employees for pilot testing, the researcher used simple random sampling.

3.5.2 Validity of the Instruments

Validity of the measuring instruments refers to the degree to which the tools used to measure what was intended to be measured. In this study, the questionnaires were validated to enhance their correctness and consistency. This was conducted in Isiolo Water and Sewerage Company using 13 employees from Isiolo Water and Sewerage Company. This represented 10 % of the accessible population (sample size) that is generally recommended by social researchers, according to Mugenda and Mugenda (2009). Items which required amendments were acted accordingly. Through this irrelevant and baseless items were discarded and replaced with more useful and logical ones.

Instrument validity was also ensured through the expert advice from my supervisor.

Information obtained was used to adjust the questionnaire.

3.5.3 Reliability of Research Instrument

Reliability of the questionnaire explains that the result will be the same even if the research was to be carried out by another researcher on a different occasion. Split half method of testing reliability was used to measure reliability where questionnaires were given to respondents in Isiolo Water and Sewerage Company in that the respondents were split into two groups and the questionnaire administered simultaneously. The data was subjected to Pearson correlation in order to ascertain the reliability coefficient. According to Kothari (2014), a correlation coefficient of 0.7 was desirable for newly developed questionnaires. The questionnaire had a correlation coefficient of 0.76 which indicated that the instrument used had good reliability.

3.6 Data Collection Procedures

Questionnaires were self-administered and two research assistants who are qualified were recruited to collect data. These target respondents were easily identified in that they had adequate knowledge having been working with the County government of Meru and MEWASS. They provided relevant insights on the implementation of water augmentation projects. The drop and pick method were used to collect data after booking appointment with the respective respondents. The questionnaires were picked after 3 days and this ensured respondents filled the questionnaire at their convenient time.

3.7 Methods of Data Analysis

Data analysis included data sorting, editing, coding, or variable generation, data entry, cleaning, processing and interpretation of results. Frequencies and descriptive analysis were used to

analyze data. Multiple regression was used to test the significance of the overall model at 95% level of significance. According to Kothari (2014) level of significance is used to measure association between independent variable and dependent variable. Data analysis was done with the help of software program SPSS version 22 which is the most current version in the market where data collected was subjected to multiple regressions for analysis and results generated to establish whether there existed any relationship between financial resources, leadership, staff competency, political factors and augmentation of water treatment projects. The analyzed data was presented using tables

The variable Y is usually defined as

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where: Y= Augmentation of Water Treatment Project

B₀= Constant

B₁ =Coefficient of Independent Variables

X₁ = Financial Resources

X₂ = Leadership

X₃ = Staff Competency

X₄= Politics

e =Error term of the model

3.8 Ethical Issues

In this study, the authority to collect data was requested from the County Secretary of Meru County government and the CEO of Meru Water and Sewerage Services. Before completing the questionnaire, the respondents were explained the purpose of the research and requested to participate in the study. Only those who gave their consent were included in the actual data collection. There was a cover letter to accompany the questionnaires requesting cooperation from the respondents, and a copy of a letter from the university indicating the study is purely for academic purposes, moreover all ethical practices were respected. Research permit was requested from NACOSTI to collect data as per the requirement of higher education commission.

3.9 Operationalization of Variables

The operationalization of variables is shown in Table 3.2

Table 3. 2: Operationalization of variables

Objectives	Type of Variable	Indicator	Measuring of Indicators	Tools of analysis	Type of analysis
Established how financial resources influences the augmentation of water treatment projects	Independent	Financial Resources	Sources Adequate Reliability of funds Budgeting	Percentages Frequency	Descriptive statistics Regression analysis
Determined how leadership influences the augmentation of water treatment projects	Independent	Leadership	Transformational Supportive Communication	Percentages Frequencies	Descriptive statistics Regression analysis
Established how staff competency influences augmentation of water treatment projects	Independent	staff competency	Trainings Employing professional Outsourcing professionals	Percentages Frequencies	Descriptive statistics Regression analysis

Established how political factors influences augmentation of water treatment projects	Independent	Politics	Oversight Allocation Ethnicity	Percentages Frequencies	Descriptive statistics Regression analysis
	Dependent	Augmentation of Water Treatment Project	No. of water connection Consistence of water supply	Percentages Frequencies	Descriptive statistics Regression analysis

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter is dedicated to the presentation, analysis and interpretation of the findings as per the data collected using the questionnaires which were administered to the respondents. The findings answered the research questions. With these regard, data collected was analyzed and reports were produced in form of tables and statistics. The findings from the questions that were Likert in nature and in the 'agree ' and 'disagree ' format were interpreted based on three levels of agreement where strongly disagree and disagree meant 'disagree'; and uncertain or neutral remained the same for interpretation, and agree and strongly agree were taken as 'agree' for the purposes of interpretation.

4.2 Response rate

The researcher issued 135 questionnaires to the respondents. Only 109 questionnaires were returned which accounted for 81% return rate. The reasons for this response rate was attributed to some of the respondents who were issued with the questionnaires returned questionnaires in time and there were well filled while very few who did not respond at all and others whose items were not filled. However, the response rate is considered adequate given the recommendations by Saunders, Lewis and Thornhill (2007) who suggested a 30-40% response is adequate, Sekaran (2010) who document 30%, and Hager (2008) recommend 50%. Based on these assertions, this implies that the response rate for this study was adequate.

4.3 Demographic Information

This section sought to gather information relating to or concerning demography among the respondents targeted in the study.

Table 4.1: Respondent's Gender

Responses	Frequency	Percent
Male	82	75.5
Female	27	24.5
Total	109	100.0

The table 4.1 represents the distribution of the gender of the respondents. Respondents were required to state their gender. Data collected indicated that out of 109 respondents, majority 75.5% of them were men while 24.5% of them were women.

Table 4.2: Respondent's Ages

Response	Frequency	Percent
31-35 years	11	11.7
36-40 years	20	21.3
41-45 years	46	48.9
46-50 years	7	7.4
Over 51	10	10.6
Total	109	100.0

The table 4.2 represents the distribution of the ages of the respondents. The respondents for the study were asked to state their age category. Data collected indicated that majority 48.9% of the respondents were of age category 41-45 years, 21.3% of the respondents were between 36-40 years, 11.7% were between 31-35 years, 10.6 % were of the age above 51 years while 7.4% were of between 46-50 years.

Table 4.3: Respondents Level of Education

Responses	Frequency	Percent
Diploma	15	13.8
Degree	66	60.6
Masters & Above	17	16.0
Other Professional courses	10	9.6
Total	109	100.0

The table 4.3 shows the response of level of education of the respondents. The respondents level of education was considered to be significant for the study as it would help to establish the literacy levels of the respondents that would influence project implementation in water projects. They were therefore asked to indicate their highest level of education. Data collected indicated that majority 60.6% of the respondents had a bachelor's degree while 13.8% of the respondents had diploma education. Only 16% of the respondents had masters' degree. This shows that employees have skills which could be used to transform the water projects into useful projects that will benefit people who reside in Meru County.

4.4 Financial Resources

This section sought to gather the responses of the respondents in regard to the financial resources which is used for water projects implementation.

4.4.1 Financial resources as a factor that influence augmentation of water treatment projects by Meru water and sewerage services

The respondents were asked to tick the most appropriate response on the several sources that financings, adequate finances to undertake the projects to completion, reliability and timely and whether money is always budgeted by county government of Meru to facilitate water augmentation projects by MEWASS.

Table 4.4.1: Financial resources influences the augmentation of water treatment project

Statements	Mean	Std. Dev.
There are several sources that are financing the water augmentation projects in Meru County	4.68	0.81
The funds received for water augmentation projects in Meru County are adequate to undertake the projects to completion	2.11	1.24
The funds allocated for water augmentation projects in Meru County are reliable and timely	2.93	1.26
There is always money budgeted by county government of Meru to facilitate water augmentation projects in Meru County	2.75	0.94

The findings revealed that the respondents strongly agreed that there were several sources that finance water augmentation projects in Meru County as indicated by a mean of 4.68 and that the funds received for water augmentation projects in Meru County are not adequate to undertake the projects to completion which was indicated by a mean of 2.11. It was also established that the funds allocated for water augmentation projects in Meru County are not reliable and they are not timely which was indicated by a mean of 2.93. The study further established that money is not always budgeted by county government of Meru to facilitate water augmentation projects in Meru County as shown by a mean of 2.75. These findings are in agreement with those of Mwaura (2013) who established that County governments increasingly relies on national government support for finances and from their limited revenues and this has developed a dependency parasitic relationship with national government which seriously weakened their ability to develop sustainable activities on water treatment projects.

4.4.2 Leadership

The researcher also requested the respondents to circle the number (1-5) that best describes the leadership skills in the county on the influence on water augmentation projects. The results were as presented in table 4.4.2.

Table 4.4. 2: Leadership Skills on water augmentation projects

Leadership Statements	Mean	Std. Dev.
There is a transformational leadership that facilitates the implementation water augmentation projects in Meru County	4.1759	.6674
There is very supportive leadership that enhances the facilitates the implementation water augmentation projects in Meru County	3.9722	.6031
The County and MEWASS leadership has developed communication systems that facilitates implementation of implementation water augmentation projects in Meru County	1.0741	.9054

As shown in table 4.4.2, the respondents agreed that transformational leadership that facilitates the implementation water augmentation projects in Meru County as expressed by a mean score of 4.1759 and that there is a very supportive leadership that enhances the implementation of water augmentation projects in Meru County as expressed by a mean score of 3.9722. The respondents again disagreed that the County and MEWASS leadership has developed communication systems that facilitates implementation of water augmentation projects in Meru County as expressed by a mean score of 1.0741.

4.5.3 Staff Competency

The researcher further asked the respondents to tick the number (1-5) that best describes their responses in relation to the staff competency factors that influence water augmentation projects in Meru County. The collective responses of the respondents were summarized in table 4.4.3

Table 4.4.3: Respondents Responses in Relation to the Staff competency

Staff Competency Water Augmentation Projects	Mean	Std. Dev.
The MEWASS staff are properly trained in project management that will help in implementation of augmentation projects in Meru County	2.4352	0.6002
The County government and MEWASS has employed professionals in construction of water augmentation projects in Meru County	3.8611	0.8255
The County government and MEWASS has outsourced professionals who assist in construction of water augmentation projects in Meru County	4.0370	0.6546
The County government and MEWASS has no capacity to construction of water augmentation projects in Meru County	3.9722	0.7545

From the results, the respondents disagreed that MEWASS staff are properly trained in project management that will help in implementation of augmentation projects in Meru County as illustrated by a mean of 2.4352 and that County government and MEWASS has employed professionals in construction of water augmentation projects in Meru County as illustrated by a mean of 3.8611. The respondents also agreed that County government and MEWASS has outsourced professionals who assist in construction of water augmentation projects in Meru County as illustrated by a mean of 4.0370 and the respondents disagreed that County government and MEWASS has no capacity to construction of water augmentation projects in Meru County as illustrated by a mean of 3.9722

4.5.4 Political factors

The respondents were asked to tick the number that best describes their responses in relation to politics factors that influence water augmentation projects in Meru County. The responses were presented in Table 4.4.4.

Table 4.4.4: Respondents responses on politics and water augmentation projects in Meru County

Statements	Mean	Std. Dev.
There is proper oversight from county government legislature on the construction of water augmentation projects in Meru County	3.3704	0.9432
The County government has politicized the construction of water augmentation projects in Meru County	4.2130	0.6843
There are some legislative members who does not support the construction of water augmentation projects in Meru County	3.8519	0.6086
The County government and MEWASS officials has been accused of embezzlement of funds of construction of water augmentation projects in Meru County	3.2963	0.8992

From the findings, the respondents agreed that there is proper oversight from county government legislature on the construction of water augmentation projects in Meru County as shown by a mean of 3.3704 while it was found that County government has politicized the construction of water augmentation projects in Meru County as shown by a mean of 4.2130 and that there are some legislative members who does not support the construction of water augmentation projects in Meru County as shown by a mean of 3.8519. The respondents however indicated that County government and MEWASS officials has been accused of embezzlement of funds of construction of water augmentation projects in Meru County as shown by a mean of 3.2963.

4.5 Water Augmentation Projects

The researcher asked the respondents to indicate the trend of various aspects of water augmentation projects in Meru County. Table 4.5 presents the summary of their responses.

Table 4. 5: Trend of Various Aspects of with Water Augmentation Projects

	Mean	Std. Dev.
--	-------------	------------------

There is reliable water supply to Meru residents due to the construction of water augmentation projects	2.3426	.9188
The is clean water supply to the Meru residents due to the construction of water augmentation projects	4.2500	.6988
There are more new connections as a result of construction of water augmentation projects in Meru County	3.8519	.6086
County government and MEWASS has satisfied the Meru residents with the supply of water due to construction of water augmentation projects in Meru	1.2593	.8899

The respondents disagreed that there is reliable water supply to Meru residents due to the construction of water augmentation projects as indicated by a mean of 2.3426 and that there is clean water supply to the Meru residents due to the construction of water augmentation projects as indicated by a mean of 4.2500. The respondents further indicated that there are more new connections as a result of construction of water augmentation projects in Meru County as illustrated by a mean of 3.8519. Finally, the respondents indicated that the County government and MEWASS has not satisfied the Meru residents with the supply of water due to construction of water augmentation projects in Meru as illustrated by a mean of 1.2593.

4.6 Regression Analysis

The study used a regression model to test the hypothesis between water augmentation projects and the variables which included financial resources, leadership, staff competency and politics.

Table 4. 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.827	0.684	0.672	2.352

The results of Table 4.6 found that R-Square value (coefficient of determination) is 0.672, which indicates that the independent variables which were financial resources, leadership, staff competency and politics explain 67.2% of the variation in the dependent variable implementation of water augmentation projects.

Table 4. 7: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1268.88	4	317.220	55.726	0.000
	Residual	586.33	103	5.693		
	Total	1855.21	107			

The ANOVA results are shown in Table 4.7 which found that the model had predictive value and thus it was significant. This was because its p-value was less than 5%, $p=.000$ and F calculated (55.726) was significantly larger than the critical F value (2.4472). Model coefficients provide unstandardized and standardized coefficients to explain the direction of the regression model and to establish the level of significance of the study variables. The results are captured in Table 4.8.

Table 4. 8: Regression Coefficients

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	0.916	0.217		4.221	.000
Financial Resources	0.787	0.249	0.613	3.161	.003
Leadership	0.599	0.286	0.234	2.094	.042

Staff Competency	0.738	0.291	0.138	2.536	.015
Political factor	0.818	0.381	0.249	2.147	.038

The following equation was derived

$$Y = 0.916 + 0.787 X_1 + 0.599 X_2 + 0.738 X_3 + 0.818 X_4$$

The findings showed that if all variables which are financial resources, leadership, staff competency and political factors were held constant at zero implementation of water augmentation projects will be 0.916. The findings presented also show that taking all other independent variables at zero, a unit increase in the financial resources would lead to a 0.787 increase in the scores of implementation of water augmentation projects. This variable was significant since $0.003 < 0.05$. Further, the findings shows that a unit increases in the scores of leadership would lead to a 0.599 increase in the scores of implementation of water augmentation projects. This variable was significant since $0.042 < 0.05$.

The study also found that a unit increase in the scores of staff competency would lead to a 0.738 increase in the scores of implementation of water augmentation projects. This variable was significant since $0.015 < 0.05$. The findings also show that a unit increase in the scores of political factors would lead to a 0.818 increase in the scores of implementation of water augmentation projects. This variable was significant since $0.038 < 0.05$.

As per the findings, at 95% confidence level, all the variables were significant as the p-value was less than 0.05. The study infer that political factors had the greatest effect on the implementation of water augmentation projects, followed by financial resources, then staff competency while leadership had the least effect to the implementation of water augmentation projects.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the summary and discussion of the findings, conclusions and recommendations based on the findings drawn on the factors that influence augmentation of water treatment projects by county governments in Kenya.

5.2 Summary of the Findings

The study found that there are delays in financing augmentation of water treatment projects and large amount of funds allocated to augmentation of water treatment projects. The study also revealed that there are funds from national government to implement water projects in counties like Meru and long approval procedures before funding augmentation of water treatment project. The study further found that there are rarely reliable funds to implement augmentation of water treatment project and that the budget allocation committee rarely considers augmentation of water treatment project as crucial project when allocating funds.

The study found that employees' professional skills influence the implementation of the water projects and that there is knowledge on policies on implementation to enhance water projects in Meru County. The study also found that employees with high technical expertise help them to implement water projects and that there is adequate staff with experience which helps in the augmentation of water treatment project in Meru County. The study also found that the county government of Meru doesn't give training on projects implementation to employees to acquire skills that can help implement water projects in the county.

The study found that there are many water projects leadership with different interests on county water projects and that there is conflict between ministry of water and irrigation at national government and the county government on water projects implementation. The study also found that there is conflict between county governments the project leadership and that there is no communication between the county government and water project leadership.

The study found that there is public participation during budgeting of water projects for proper augmentation of water treatment project in Meru County, that managers oversees who does what during augmentation of water treatment project in Meru County and that the management teams have developed reporting channels used to when water projects are to be implemented. The study also found that the management rarely practices transparency when planning for augmentation of water treatment project in Meru County and that the management employees rarely delegates assignments to the juniors when implementing water projects in Meru County.

5.3 Discussion of the Findings

The findings revealed that financial resources, leadership, staff competency and political factors played a key role in the implementation of water augmentation. These independent variables are discussed below.

5.3.1 Financial resources

The study found that there is delay in financing augmentation of water treatment project and that there is large amount of funds issued to augmentation of water treatment project. The study also revealed that there are funds from national government to implement water projects in marginalized counties like Meru and that there are long approval procedures before funding augmentation of water treatment project. This concurs with Saunders (2009) who argued that in Uganda there are cases where government obtains their finances free of interest from the bank. These practices put the government in greater financial strains as they incur large debts by way

of interest on the loans. He concludes that it would appear that the crucial factor in the financial difficulties of the government is mismanagement of funds available rather than the inability of the organization to raise money from elsewhere.

The study further found that there are rarely reliable funds to augmentation of water treatment project and that the budget allocation committee rarely considers augmentation of water treatment project as crucial project when allocating funds. This is similar to Mwaura (2013) who noted that many devolved governments are weighted down by the presence on their balance sheets of accumulated debts dating back many years from the previous municipal councils.

5.3.2 Staff Competency

The study found that employees' professional skills influence their Implementation of the water projects and that there is knowledge on policies on implementation to enhance water projects in Meru County. Campo (2008) in an intervention model introduced in Peru for water supply considered community training as an important component in which the project used various methods of training such as audio-visuals, visual etc., argues that training on issues like operation and maintenance empower the communities to look after water supply systems thus aiding sustainability.

The study also found that employees with high technical expertise help them to implement water projects and that there is adequate staff with experience which helps in the augmentation of water treatment project in Meru County. This correlate with Dobi (2012) who while quoting Jones (2009) notes that lack of adequate monitoring and evaluation expertise or capacity among local NGOs is one area that has been highlighted by several scholars.

The study also found that the county government of Meru doesn't give training in projects implementation to employees to acquire skills that can help implement water projects in the county.

5.3.3 Leadership

The study found that there are many water projects leaders with different interests on county water projects and that there is conflict between ministry of water and irrigation at national government and the county government on water projects implementation. In line with this, World Bank (2010) notes that the social development department adopted a more intuitive and mutually exclusive four-level classification of participation involving information sharing, consultation, collaboration and empowerment ranked in order from the least to the most influential.

The study also found that there is conflict between county governments the project leadership and that there is no communication between the county government and water project leadership. This corresponds with Samuel and Tom (2010) who argue that the focus of project implementation has been disrupted by conflict between the levels of government in a country. Corporate governance is the process by which organizations are directed, controlled and held accountable.

5.3.4 Political factors

The study found that there is public participation during budgeting of water projects for proper augmentation of water treatment project in Meru County, that managers oversees who does what during augmentation of water treatment project in Meru County and that the management teams have developed reporting channels used to when water projects are to be implemented. This is similar to a report of Elhance and Agarwal (2002) who in their studies indicate that there is an inherent desire for withholding of authority on the part of superiors because of the love for authority. Though there is a universal phenomenon, this is operative more strongly in organizations because they have to work in authoritarian culture.

The study also found that the management rarely practices transparency when planning for augmentation of water treatment project in Meru County and that the management employees

rarely delegates assignments to the juniors when implementing water projects in Meru County. This concurs with Nwankwoala (2011) who indicates that in business organizations, there is lack of adequate delegation authority to various managerial levels while in public sector enterprises delegation of authority is not always for the whole job.

5.4 Conclusions

The study concludes that financial resources has a positive and significant influence on the augmentation of water treatment project. Large amount of funds issued to augmentation of water treatment project as well as funds from national government to implement water projects in marginalized counties like Meru were behind the positive influence. Although there are long approval procedures before funding augmentation of water treatment project and partial consideration of augmentation of water treatment project as crucial project when allocating funds by budget allocation committee rarely.

The study concluded that staff competency influences augmentation of water treatment project in Meru County positively. This is as a result of the influence that employees' professional skills bring to implementation of the water projects. Also there being knowledge on policies on implementation to enhance water projects in Meru County brings the influence. It was realized that the county government of Meru doesn't give training in projects implementation to employees to acquire skills that can help implement water projects in the county.

The study concluded that Leadership positively and significantly influences augmentation of water treatment project in count Meru County. It was realized that there are many water projects leadership with different interests on county water projects and that there is conflict between ministry of water and irrigation at national government and the county government on water projects implementation and that there is no communication between the county government and water project leadership.

The study concluded that politics influences augmentation of water treatment project in Meru County significantly. There is public participation during budgeting of water projects for proper augmentation of water treatment project and managers oversees who does what during augmentation of water treatment project in Meru County. The management rarely practices transparency when planning for augmentation of water treatment project and rarely delegates assignments to the juniors when implementing water projects in Meru County.

5.5 Recommendations

The study recommends that involvement of key leadership such as relevant government agencies, financial advisers, and other professionals should be increased in order to enhance the success of their projects. This can be done by involving such leadership who add value to the project by enhancing management skills and competencies in managing projects.

The study recommends that the ministry should uphold training on corporate governance, and management development; provide more resources in the strategy management process. In addition, the management should be sensitized on their organizational roles and evade political influence. The management should be fully involved in setting the objectives according to the needs required.

The study also recommends that policy makers in various areas such as the ministry of water and county administration should also consider pursuing policies that promotes the active involvement of key leadership in community water projects. The study further recommends that there is need for the government to follow up on the enforcement of the regulations of stakeholder participation in the county water projects implementation process since this will ensure better management of county funds and successful implementation of various water projects.

The study recommends that there is a need to involve the juniors in the augmentation of water treatment project within the county through delegation of some assignments to ensure that the junior feel fully part of the projects. This will ensure successful implementation of the projects all the staff is involved.

Since there has been no communication between the county government and water project leadership and conflicts between county government the project leadership, the study recommends that the county government should create the right communication channels between them and the projects leadership as well as the national government. This will in turn reduce conflicts between the county and national government as well as uphold transparency in the implementation of the water projects hence make it successful.

5.6 Recommendations for further Study

The current study was limited to water projects in Meru County. Future studies should consider replicating the same study in other areas so as to support the generalization of these findings. The study was also limited to four factors: Financial resources, staff competency, leadership and political factors. In future studies, researchers should also consider exploring other variables that may influence the augmentation of water treatment project such as technology and community participation.

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APPENDICES

Appendix I Letter of transmittal

Mugambi Philip Aciita
University of Nairobi
Meru Extra Mural Centre

Dear Sir/Madam,

RE: DATA COLLECTION

This is to kindly inform you that I am carrying out an academic research for the purpose of examination leading to the award of a degree of Masters of Arts in project planning and management of University of Nairobi.

The purpose of this letter is to request you to provide the required information as per the questionnaire provided. Kindly be as honest and thorough as possible. The information you will provide will be considered as confidential and will only be used for the purpose of my examination only. Confidentiality of the collected data and anonymity of the respondents is assured, and time taken to fill the questionnaire will be highly appreciated.

Thanking you in advance for your cooperation.

Yours Faithfully

Mugambi Philip Aciita

L50/10478/2018

Appendix II Questionnaire

GENERAL INSTRUCTIONS

The purpose of this questionnaire is to collect data on the factors influencing augmentation of water treatment projects by county governments in Kenya; a case of Meru Water and Sewerage Services, Meru County. It is divided into two sections: Section (A) containing Background information and section (B) structured to establish the objectives of the study. Please tick () appropriately or provide the answers in the provided spaces.

SECTION A : BACKGROUND INFORMATION

By means of a tick kindly indicate an option that best describes:

1. Indicate your gender

a. Male ()

b. Female ()

2. Indicate your age: -

a. Below 25 years ()

b. 25-30 years ()

c. 31-35 years ()

d. 36-40 years ()

e. 41-45 years ()

f. 46-50 years ()

g. Over 51 ()

3. Indicate your level of education:-

a. Primary education ()

b. Secondary education (O level) ()

c. Diploma ()

d. Degree ()

e. Masters &Above ()

4. Years you have worked in Meru County/MEWASS :-

a. Below 5 years ()

b. 5-10 years ()

c. 11-15 years ()

d. Above 15 years ()

SECTION B: FINANCIAL RESOURCES

5. The following table deals with financial resources as a factor influencing augmentation of water treatment projects by Meru water and Sewerage Services, Meru County. Express your level of agreement by placing a tick in an appropriate column that expresses what you feel.

KEY: 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Statements	1	2	3	4	5
There are several sources that finance the water augmentation projects					
The funds received for water augmentation projects in Meru County are adequate to undertake the projects to completion					
The funds allocated for water augmentation projects in Meru County are reliable and timely					
There is always money budgeted by county government of Meru to facilitate water augmentation projects					

SECTION C: LEADERSHIP

6. On a scale of 1 to 5 to what extent do you agree or disagree with the following factors as influencing water augmentation projects in Meru County

KEY: 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Statements	1	2	3	4	5
There is a transformational leadership that facilitates the implementation water augmentation projects in Meru County					
There is very supportive leadership that enhances implementation water augmentation projects in Meru County					

The County and MEWASS leadership has developed communication systems that facilitates implementation of water augmentation projects					
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SECTION D: STAFF COMPETENCY

7. The following table deals with staff competency factors that influence water augmentation projects in Meru County. Express your level of agreement by placing a tick in an appropriate column that expresses what you feel.

KEY: 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Statements	1	2	3	4	5
The MEWASS staff are properly trained in project management that will help in implementation of augmentation water treatment projects					
The County government and MEWASS should contract professionals in the implementation of water augmentation projects					
The County government and MEWASS should outsource professionals who assist in implementation of water augmentation projects					
The County government and MEWASS have no capacity to implement the water augmentation projects					

8. How important is staff competency in managing the construction of water augmentation projects in Meru County?

- a) Very important
- b) Important
- c) Do not know
- d) Less important

e) Not important

SECTION E: POLITICS

9. The following table deals with politics factors that influence water augmentation projects in Meru County. Express your level of agreement by placing a tick in an appropriate column that expresses what you feel.

KEY: 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Statements	1	2	3	4	5
There is proper oversight from county government legislature on the implementation of water augmentation projects in Meru County					
The County government has done adequate public participation on the implementation of water augmentation projects					
There are some members of county assembly who does not support the implementation of water augmentation projects in Meru County					
The County government and MEWASS officials have been accused of embezzlement of funds of implementation of water augmentation projects in Meru County					

10. How are you satisfied with the politics in support the implementation of water augmentation projects in Meru County?

- a) Highly satisfied ()
- b) Satisfied ()
- c) Neutral ()
- d) Dissatisfied ()

- e) Highly dissatisfied ()

SECTION E: WATER AUGMENTATION PROJECTS

11. The following table deals with water augmentation projects in Meru County. Express your level of agreement by placing a tick in an appropriate column that expresses what you feel.

KEY: 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Statements	1	2	3	4	5
There is reliable water supply to Meru residents due to the implementation of water augmentation projects					
The is clean water supply to the Meru residents due to the implementation of water augmentation projects					
There is more new connections as a result of implementation of water augmentation projects					
The County government and MEWASS have satisfied the Meru town residents with the supply of water due to implementation of water augmentation projects in Meru County					

11. How are you satisfied with the supply of water due to augmentation water treatment projects by MEWASS in Meru County?

- a) Highly satisfied ()
- b) Satisfied ()
- c) Neutral ()
- d) Dissatisfied ()
- e) Highly dissatisfied ()

Thank you very much for your cooperation