



**WOLKITE UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**FACTORS AFFECTING PERFORMANCE OF WATER SUPPLY PROJECT THE  
CASE OF MAREKO WOREDA GURAGHE ZONE ETHIOPIA**

**MBA THESIS**

**WONDMU ENDALE BEHARE**

**A THESIS SUBMITTED TO THE DEPARTMENT OF MANAGEMENT, COLLEGE  
OF BUSINESS AND ECONOMICS, SCHOOL OF GRADUATE STUDIES WOLKITE  
UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION**

**JUNE, 2019  
WOLKITE, ETHIOPIA**

**FACTORS AFFECTING PERFORMANCE OF WATER SUPPLY PROJECT THE  
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OF PEOPLE AND REGION, ETHIOPIA**

**By**

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**JUNE.2019  
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Approval Sheet-1  
School of Graduate Studies  
College of Business and Economics  
Wolkite University  
Advisors' Approval Sheet  
(Submission sheet-1)

This is to certify that the thesis entitled “factors affecting performance of water supply projects; in Mareko wareda Ethiopia” submitted in partial fulfillment of the requirements for the degree of Master’s with specialization in Business Administration the graduate program of the management department, and has been carried out by Wondmu Endale Behare Id.No.GSE/107/09 under my/our supervision .To the best of my knowledge is an original work and submitted earlier for any degree either at this university or any other university.

Therefore I/we recommended that the students has fulfilled the requirements and hence here by can submit the thesis to the department.

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Approval sheet-2  
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Examiners' Approval Sheet

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We the undersigned members of the Board of examiners the final open defense by Wondmu Endale Behare have read and evaluate his thesis entitled “ factors affecting performance of water project in Mareko Woreda Guraghe Zone Ethiopia” and examined the candidate. This is, therefore, to certify that the thesis has been accepted partial fulfillment of the requirement for the degree of Master of Business Administration.

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I declare that this thesis ,which I hereby submitted for the degree of MBA in Business Administration to department of Management and Economics school of graduate studies at Wolkite university is my own work and all source of materials used for this thesis have been duly acknowledge. I solemnly declare that this thesis is not submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

Researcher's Name

Signature

Date

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## DEDICATION

I dedicate this thesis manuscript to my lovely wife Kidist Yilma and our children Ealiyana Wondmu, Adoniyase Wondmu and Maramawite Wondmu for their love and support for the success of my life.

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## ACRONYMS

RBV	Resource base view
WASH	Water Supply Hygiene and Sanitation
ADF	African Development Fund
WUCs	Water user committee
ET	Ethiopian
FGD	Focus Group Discussion
MDGs	Millennium Development Goals
MoWRs	Ministry of Water Resources
MBA	Masters of Business Administration Business
MWWS	Mareko Woreda Water sector
NGO	Non-Government Organization
SNNPR	Southern Nation Nationality People Region
UN	United Nation
UNICEF	United Nation Children Fund
USA	United States of America
WHO	World Health Organization
MWHO	Mareko woreda health office
CPARTICIPAT	Participation
PMANAGE	Project management
INFRA	Infrastructure
FINANCE	Finance
M &O	Operation and Maintenance
RQ1	Research question one
RQ2	Research question two
RQ3	Research question thre
RQ4	Research question four

## ABSTRACT

*In current trends of poor performance of water projects are allowed to continue rural water facilities in Ethiopia. The aim of this study was to determining factors that affecting performance of water supply projects in Guraghe Zone Mareko Woreda. The specific objective is to establish effect of community participation, project management, water infrastructure and project finance funds, on the performance of water projects. In order to achieve the objective the researcher adopted a descriptive and explanatory design, where the data was collected from sample of 390 participants using structured questionnaires, interview, and focus group discussion and analyzed using descriptive statistical techniques. Results revealed that only project management has significant and positive effect on the performance of water supply project on Mareko Woreda. Available data was support the existences of a statistically significant relationship between community participation, water infrastructures, project finance fund and performance of water supply project. These findings have significant implication on water supply projects in Mareko Woreda and other parts of country. The study recommended Community based water supply Project problems could be minimized through awareness creation, to the community members throughout project life period, project management techniques in short term training for water supply project committee, by Mareko Woreda water sectors office, improve water infrastructures and assigning budget for maintenance.*

**Key words;** *project management, community participation, project financing, performance*

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background of the Study

Water is the essential inputs for the human being to live. It is the most important on the earth which is a natural resource that is necessary for sustenance of life, ecological systems and a key resource to social and economic development, (PeterMaburi, 2014). Now a days Access to safe drinking water and sanitation is global concern, it has been increasingly address as one basic human rights of nation (UNDP, 2014).

The performance of water supply projects, which are functionality, sustainability, adequately and timely water provide to the community. Many water supply projects had been constructed or implemented by Governments, Non-governmental organizations, local and international organizations from all over the world, to promote safe rural water supply and sanitation over the years. Despite of the sustainability rate on water project in developing countries alarmingly low, due to a lack of resource, capabilities and spare parts for service and maintenance!Hazelton,2015. However in most rural water project areas the developing world, safe drinking water from an improved source and sanitation services remain unacceptable lacking (WHO/UNCEF, 2014).Although the important of these issue in the political agenda, water police in many country do not promote the creation of appropriate institutions to manage water needs and maintenance capabilities (Saleth&Dinar, 2013).

The importance of community involvement , demand responsive and ownership of the users issue do not consider during the project implimentation. The administrative structur and institutional suport levels to rural areas in most parts of the world to weak adress advocacy,encourage community engagement,facilitate finance and management initiatives for the community. Consequently, water source become non-functional after a few years of service (LockWood, 2014). Since inaduquqte access to water for drinking, bathing and hygien gives rise social problems associated with poverty. Worldwide, 80 percent of the people who have limited access to drinking water supplies live in rural

areas (UnitedNation, 2010). Effects on health are perhaps the most obvious. It has been estimated that 13 million children less than 5 years of age die each years from poor sanitation and other disease linked with poverty (Redclift, 2014). ‘Dirty water and dirty air are major cause of diarrhea and respiration infections, the two biggest killers of the poor children’pp). Improvements in these services could reduce mortality rates due to diarrheal diseases by an estimated 65% and related morbidity by 26% (WHO, 2004) . While the international community has made advancements toward this goal over the past decade, progress in rural areas is lagging relative to urban areas (UnitedNation, 2011). Even where rural water supply systems are developed, many are in disrepair or not functioning properly.

With over 75% of the Africa’s poor living in rural areas the need to expand sustainable water service to these areas is imperative (De Regt 2005). According to, Harvey and Reed,2013’ low sustainability rate related to community issue such as limited demand, perceived lack of ownership, limited community education and limited sustainable community management structures such as water user committee (WUCs).

Access to safe water and adequate sanitation has multiple benefits in the overall development of a society such as having healthy society, address gender imbalances in education, improves productivity and contribute to economic growth as well. However, more than 1 billion people around the world have no access to clean drinking water (UNDP, 2014) . Lack of access to water in general and particularly potable water causes many social and economic problems.

As noted by World Bank water utilities in Africa differ greatly in terms of size, organizational culture and operating environments. They share one major challenge of expanding access to appropriate levels of services to their growing urban populations as can be seen clearly in the context of the MDGs where Africa lags far behind other regions. It is now widely acknowledged that the inefficiencies of African water utilities are a major cause of poor access to water services.

The situation to lack of potable water is also common in Ethiopia, despite Ethiopia is a country known in the continent as a tower of water and roof of Africa, The country is facing a number of challenges related to performance of water projects. Although, now confronted with the challenge of meeting water needs of the community at pace with its

population

growth.

(onjala, 2012) studies show that the consequence of poor water supply coverage in the country is severe. For example, inaccessibility of clean water and adequate sanitation women and children living in the world's poorest communities often spend hours each day walking miles to collect dirty and unsafe water and without sanitation communities are further exposed to diseases like high incidence of vector-borne disease, intestinal disease, trachoma, and arsenic poisoning which are common in developing countries.

The sustainability rate on water projects in developing countries is alarmingly low, due to lack of resources, capabilities and spare parts for service and maintenance (Hazelton, 2015). However, in most rural areas of the countries, safe drinking water from an improved source and sanitation services remain inaccessibly or lacking (WHO-UNCEF, 2014). These services are basic and building blocks of development and key to poverty reduction and lack of service on contrary case, a lot of social and economic problems at a larger community.

To solve this significant problem, supplying the service of potable water and sanitation, to mitigate the complex social, human, environmental and health influence national and regional governments, local and international NGOs invest many millions of capitals every year in developing countries to tackle the problem through the implementation and improve performance of water supply projects.

In this regard, the condition of Ethiopia is not different from that of the situation on the rest of the world in general and developing countries in particular. According to ADF report, (ADF, 2015), about 33% of water projects in Ethiopia are not functional, due to lack of funds for operation and maintenance, inadequate community mobilization and commitments, less community participation in decision making as well as lack of spare parts. As (Harveyandreed, 2013) report showed that community issues like perceived lack of education on water supply and sanitation, poor management system and limited demand are related to decline performance of water supply system.

In South Nation Nationality and people Region state, many water supply projects have been constructed or implemented to urban and rural areas of the region, however; most of the rural areas of the region access to safe drinking water and sanitation is alarmingly low, due to different causes. According to (SebsibeAlmneh, 2002), showed that in

Southern Nations, Nationalities and People Regional State(SNNPR), of water supply projects have been poor performance ,which are between 50% and 57% of the rural water supply schemes were not successful due to different causing factors during the implementation and after implementation of the project.

However, constructing water supply systems alone would not eliminate all problems, especially in rural areas. Functionality, utilization by intended beneficiaries, and resilience of water projects are important characteristics to be considered and integrated in order to achieve maximum benefits (HarveyandReed, 2007).Hence, integration between beneficiaries and project suppliers in decisions and contributions as well as management in all phases need to be addressed.

According to (Gebrehiwot, 2006), sustainability of water projects could originate from the project environment, lack of sufficient resources and management related issues, obtaining sufficient knowledge of the factors, which influence performance of water projects. Many community water projects are started, but fail to realize the intended objectives with a good number of these water projects collapsing before and after completion.

However, in the region efforts has been done to establish 1,304hands dug wells, 1,678 shallow wells, 421 deep wells, 2,686 spring developments with distribution points and 255 springs with network distributions, constructed by the regional government and NGOs in recent years (BoWR, 2006). However, it has been noted that about 23% of the water supply schemes were not providing service due to different causes (BoWR, 2006).

In this regard, the study area which is, Mareko woreda in Guraghe zone, although efforts has been done to establish 80 hands dug wells,46 shallow wells,19 deep wells, and 87 water points with network distributions, constructed by the government and NGOs in recent year MWWS repot (MWWS 2018), access of safe drinking water coverage of the study area that is mareko woreda 46% (MWWS 2017/18) .

However, the functionality of water projects were noted that about 24% of the water supply schemes not provided service due to different causes (MWWS 2018). Based on the above introductory review, the following objectives were set to implement the study (1) to identify factors affecting the performance of water supply projects, and (2) to discover the underlying relationship between the factors, that has been take a sample of

water projects constructed within in ten years ago in mareko woreda water projects, this study was addressed the determinants of water project and found out the causes and gave proper recommendation to solve that problems.

## **1.2 Statements of Problem**

In the study area that is, Guraghe zone Mareko woreda is one of water scarce area of the zone, it is partially covered by rift valley province at west part of the woreda, and water available are not evenly distributed to all areas. People who don't have water sources near their places of habitation are forced to walk for kilometers to collect this precious resource especially a dry season. They spend many hours to collect the resource, which could have been spent on other activities like subsistence farming or managing small businesses.

Water is a socio and economic commodity as a community that has safe water is less prone to water borne diseases making it a healthy community. Children in these communities also have better access to education. Although many community water projects were constructed or implemented by government and non-government organization making good efforts to supply water to people in the Woreda, but fail to realize the intended objectives with a good number of these water projects collapsing before and after completion, that is 24% of water projects are non-function or not provided water to community due to different reasons. The peoples are not provide clean drinking water or use of unsafe water and without sanitation, therefore the communities are further exposed to diseases like high incidence of vector-borne disease, intestinal disease, trachoma, and arsenic poisoning which are common in mareko woreda (MWHO, 2017).

Some of the factors that affecting rural water supply systems, especially in study areas were; lack of community involvement during operation and maintenance of water supply project, selection of site and technology, absence of water project management practice, lack of finance at the community level for operation and maintenance of water project, use of complicated technology without proper capacity building at community level, lack of infrastructure and have been deep water table and poor quality of water in the study areas (MWWS, 2017). Therefore, many water supply projects were not provided service due to the above mention causes in the study area.

Previous studies have focused on various aspects of water projects, (Khawaja, 2014) Looked at community participation has a real influence of effective water project. (KinuthiaWaruiandKaranja, 2009) did a study in Mbeere on the group-owned water points lack effective committees and this challenge of management? (Gebrehiwot, 2006), water project are more or less demand responsive to the degree that beneficiary to make choices and commit their resources in support of their choices. (Rimberia, 2012) studied on the determinants of water projects; the sustainability rate on water projects in developing countries is alarmingly low, due to a lack of resources, capabilities and spare parts for service and maintenance. Most of the previous study was mostly from different countries whose strategic approach and strategic footing was different from that of the country.

The studies done in other countries have also not looked on the issue of factors affecting performance of water projects that is in the Guraghe zone Mareko district. However, everyone has been a question to know the factors of water supply project, but no one has conducted any survey or research to identify the causing factors of water project. For that reason, the researcher initiated to find out or investigates the reasons why the above mention causes/problems happen. Due to this researcher's was to investigate the factors affecting the performance of water supply projects in Mareko district.

### **1.3 Research Questions**

To fulfill the objective of the study, the following specific research questions were employed;

1. To what extent does project community involvement affects performance of water projects in Mareko District?
2. To what extent do project management practice affecting performance of water projects in the study area?
3. To what extent does project financing affecting performance of water supply projects in the study area?
4. To what extent does water infrastructure-affecting performance of water supply projects in the study area?

## **1.4 Research objective**

### **1.4.1 General Objective**

The purpose of this study was to investigate the factors affecting the performance of rural Water supply projects in Mareko District,

### **1.4.2. Specific Objective**

The study has been the following specific objectives.

- i. To investigate community involvement affects performance of water projects in in the study.
- ii. To determine to which project management practice affects performance of rural water projects in the study.
- iii. To determine the extent to which project financing affects performance of rural water projects in the study area
- iv. To determine the extent to which water infrastructure affects performance of water supply project in the study area.

## **1.5 Significance of the study**

This study will have significance to methodological or knowledge contribution to actors of water supply project implementer, stakeholder and users. Contribution to police makers as a source of input insight performance of water supply project issue. To the study area, that is Guraghe zone , Mareko woreda , the finding of the study could be enable to all responsible stakeholders and organizations to get information and insight as to when and how to channel efforts in implementation of different governmental and non-governmental organizations' funded projects. And also it has been serve as an input to rural water supply actors to intervene and take appropriate measures to sustain the water schemes. To the other researchers' it will be use of as reference for the further study. To the researcher's it can be get or capacitate own skills and knowledge through working the research, that is how can be made the research study, and I help to capacitate to me for the future works.

## **1.6 Scope of the study**

The specific boundary and delimitation of this study has been addressed in terms of the following dimensions: area delimitation (the geographic/territorial boundary have been covered in this study) unit delimitations (the subjects of study to be considered or to be excluded from the study): time delimitation (the number of years/ the history of the project to be covered in this study) . Accordingly, in terms of area delimitation, only eleven water projects are selected purposely in mareko woreda guraghe Zone, SNNPR Sate had been covered. Moreover, not all of the project performances were assessed rather only eleven Water supply projects in elven water supply operational area in rural kebele were addressed.

In terms of unit delimitation, the research was including a few respondents who have linkage with the project. Participants that have been included in the woreda water sector had been existing staff who may have some information about the project, few water committee members, community representative, kebele administration and government staff representative within the kebele workers(education, healthy, development agent, manager of kebele) responsible for the development of the area particularly for the project. The study was used to small in number of samplings due to unavailability of other respondents who had been better information regarding the project.

## **1.7. Limitation of research**

### **1.7.1 Geographical limitation**

In Ethiopia is a common to observe non-functional water supply projects. Therefore, many water projects were not providing water to the community in most part of the country. However the researcher's was not addressed all defects of water project in the country. Hence; a water project problems are not generalized in this study, so it is a geographical limitation.

### **1.7.2. Limitation of theory**

Limitation of theory is lack of consideration of the variables effects of performance, to refer many theoretical literatures to reach optimized performance of finding. The researcher was not addressing most of theories of water project by the constraints time and available resource. Thus; it is limitation of theory

### **1.7.3. Limitation of methodology**

The research findings that are the result of the way in which the researcher's initially choose the design that is descriptive analyze methods used to establish. Hence researcher's was restricting discussion to limitations related to the research problem under investigation. Limitations related to methodology and research process may need to describe and discuss how extent in depth of problem analyze and impacts of the result. Then; further researcher can be use other methodology the results may not be unanticipated. Therefore; it is methodological limitation

### **1.8 Operational definition of terms/key terms**

#### **Management**

Management is the process by which people, technology, job tasks, and other resources are combined and coordinated to achieve organizational goals Management is one of the main issues for the development project. Therefore; without management practice water supply projects don't achieve its objective. However a management practice has been a serious issue for a performance of water supply projects.

#### **Community**

The idea of "community" came about where people gathered around a common area for their mutual benefit (Anderson, 2010). Sharing a language, customs, ideas, skills, goods and services, or protection from enemies were some of the advantages the people derived from being a part of a group. The United Nations defines Community development as "a process where community members come together to take collective action and generate solutions to common problems."

#### **Project**

Project is a specific activity or event initiated by a community worker with support aimed at addressing the specific needs that community. Project is a novel under taking to create a new product or service the delivery of which signal completion and begins when resource are dedicated to its specific goal.

### **Project Management**

Project management is one of a core issues for the functionality and sustainability of water project through the project life. Management is a process by which a people, technology and resource combined and coordinated to achieve organizational goal.

### **Community Participation**

Community participation is involved by which the people to done their roles and responsibilities during a before and after project implementation. Without Community participation the project performance can be decline, because of the community haven't a sense of ownership to a project.

### **Sustainability**

Sustainability is the process of maintaining change in a balanced fashion, in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.

### **1.9 Organization of this paper**

This study is consisting of five chapters. The first chapter is comprised background of the study, statement of the problem, research question, objective of study, hypothesis, significance of the study, and scope of the study, operational definition of terms and organization of the study.

The second chapter deals with review of related literature. In the third, research method, data collection instrument, sample size and sampling techniques and the methods of data interpretation has been stipulated. The fourth chapter was deals with presentation, analysis and interpretation. The fifth, which is the final chapter, it contains, summary of major findings, conclusions and recommendations. Following recommendations end of-text reference has been list out.

### **1.10 Ethical consideration**

The purpose of this questionnaire is to collect data for a thesis entitled “FACTORS AFFECTING PERFORMANCE OF WATER SUPPLY PROJECT: THE CASE OF GURAGHE ZONE MAREKO WOREDA, and to recommend possible solutions for further improvement for project success. Thus, your cooperation in responding to the questions honestly and timely is very essential to the success of the study. Your response will be kept confidential and will never be used for other purposes other than the purpose mentioned above. Therefore, you are kindly requested to complete the questionnaire honestly and responsibly.

**Thank you in advance for your cooperation!**

## CHAPTER TWO

### 2. REVIEW OF RELATED LITERATURE

#### 2.1. Theoretical literature

This literature has shown that performance of rural water supply projects in sub-Saharan Africa often demonstrate high levels of challenges. The key causes for this include insufficient institutional support; low involvement of the community, unsustainable financing mechanisms; ineffective management systems; and lack of technical back stopping. (Williams, 2011) describes that poor project design, lack of project management capacity is responsible for the water project successes or not. The determinant factors for the performance of rural water supply systems are categorized in to two main categories. These are pre implementation factors and post Implementation factors. Community participation, technology selection, site selection, demand responsiveness, construction quality, population and training are some of the pre-implementation factors. Community participation theory propounded by (Khwaja, 2014) is also consulted and used for the present study. The community participation theory assumes that community participation has areal influence on decision, that is ; greater community participation makes its less likely that the decision is determined by the external agency (Khwaja). In community Participation theory, focuses are given on the participation of beneficiaries, and not those government personnel in development project. The joint or collaborative involvement of beneficiaries in group is a hallmark of community participation; and that community participation refers to a process and not a product in sense of sharing project benefits. Community participation theory stands for the general assumption that the higher the community participation in a decision, the lower the likelihood of the interferences of external organizations on that decision (Munguti, 2014).

One of the pre implementation factors for rural water supply systems is demand responsive approach. In this context ‘demand’ is defined as the quantity and quality of water, where community members will choose to consume at a given price (Gzachew, 2005). In a demand responsive approach, beneficiaries should feel the need for safe drinking water supply, in order to identify safe drinking water supply projects. Water

projects are more or less demand responsive to the degree that beneficiaries make choices and carry out resources in support of their choices (Gebrehiwot, 2006) .

If there is willingness in the community to provide valued resources in the exchange for services then these community members valued the service. As a result demand for supply of water will facilitate the management of the water supply system and it enhances the rate of sustainability of the water supply system (Gzachew, 2005) .In the last three decades, literature in the water supply sector has shown that sustainability of rural water supply structures has become positively associated with small-scale initiatives, which maintain public participation (DavisandLiyer, 2002).Involving the users in the planning, implementation, operation, protection and maintenance of water supply systems meaningfully is the key to sustainability.

Community members' contributions might take the form of money, labor, material, equipment, or participation in project-related decision-making and meetings (DavisandLiyer, 2002). Over the past three decades, experience has shown that water and sanitation activities are most effective and sustainable when they adopt a participatory approach that acts in response to genuine demand, builds capacity for operation and maintenance and sharing of costs, involve community members directly in all key decisions, develop a sense of communal ownership of the project, and uses appropriate technology that can be maintained at the village level.

An important as the educational and participatory efforts to change behavioral practices (USAID, 2009).According (Gleick, 2006) stated that the international acceptable standards for water requirements for basic needs, commonly referred to as basic water requirement (BWR). BWR is defined as water requirement in terms of quantity and quality for the four basic needs of drinking water, human hygiene, sanitation service and modest household needs. This standard is defined by WHO guide line as 20 liters per capital per day (Admassuetal, 2002). When springs are used for multiple purposes such as domestic use, livestock watering, irrigation and tanker supply, care should be taken to prevent contamination of water used for human consumption (Admassuetal, 2007). Relative to hand dug wells natural or developed springs is easily contaminated by different contaminant agents.

The effective operation and maintenance (O & M) of rural water supply systems is crucial element for the performance of the water project. The community management of rural water supply systems on operation and maintenance (O & M) is not successful, if financing resources are not available and frequent supports are not provided (Binder, financingsourceavailable, 2008). Budgeting sufficient funding for rural water supply systems is an important issue for sustainability and proper maintenance but not only one. Binder,(2008) states that “increasing the budget allocation for rural water supply systems is very important, but that is not the only thing to meet the challenges of achieving the Millennium Development Goals (MDGs).”Enhancing the capacity of the operators’ related to the choice of appropriate institutional management is also mandatory to achieve the Millennium Development Goals (MDGs).

**2.1.1.Community Participation Theory:** Community Participation theory propounded by Khwaja (2014) is also consulted and used for the present study. The community participation theory assumes that community participation has a real influence on the decision, that is: greater community participation makes it less likely that the decision is determined by the external agency (Khwaja, 2014). This assumption and found that it is indeed true higher community participation in a decision also implies a lower likelihood that the external organization rather than the community is identified as the main decision makers.

If their participation is ensured, they can best fit the need, nature and type of project according to their own need as well as challenges and constraints. Moreover, their participation in project identification imbeds the sense of ownership among them which will, help during the implementation of the project in question (HarveyandReed, 2013).

In community participation theory, focuses are given on the participation of beneficiaries, and not that of government personnel in the development project. The joint or collaborative involvement of beneficiaries in groups is a hallmark of water project successes; and that community participation refers to a process and not a product in the sense of sharing project benefits. Community Participation theory stands for the general assumption that the higher the community participation in a decision, the lower the likelihood of the interferences of external organizations on that decision (Munguti, 2014).

This theory addresses community participation that highly influences acceptance and performance of project.

Therefore it is relevant to this study in understanding influence of community participation on performance of water projects in Guraghe zone Mareko Woreda water supply projects.

**2.1.2 Institutional Theory:** Institutional theory is a predominant theoretical tool within the field of organization studies (Suddaby, 2010). Institutional theory was subsequently used to examine how water project organizations and their behaviors acquired myths and meanings which contribute to formal organizational structure, but which are not able to be understood as the products of water project organizations' practical demands (ibid).

The scope of institutional theory has steadily expanded to include its application to the study of how, through institutional pressures, organizations come to resemble each other, how individuals exercise power within institutional environments, and how institutions change. Institutional theorist Roy Suddaby even goes so far as to say that institutional theory has become ubiquitous within organization studies, being applied by default to any and all questions within the field (Suddaby, 2010). This theory examines how organizations and their behaviors acquired myths and meanings which contribute to formal organizational structure influence performance of water project. Therefore it is relevant to this study in looking at influence of project management on performance of water projects in millennium development goal water supply project, Guraghe zone Mareko Woreda.

**2.1.3. Resource Based View:** The currently dominant view of resource-based theory is based on the concept of economic rent and the view of the water supply project as a collection of capabilities. This view of strategy has a coherence and integrative role that places it well ahead of other mechanisms of strategic decision making (Kaye, 2015).

The resource-based view (RBV) offers critical and fundamental insights into why the water project firms with valuable, rare, inimitable, and well organized resources may enjoy superior financial performance (Barney&Arikan, 2011). The main contribution of the resource-based view lies in the notion of competitive advantage. The resource-based view of the water project, which envisions firms as a bundle of resources, is probably the

dominant theory for explaining differences in performance among water supply project today (Barney&Arikan, 2011).

Resources have been variously defined by RBV theorists, but can include financial capital, assets, human skills/knowledge, organizational processes, and technologies (Carmeli.).The resource-based view suggests that a firm can create sustainable **competitive** advantage through developing its unique resources and capability (Barney&Arikan, 2011). Managers are not static in the RBV, but instead they are called upon to structure, bundle, and leverage their valuable resources in unique ways to maximize their contribution to providing sustained advantage (SirmonHitt&Ireland, 2013).

However this; literature emphasizes how these resources affect the water project organizations environmental or social performance and ultimately its financial sustainability. According to the resource based view, water project should look into their internal resources, both physical and intellectual, for sources of competitive advantage (Christmann, 2010).

## **2.2. Empirical Literature**

The determinant factors for the performance of rural water supply systems are categorized in to two main categories. These are pre implementation factors and post implementation factors. Community participation, technology selection, site selection, demand responsiveness, construction quality, population and training are some of the pre-implementation factors. Post implementation factors are technical support, community satisfaction, institutional and financial management, training and willingness to sustain the water project (UNDP-WSP, 2006).

One of the pre implementation factors for rural water supply systems is demand responsive approach.

In this context ‘demand’ is defined as the quantity and quality of water, which community members will choose to consume at a given price (Gzachew, 2005). In a demand responsive approach, beneficiaries should feel the need for safe drinking water supply in order to identify safe drinking water supply projects. Water projects are more or less demand responsive to the degree that beneficiaries make choices and commit their

resources in support of their choices (Gebrehiwot, 2006). If there is willingness in the community to provide valued resources in the exchange for services then these community members value the service and as a result demand for supply of water will facilitate the management of the water project enhancing the rate of performance of the project (Gzachew, 2005).

(Deverilelall, 2012)Who claim that the principal of offering communities a range of choices of technology should be planned carefully if it is to be successfully put in to practice?

Project performance can be measured and evaluated using a large number of performance indicators that could be related to various dimensions (groups) such as time, cost, quality, client satisfaction, client changes, business performance, health and safety for explaining different in performance among firms today (Barney&Arıkan, 2011). Time, cost and quality are however the three predominant performance evaluation dimensions.

The community management of rural water supply systems on operation and maintenance (O & M) is not successful, if financing resources are not available and frequent supports are not provided (Binder, 2008). Budgeting sufficient funding for rural water supply systems is an important issue for sustainability and proper maintenance but not only one. (Binder, 2008) States that “increasing the budget allocation for rural water supply systems is very important, but that is not the only thing to meet the challenges of achieving the Millennium Development Goals (MDGs) in Ethiopia.” Enhancing the capacity of the operators’ related to the choice of appropriate institutional management is also mandatory to achieve the Millennium Development Goals (MDGs).

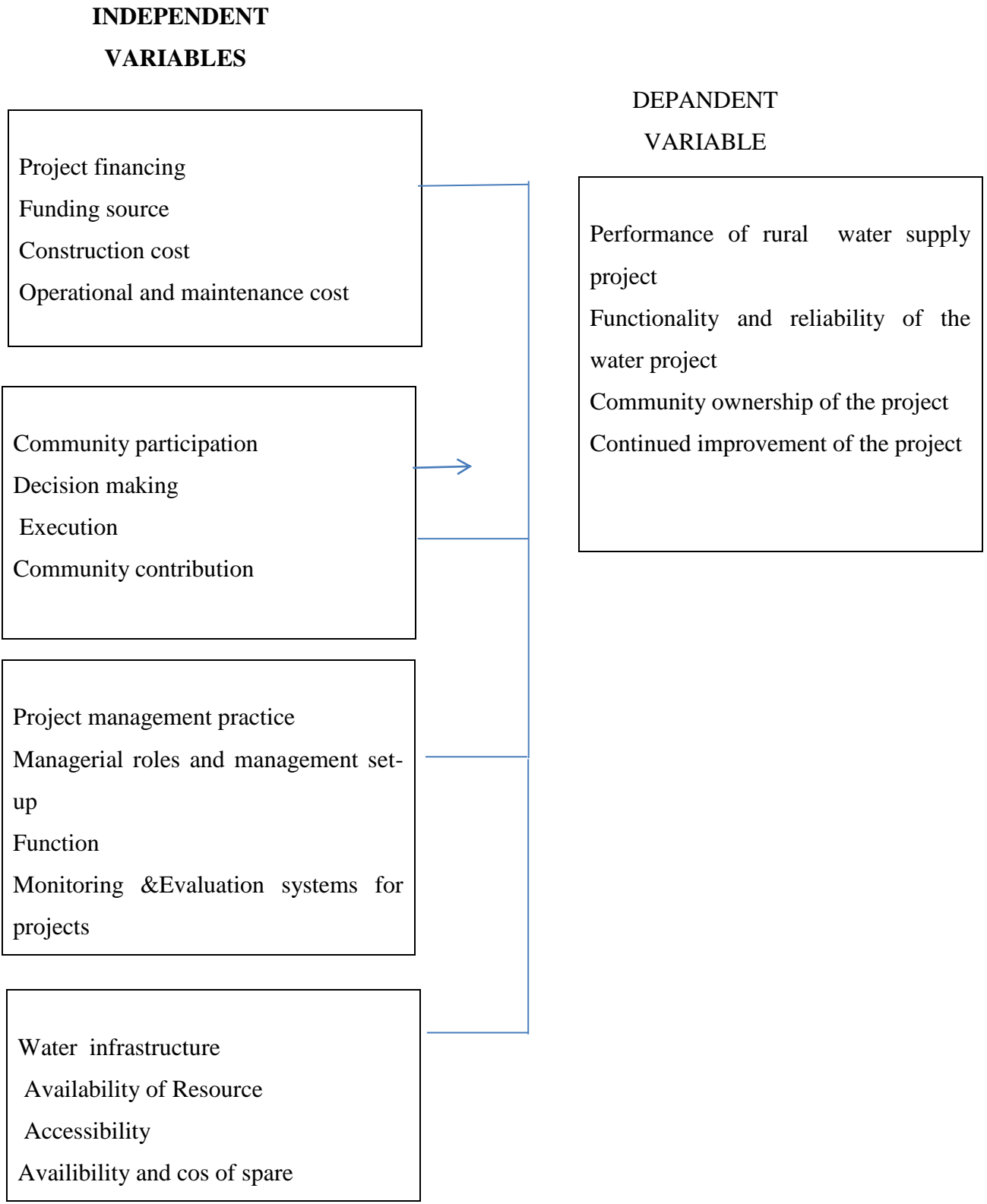
### **2.3. Conceptual Framework**

In this study the dependent variable is performance of water supply projects while the independent variables are factors affecting performance of water supply projects which are: Community participation, project financing, project management practices and water infrastructure. Performance of water supply project determines the project functionality and reliability of water project, community ownership of the project and continued improvement of the project.

In Community participation people involves at all stages of project implementation and also they contribute to their share to develop a sense of ownership.

In Project finance there is a main issues for implementation and maintenance of projects for sustainability of water supply projects. Project management is a core issues for project performance; it require knowledge, skills, experience, and commitment to achieve its objective. Water infrastructure potential to performance of water supply project and accomplished to its schedule.

The variables and their relationship are shown in the figure below;



**Figure 1 Conceptual framework** (observation)

### **Definition of terms**

**Community Participation;** traditionally, participation is viewed as active, passive or interactive (mikelsen, 2005). Active participation is open and community members take part actively in all stages of the project. Decision making as well as other vital activities, such as management as well as monitoring and evaluation of the projects, are done by the people.

**Project Management practice;** Project management indicates how project should be implemented on time, within budget and to the customer's satisfaction (BurgerandNell, 2010). Project management is further defined as application of knowledge, skills tools, and techniques to project activities to meet project requirements (Projectmanagementinstitution, 2008).

**Project finance;** the Harvard Business Review, defined project finance as “a financing of a major independent capital investment that the sponsoring company has segregated from its assets and general purpose obligations.” A major player in sponsoring infrastructure projects and providing financing in developing countries, the World Bank defines project finance as the “use of nonrecourse or limited-recourse financing.”

**Performance;** The accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. Performance is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract.

## CHAPTER THREE

### 3. DESCRIPTION OF THE STUDY AREA AND RESEARCH METHODOLOGY

This section discuss about research methodology that has been employed to achieve the objectives of the study. It contains the setting where the researcher was conducted; description of the study area, research design, source of data and sampling techniques, methods of data collection and data analysis technique.

#### 3.1. Descriptions of the study area

This study was addressed Guraghe Zone **Mareko Woreda** in South Nation Nationality People Region (SNNPR), it is located at 160km south east of Addis Ababa, the capital of Ethiopia, 160km to the west of Awassa, the capital of South Nation Nationality People Region, and 120km to east of wolkite, the capital of Guraghe zone. The mareko woreda has been divided in to 26 rural and one urban Kebele Administration. According to the latest census, the population of the state as of November 2007, was 84,384 of which males (49.8%) and (50.2%) are females. The major ethnic composition in the region is libido/mareko. The markegna language is predominantly spoken in the region. Amharic is the working language of the state /SNNPR/ so do in the guraghe zone. The study period covered from 2008-2018 G.C for ten years ago.

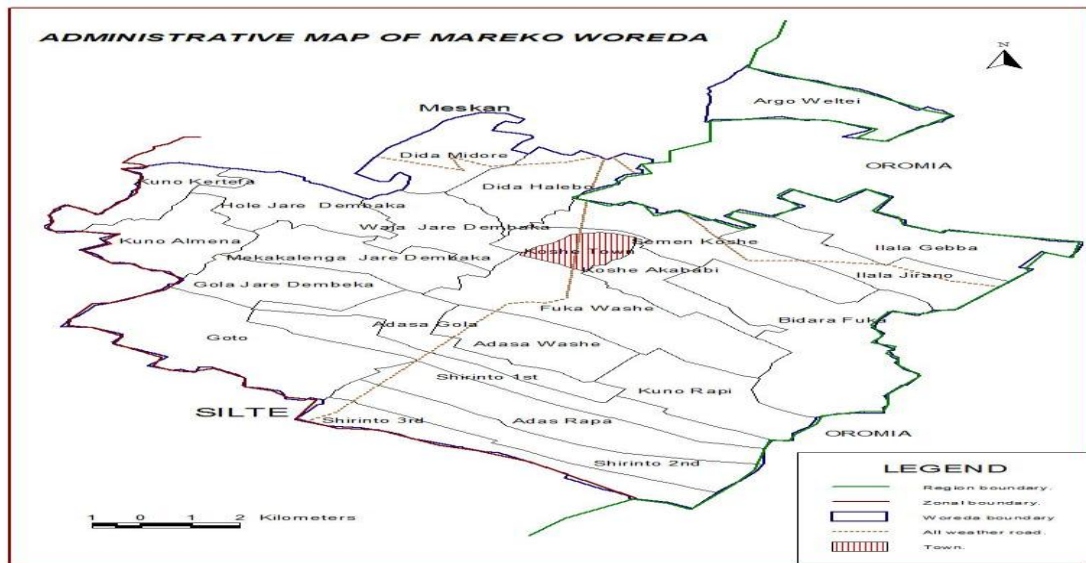


Figure 2 Map of the area

### **3.2. Research Design**

This study adopted descriptive research design. This research design was preferred, because it permitted the collection of data quickly, efficiently and accurately through questionnaires administered to a sample (Kothari, 2004), (Mugenda&Mugenda, 2003), (Oso&Onen, 2005).The data collected by this design and used to suggested the reasons for particular relationships between independent and dependent variables (Saunders&ThornHill, 2007).

A descriptive study is a study concerned with describing the characteristics of a particular individual or of a group (Kothari, 2004). The study was to investigate the factors that affecting performance of water supply project in mareko District. Opinions of people have been easily perceived with the use of a structured questionnaire (interview, questionnaire, focus group discussion and field observation) and percentages generate for comparison. It also provide a measure of what many people think, feel or behave in a certain way and uses statistical analysis to determine the results.

Generally this study can be seen as a descriptive cross-sectional study with a central task of investigating performance of rural water supply projects in selected rural kebeles of mareko woreda. The study used a mixed approach with a central premise of; the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. Hence, the mixed approach that is used in this research employs strategies of inquiry that involve collection of qualitative and quantitative data simultaneously to best understand the research problem under investigation. The core argument for an descriptive design is that the combination of both forms of data provides a better understanding of the research problem than either qualitative or quantitative data by itself (Creswell, 2012).

The study was guided by the principles of multiple sources and subsequent crosschecking of information as well as by applying various data collection instrument and analysis techniques- both quantitative and qualitative.

### 3.3. Population and Sampling techniques

Mareko woreda has one town and 26 rural kebeles with rural population of 67506 and urban population of 16878. The research focused on the rural kebeles of the woreda within ten years constructed water project users, which is 15000 households. The researcher was used to Slovin's formula (Slovin, 2006) for calculating the appropriate sample size for this study. It is calculated as follows

$$n = \frac{N}{1 + N * (e)^2}$$

Where

n = the sample size,

N = the population size,

1= constant,

e = the acceptable margin of error

To calculate determined number of sample size

$$\begin{aligned} n &= 15000 / (1 + 15000 * (0.05)^2) \\ &= 390 \text{ sample population} \end{aligned}$$

Total populations are 15000 households were live in the project area, the researcher used slovin's formula which gave a total 390 Households were determined sample respondents, a desired acceptable margin of error 5%. The researcher used to random sampling techniques to select 390 participants from the total population of 15000 households. A total of 390 respondents were addressed from the study area to filled questionnaire and in addition the researcher's was used, 10 respondents to asks interview and 30 respondents were participated in focus group discussion, which has been consists of water committee, community representative including to kebele administrative and government employees (health, education, development agent), water sector technical staff. The researcher's distributed 395 questioners, that is exceed 5 questionnaires because to minimize unreturned questioners. The researcher was using random sampling technique to identify the respondents from census of the community by tombola methods.

### **3.4. Methods and tools of data collection**

As the study used a descriptive research design, although the data collection instruments was used to get information required for the study purpose. Semi-Structured Questionnaires (which is open and closed ended), interview guides, Focus group discussion, field observation checklists and other secondary documents were used for the data collection. A drop and pick later method was used, while face to face interviews were conducted with the key informants. Open and close ended questionnaire were employed to collect primary data from the respondents. After coded the data was entered in the SPSS version 20 computer program where frequencies and percent multiple response, mean and cross- tabulations were compute during the analysis. Questionnaires are research instruments used to collect information geared towards addressing specific objectives (Komboetal, 2002).

The questionnaire has been contained close ended items were scaled on a 5 point Likert scale. Likert's five systems were also used to in the questionnaire; that is strongly agree (SA); agree (A); undecided (UD); disagree (DA); and strongly disagree (SDA). The value of measurement scales, that is SA=5, A=4, UN =  $\Phi$ , DA = -4, A and SDA = -5.

Pilot testing was conducted to check the validity and reliabilities of the target respondents' survey questionnaire and accordingly some adjustments was made prior to conducting main research

#### **Reliability test**

Reliability refers to the consistency or repeatability of the measure. Among the different types of reliability estimators, this study used Cronbach's alpha reliability test. Internal consistency reliability of the Amharic versions of the instrument was determined for the four independent variable and one dependent variable using Cronbach's alpha. As indicated by table 3.2 below Cronbach's alpha test result revealed that community participation 0.93, project management 0.82, water infrastructure 0.70, project financing 0.72 and project performance registered 0.71 Cronbach's Alpha value. All variables registered greater than 0.70 which is a common accepted rule of thumb that indicates acceptable reliability (Mugenda, 2008). The data collection instrument used by this research could generate consistent and reliable results.

**Table 3. 1.** Reliability Test

s.no.	Dimension	N	No. of items	Cronbach's Alpha value	Remark
1	Community participation	19	9	$\alpha= 0.932$	Accepted
2	Project Management	19	10	$\alpha= 0.817$	Accepted
3	Water infrastructure	19	8	$\alpha= 0.704$	Accepted
4	Project financing	19	8	$\alpha= 0.724$	Accepted
5	Project performance	19	4	$\alpha= 0.707$	Accepted

Source: own survey, 2019

### **Validity test**

Validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested (Kothari, 2004). In other words, Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. In order to ensure the quality of this research content and construct validity of the research were checked.

According to (Kothari, 2004). Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. If the instrument contains a representative sample of the universe, the content validity is good. Its determination is primarily judgmental and intuitive. It can also be determined by using a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it. Based on this definition the content validity was verified by the advisor of this research, to look into the appropriateness of the questions and the scales of measurement.

### **3.5. Data analysis techniques**

After collected the data, the researcher has edited, collated to eliminate errors and coded for analysis using the Statistical Package for Social Sciences (SPSS version 20 tool). The data was analyzing both qualitatively and quantitatively. Qualitative data was collected through in-depth interviews and focus group discussions and secondary data were

analyzed using explanatory analyzing, and quantitative data collected from questionnaires; it analyzed using descriptive. Descriptive statistics based on frequency, percentages and mean were used to analysis findings, and it is useful to summarize of group data using a combination of tabulate description. Correlation analysis was used to establish the degree of relationship between the dependent and independent variables. It has been four independent variables analyzed in this study.

Mainly Pearson correlation was conducted to determine the relationship between the variables. The researcher deemed regression method to be useful for its ability to test the nature of influence of independent variables on dependent variables. Therefore, the researcher use to the linear regression analysis to analyze the data

### **3.6. Model specification**

$$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \beta X_4 + \varepsilon$$

Where:

Y= performance of the water supply projects,

$\alpha$  is the regression coefficient/constant/Y-intercept,

$\beta$  =coefficients of the linear regression equation.

X1 = community participation, X2 = project management practice, X3= project financing factors, X4 = water infrastructure and

$\varepsilon$  = error term normally distributed about a mean of  $\alpha$

## CHAPTER FOUR

### 4. DATA PRESENTATION, ANALYSIS AND DUSCUSSION

This chapter tried to present data collected through questionnaire, interview, document review and observation. The chapter organized in to three subsections. Sub section one presented demographic characteristics of respondent, sub section two presented descriptive statistics and sub section three presented inferential statistics of variables. The data collected through questionnaire presented in this section using tables, graphs and charts.

Response Rate; out of 395 questionnaires were distributed, that is exceed 5 questioners because to minimize unreturned questioners, 390 were duly filled and returned to the researcher making response rate 100%, this is high response rate which therefor increase the representativeness of the data to the population of study, and reduce response bias and the margin of error (Sifer.Puddy.Warren&Roberts, 2002).

#### 4.1 Demographic characteristics of respondents

The researcher sought to understand the demographic characteristics of the respondents. An analysis of the participant gender revealed of that 73.6% of respondents were male and 26.4% were female (table 4.1). This data indicated to the participants were majority of male Mareko Woreda more men are available during the day when questionnaires were being presented.

From the collecting data analysis of the respondents, the education level showed that 30.4% of the respondents had attained the primary level education ,19.6% of participants had secondary level education 8.7%,6.8% and 6.1% had college diploma, professional certificate and BA/Bsc degree completed consecutively and the remaining 28.4% had been informal education learned as showed that table4.1.

An analysis in terms of age table 2 showed that a majority of respondents (44.6%) were in the 18-28 years age intervals ,31.8% were between the age of 29 and 38 years ,12.2% were between the age of 39- 48 years and 11.5% were greater or equal of 49 years. These figures also reflect the age characteristics of the respondents have been productive stages.

Table 4. 1 Demographic characteristics of the respondents

		frequency	Percentage
Gender of respondent	Male	287	73.6
	Female	103	26.4
	Total	390	100
Age of respondents	18-28 years	174	44.6
	29-38 years	124	31.8
	39-48 years	47	12.2
	Grater or =49 years	45	11.5
	Total	390	100
Education level of respondents	Informal education	111	28.4
	Primary school	119	30.4
	Secondary school	76	19.6
	Professional certificate	26	6.8
	College of diploma	34	8.7
	BA/BSc degree	24	6.1
	Total	390	100.0
Respondents' occupation	Government employee	63	16.2
	Trade and industry	18	4.6
	NGO employee	24	6.2
	Agriculture	227	58.2
	Self-employee	11	2.8
	House maid	36	9.2
	Student	11	2.8
	Total	390	100
Respondent relationship with water project	Water committee	13	3.3
	WSP construction professional	24	6.2
	Beneficiary/users	340	87.2
	Gov't delegation WSP	13	3.3
	Total	390	100

Source: own survey, 2019

Analysis in terms of occupation, table 4.1 showed that a majority of participant 58.2% respondents were worked in rural agricultural activities, that is the respondents were closely relationship to the water project, 16.2% respondents were government employees, 9.2% respondents were house maid, that are vulnerable to issue of water project, 4.6%, 2.8%, 2.8% respondents were worked petty trade and industry, self-employee, and students consecutively. The presence of large number of respondent who have participated in a response a given questioners were close relations to water projects with sample increase the validity of findings ,who have in-depth information about the water supply project in the study area.

The researcher also sought (table4.1) to determine the respondents were relationship with mareko woreda water supply projects. A majority of participants 87.2%of respondents were beneficiary/user of the project, 6.2% of respondents were water supply project construction professional, 3.3%were water committee and 3.3%have been government delegated to rural water supply project. The presence of large number of respondents who have participated in response a given questioners were beneficiary/users of water projects within the sample increases the validity of findings since these participants are likely to have in-depth information about water supply projects in the area.

#### **4.2. Descriptive statistics**

In this sub section the researcher tried to describe the situation of community participation, project management, water infrastructure, project financing as explanatory variable and water supply project performance as dependent variable by using mean and standard deviation. To classify the data in to three high, moderate and low category the researcher used the following guideline; Mean value range between 1.00 - 2.333 = low, Mean value ranges between 2.334-3.666 = Moderate and Mean value ranges between 3.667-5.00 =high. To compare differences between items with in the same dimension the researcher used grand mean value as a reference point.

#### **4.2.1 Community participation**

Ownership of water supply project is dependent upon the degree to which the technology corresponds to the needs of the users and the users' ability and willingness to maintain the project it over time (Gleitsman, 2015). The key to sustainability is to meaningfully involve the users in the planning, implementation, operation, protection and maintenance of water supply systems according to their needs and potentials (Daviseandliyer, 2012). Hence, nine items related to community participation in water supply project were placed for the respondents and the analysis is shown in the table below

**Table 4. 2 Community participation analysis**

s/no	Items	N	Mean	Std. Deviation
1	The beneficiaries of water supply project were active participant during project initiation phase	390	2.81	1.449
2	The beneficiary of water supply project involved in planning stage of the project	390	3.60	1.374
3	The beneficiary of water supply project makes timely financial contribution	390	3.56	1.356
4	The beneficiary of water supply project willingly makes labor contribution for the success of the project	390	3.24	1.464
5	Community found near to water supply project construction area were equally willing to minimize conflict of interest	390	3.21	1.415
6	The beneficiary of water supply project were willing to share maintenance cost	390	2.87	1.416
7	The beneficiary of water supply project developed sense of ownership towards the project	390	3.13	1.500
8	The beneficiary of water supply project acted as controller of the project	390	3.28	1.452
9	Water project in Mareko woreda established society mobilization	390	3.12	1.466
	Grand mean of Community participation		3.20	.876

Source: own survey, 2019

Table.4.2 the result shows that the respondents scored the lowest for the item community involved in during the project initiation phase and willing to share maintenance costs, it affects performance of water supply projects in Mareko Woreda in a great extent, with a mean score(M=2.81 and M=2.87) respectively. These findings were line with Gleitsmann, (2015), who argued that ownership of water supply project is depend up on the degree to which needs of the users and the user's ability and willingness to maintain the project it cover time. These result revealed that low involvement of community on water project activities to affected performance of water supply project.

on the other hand the respondents scored that highest for the item community involved in planning stage of the project, community makes timely financial contribution, community acted as controller of the project, community willingly makes labor contribution for the success of the project, Community found near to water supply project construction area were equally willing to minimize conflict of interest with a mean score of (M=3.60, M=3.56, M=3.28, M=3.24 and M=3.21) respectively.

The data implies community participation in Mareko Woreda is relatively good in participation during project planning stage, in controlling the activity of the project, in making financial and labor contribution and participating in managing conflict of interest. But, the grand mean result of community participation is (Grand Mean = 3.20, SD=0.876) which implies the level of community participation is at moderate level.

#### **4.2.2 Project management practice**

The practice of project management pays attention to goal-oriented systems, subsystems, their relationships, and environment; this is what makes project management a “systems approach” to management. Nonetheless, project management also relies heavily upon elements of the classical and behavioral viewpoints. It is, in fact, a good example of the contingency approach because it is a management philosophy and methodology oriented toward effective accomplishment of just one type of undertaking projects. Ten items related to project management in water supply project were asked to the respondents and the analysis is shown in the table below:

**Table 4.3** Project management analysis

s/no	Items	N	Mean	Std. Deviation
1	Water supply project committee in mareko woreda acquired reasonably adequate project management knowledge	390	3.30	1.506
2	Water supply project in Mareko woreda able to use available financial resources wisely	390	3.05	1.406
3	Water supply project in Mareko woreda can using available material resources	390	2.97	1.496
4	Water supply project in Mareko woreda able to achieve minimum project risk leads to project delay	390	3.71	1.331
5	Water supply project in Mareko woreda able to submit all project deliverables as described in project document	390	3.07	1.471
6	Water supply project in Mareko woreda clearly described the scope of the project during project initiation phase	390	2.90	1.394
7	Water supply project in Mareko woreda able to finish within project life period	390	2.91	1.372
8	Water supply project in Mareko woreda able to satisfy pre specified project quality need	390	2.93	1.471
9	Most projects undertaken in Mareko woreda has chance to deliver the desired output	390	3.17	1.491
10	Most project undertaken in mareko woreda has contingency fund in order to minimize future problems	390	3.29	1.439
	Grand mean of Project management		3.13	.896

Source: own survey, 2019

The result of project management factor presented (in table.4.3) indicated some items registered relatively low score for item i.e. the project able to using available resource, transparency for community the scope of project during the initiation phase, able to satisfy pre specific project quality need, and the projects finish within a project life period, with a mean score (M=2.97, M=2.90, M=2.93 and, M=2.91) respectively. These results imply project management practice affects performance of water supply projects in Mareko woreda in great extent. These finding similar to (Cheungelal, 2004) who argued that project performance could be related to various dimensions (groups) such as time, cost, quality, client satisfaction. In some response felt that registered the highest score for item i.e. the projects able to achieve minimum project risk, Water supply project committees acquired reasonably adequate project management knowledge, project undertaken in the woreda has contingency fund in order to minimize future problems, Most projects undertaken in Mareko woreda has chance to deliver the desired output with mean value (M=3.71, M=3.30, M=3.29, M=3.17) respectively. Generally speaking, the grand mean value of project management practice registered (grand mean = 3.13, SD=0.89) moderate mean value which signifies the project management practice in Mareko woreda exhibits some limitation.

### 4.2.3. Water infrastructure

This research used eight items to evaluate the effect of water infrastructure on project performance. The response gathered through questionnaire presented below:

**Table 4. 4 water infrastructure**

s/no	Items	N	Mean	Std. Deviation
1	There is available underground water resource with in Mareko woreda	390	2.79	1.486
2	There is willing society to expand water supply project in Mareko woreda	390	3.48	1.426
3	There is adequate machinery needs to execution of water supply project in the woreda	390	3.02	1.392
4	There is sufficient spare parts supply within Mareko woreda to maintain failed projects	390	2.86	1.409
5	There is well equipped human resources able to run water supply project in the Woreda	390	2.84	1.418
6	There is well organized government organization to manage water supply project in the woreda	390	3.36	1.448
7	There is adequate government willingness to support water project in mareko woreda	390	3.38	1.372
8	There is reasonably sufficient number of non-governmental organizations to support water supply projects in the woreda	390	3.01	1.438
	Grand mean of water infrastructure		3.09	.754

Source: own survey, 2019

Table.4.4 the finding show that water infrastructure factors affecting on performance of water supply projects. The results implies that relatively low score for items i.e. the existence of machinery, the existence of support from non-governmental organizations, spare part availability , human resource availability and availability of sufficient

underground water resource in the woreda registered relatively lower mean score (M=3.02, M=3.01, M=2.86, M=2.84 and M=2.79) respectively. These findings were in line with (Deverillelal, 2012) who claim that the principal of offering communities a range of choices of technology should be planned carefully if it is to be successfully put in to practice. Whereas, some responses indicated that the result of water infrastructure factors were moderate, the results show that relatively highest scores for items i.e. the presence of willing community for the expansion of water project, government willingness to support water project, the presence of organized government institutions to manage projects with mean scores (M=3.48, M=3.38 and M=3.36) respectively. The grand mean of water infrastructure result (Grand Mean=3.09, SD =0.754) revealed that water infrastructure factor in Mareko woreda is at moderate level but some items indicated limitation.

#### 4.2.4 Project financing

This research utilized eight items in order to determine the role of project financing factor for the success of project performance. The result discussed as below

**Table 4. 5** Project Financing

s/n	Items	N	Mean	Std. Deviation
1	Water supply project in Mareko woreda has sufficient budget for project under construction	390	3.11	1.393
2	There is sufficient budget allocation to maintain water supply project faces frequent failure in the woreda	390	3.55	1.377
3	The beneficiaries of water supply project are willing to pay monthly while using the water	390	3.26	1.381
4	There is government body to manage project financing issues for project undertaken in the woreda	390	2.82	1.429
5	Mareko woreda actively using community based project financing mechanism	390	3.32	1.365
6	Mareko woreda uses government budget as a project financing mechanism	390	3.11	1.485
7	Mareko woreda uses non-governmental support as a project financing mechanism	390	3.31	1.451
8	Mareko woreda uses multiple project financing source as a project financing mechanism	390	3.06	1.430
	Grand mean of project financing		3.19	.810

Source: own computation, 2019

Table 4.5 highlighted the role of project financing in Mareko woreda clean water supply projects. From eight items some items i.e. allocating sufficient budget for maintenance , using community based project financing mechanism , using non- governmental organization as a project financing mechanism , communities are willing to pay monthly

while using the water registered relatively highest mean (M=3.55, M=3.32, M=3.31 and M=3.26) respectively. items like allocating sufficient budget for project under construction, using government organization as project financing mechanism , the existence of government body to administer project financing issues registered relatively lower mean score (M=3.11, M=3.11, M=3.06 and M=2.82) respectively. These finding implies project finance greatly affecting on performance of water supply projects in Mareko Woreda .these were similar to (SirmonHitt&Ireland, 2013), who argued resource is a unique ways to maximize their contribution to providing sustainable advantage of water project. Grand mean of project financing value (Grand mean = 3.19, SD=0.81) highlights the effect of project financing is at moderate level.

#### 4.2.5 Project performance

**Table 4. 6** project performance

Items	N	Minimum	Maximum	Mean	Std. Deviation
There is effective Water project coverage in the woreda	390	1.00	5.00	4.014	.933
There is minimum water supply project delay in the woreda	390	1.00	5.00	2.764	1.269
Most of water supply projects in the woreda are functional	390	1.00	5.00	3.128	1.258
Water supply project in the woreda are proportional to the people live in the woreda	390	1.00	5.00	2.878	1.234
Grand mean of project performance	390			3.196	.862

Source: own computation, 2019

Table 4.6 indicated project performance of water supply project in Mareko woreda . The result highlighted that water project coverage registered the highest mean value (M=4.01) and items like functionality of water project , proportionality of water supply project to the beneficiary and the existence of on time water supply project delivery registered lower mean score (M=3.12, M=2.87 and M=2.76 )respectively. The result implies water supply

project performance in Mareko woreda is at moderate level.

The above quantitative result also supported by the following facts gathered through annual report document of different organization found in the woreda. Mareko woreda planned to build 13 water supply projects with in the past ten years. Currently Mareko woreda built 11 water supply projects which is 84.6 % success rate, out of 11 water supply project only 5 water supply projects completed without delay it is 45.45% or (54.54% of the project registered delay when under project construction). currently only 5 water supply projects constructed within 10 years period are functional the remaining 6 water supply projects are non-functional because of failure it's 54.54% of completed water supply projects discontinue providing water to the community. Mareko woreda planned to 33000 house hold to make beneficiary on water supply project but only 15000 (45.45%) house hold become beneficiary at the end of the year.

#### **4.3 Regression and Correlation analysis**

This sub section tried to present correlation and regression analysis. The purpose of conducting correlation and regression analysis was to indicate the relationship between independent and dependent variables.

### 4.3.1 Correlations

**Table 4. 7** Correlation analysis

		PARTICIPAT	PMANAGE	INFRA	FINANCE
PARTICIPAT	Pearson Correlation	1			
	Sig.(2-tailed)				
PMANAGE	Pearson Correlation	.352**	1		
	Sig.(2-tailed)	.000			
INFRA	Pearson Correlation	.218**	.742**	1	
	Sig.(2tailed)	.008	.000		
FINANCE	Pearson Correlation	.807**	.542**	.410**	1
	Sig.(2-tailed)	.000	.000	.000	
PPERFORM	Pearson Correlation	.433**	.549**	.442**	.507**
	Sig. (2-tailed)	.000	.000	.000	.000

\*\* Correlation is significant at the 0.01level (2- tailed) ----, N=390

According to (Cohen, 1988),to determine the strength of the relationship between variables He suggests the following guidelines:  $r=.10$  to  $.29$  or  $r= -.10$  to  $-.29$  small  $r=.30$  to  $.49$  or  $r= -.30$  to  $-.4.9$  medium  $r=.50$  to  $1.0$  or  $r= -.50$  to  $-1.0$  large these guidelines apply whether or not there is a negative sign out the front of your r value.

Since all variables are interval, the relationship between factors of water supply project (Community participation, project management, water infrastructure and project financing) and project performance of Mareko woreda investigated using Pearson correlation coefficient. Preliminary analyses performed to check the assumptions of correlation analysis the result as clearly indicated by normal probability plot and scatter plot (result annexed) indicated linear relationship between dependent and independent variables and roughly distributed with a reasonably rectangular shape which ensure no violation of the assumptions of normality, linearity and homoscedasticity .

The results of correlation analysis on table 4.7 above, community participation , project management , water infrastructure and project financing positively correlated with the project performance with r value (r=0.433, p=.000 : r=0.549, p=.000 : r=0.442, p=.000 and r=0.507, p=0.000) at a p<0.05 significance level respectively. There for, community participation and water infrastructure has moderate level positive correlation and project management and project financing had strong positive correlation with project performance.

#### 4.3.2. Regression Analysis

In this sub section of the analysis includes a regression model to test the hypotheses. Factors of water supply project (Community participation, project management, water infrastructure and project financing) were taken as independent variables against overall water supply project performance of Mareko woreda as dependent variable in a multiple regression model. For all the hypotheses of the study below hypothesis test was used at 95% confidence interval.

**Table 4. 8 Model summery analysis**

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.614 <sup>a</sup>	.377	.359	.689	.377	21.605	4	143	.000

Source: own survey, 2019

Predictors: (Constant), FINANCE, INFRA, PMANAGE,PARTICIA

b. Dependent Variable: PPERFORM

From Model summery table 4.8, it has been seen that R-value is 0.614. Therefore, R-value (.614) for Water supply project factors suggested that there is a strong effect on project performance. From the table, it can also observed that the coefficient of determination i.e. the Adjusted R-square ( $R^2$ ) value is 0.359 which representing that 35.9% variation of the project performance is due to the water supply project factors

**Table 4.9 ANOVA analyses**

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.132	4	10.283	21.605	.000 <sup>b</sup>
	Residual	68.060	143	.476		
	Total	109.193	147			

a. Dependent Variable: PPERFORM

b. Predictors: (Constant), FINANCE, INFRA, PMANAGE, PARTICIPAT

As clearly indicated by ANOVA table 4.9, it is identified that the value of F-stat is 21.605 and it is significant as the level of significance is less than 5% ( $p < 0.05$ ). This indicates that there is statistically significant association between factors of water supply project and project performance.

**Table 4.10 Coefficients analysis**

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
	(Constnt)	.800	.290				2.757	.007	.226	1.374		
PARTICIPAT	.180	.113	.183	1.594	.113	-.043	.402	.433	.132	.105	.332	3.008
PMANAGE	.328	.103	.341	3.193	.002	.125	.532	.549	.258	.211	.381	2.624
INFRA	.106	.114	.093	.936	.351	-.118	.331	.442	.078	.062	.442	2.261
FINANCE	.145	.135	.136	1.073	.285	-.122	.413	.507	.089	.071	.269	3.714

a. Dependent Variable: PPERFORM

In the coefficients table 4.10 standardized coefficients indicated how much the dependent variable varies with an independent variable, when all other independent variables are held constant. The beta coefficients indicated that how and to what extent each factors of water supply projects influence project performance of Mareko woreda. It has been found that, among four factors of water supply project only project management factors makes statistically significant unique contribution for the prediction of water supply project performance ( $\beta = .34.1$ ,  $t = 3.193$  ,  $P < 0.05$ ) or project management has greater impact on project performance in Mareko Woreda.

#### **4.3.3. Summary of major finding**

In this sub section the researcher tried to answer research questions listed in chapter one of this study and tried to establish relationship with the findings of other researches.

The majority of respondents were males 73.65%. This male dominance in number can be resulted from the gender composition of involvement in water supply projects in the Woreda. Concerning their age, the majority of them falls in the age group 18 -28 years (44.6%) followed by 29-38 years (31.8%) . Generally, 76.4% of the respondents are in the age range between18 – 38 years. Regarding the level of education of the respondents, the majorities 78.4% of the respondents were less or equal to secondary school level.

Concerning the occupation of the respondents the majority 58.1% of them were participated in agriculture followed by government employee 16.22%. The majority of the respondent 87.16% of the respondent were direct beneficiary of water supply project, followed by water supply project construction professional were 6%, water construction committee member were 3.38% and government delegate to rural water supply project were 3.38%.

RQ1 To what extent does community involvement affects performance of water projects in Mareko District?

This research tried to determine the extent of community participation in water supply project of Mareko woreda. The result indicated that the extent of community participation in water supply project at Mareko woreda was moderate level ( $M=3.20$ ,  $SD .876$ ). Positive correlation observed between community participation and project performance ( $r=.433$ ,  $p=.000$ ). The finding of this research support the finding of (Gizachew, 2005) Willingness in the community to provide valued resources in the exchange for services

then these community members value the service and as a result demand for supply of water will facilitate the management of the water project enhancing the rate of performance of the project Gezachew, 2005).

RQ2 To what extent do project management practice affecting performance of water projects in the study area?

This research examined the extent of project management practice in Mareko woreda water supply projects and its relationship with project performance. The result revealed that moderate level project management practice observed in Mareko woreda water supply projects (M= 3.13 SD=.816). Project management factor of water supply project has positive correlation with project performance of Mareko woreda ( $r=0.549$ ,  $p=0.000$ ). This research further examined the influence of project management on water supply project performance. The result revealed that project management make statistically significant unique contribution while keeping other variables constant ( $\beta = 0.341$ ,  $t = 3.193$ ,  $P < 0.05$ ). This finding linked with Ouafa Barakat (2014), He's studies indicated that, the high rate of project failure is essentially due to the problems of project management.

RQ3 To what extent does project financing factors affecting performance of water supply projects in the study area?

The result of this study examined the extent of project financing practice and its effect on project performance in Mareko woreda water supply projects. The result highlighted that project financing of water supply project practice in Mareko woreda is at moderate level (M=3.19 , SD =.810). Project financing factor of water supply project has positive correlation with project performance of Mareko woreda ( $r=0.507$ ,  $p =0.000$ ). The finding of this research is consistent with the suggestion of (Binder, 2008) Budgeting sufficient funding for rural water supply systems is an important issue for sustainability and proper maintenance but not only one. (Binder, 2008) States that increasing the budget allocation for rural water supply systems is very important, but that is not the only thing to meet the challenges. Enhancing the capacity of the operators' related to the choice of appropriate institutional management is also mandatory.

RQ4 To what extent does water infrastructure affecting performance of water supply projects in the study area?

This research determined the extent of water infrastructure and its relationship between project performance improvements. The result highlighted water infrastructure factors in Mareko woreda registered moderate mean value ( $M=3.09$ ,  $SD=.754$ ). Water infrastructure has positive correlation with project performance of Mareko woreda water supply project ( $r=.442$ ,  $p=.000$ ).

This research indicated that the problem of low community participation is due to low involvement in decision making process in whole project life period. Effective Project management problem observed in the Mareko woreda water supply projects. The cause for weak project management were lack of experience, ineffective communication, weak project scope management, unable to selecting feasible project and lack of alternative plan to manage unseen problems.

Water infrastructure problem was the key problem in Mareko woreda water supply projects. The major problem was lack of adequate water infrastructure, inefficient system, shortage of facility and lack of skilled human resources. This finding related with Deverill et.al.(2012), studies show that infrastructure is affected the performance of water projects. Mareko woreda water supply project delay caused due to project financing issues. Most of the project waits for additional budget or to adjust its original project cost due to project design problem and most project after implementation terminated providing water to the beneficiary because of lack of additional budget for maintenance.

#### **4.4. Analysis of qualitative data result.**

In this subsection the result of field observation, interview, focus group discussion and document review summarized and interpreted as follows.

##### **4.4.1. Community participation**

Community participation in the community based water supply project should be started from the initial phase of the project and lasts forever throughout project life period. Community participation includes idea generation, consulting, selections of site, location of water points and assessment of the situations need the participation of the community at the initial phase of the project.

All interviewees, focus group discussion members, and document review result revealed that there is no community involvement at initial phase of the project. Community

involvement starts at construction phase of the project. Their involvement is limited to financial and labor contribution only. In addition to this, absence of community participation at initial phase of the project and decision making process during project construction phase causes dissatisfaction and grievance between the beneficiary.

#### **4.4.2. Project management**

The researcher tried to examine procedures, approaches, activities and management practices applied in the project under study. It was difficult to find whole written evidence regarding project management through conception to the end. The researcher reviewed project design and planning, details of the design, contents of the project, objectives, scopes, strategies, resources required and source of funding, inclusion of feasibility study, monitoring plan, risk management plan and bill of quantities, staff members and changes in design were primary emphasized.

The result indicated Mareko woreda water supply projects are limited in conducting baseline survey, need assessment, feasibility study, using skilled human resource, determining scope, and time management. In fact conducting feasibility studies help any project holders to decide whether a project needs to be undertaken or not. And the inability to conduct these studies has often led to poor achievement of the project. With reference to this project, no review document shows the preparation of feasibility studies prior to the execution of the project. Design of original document was poor and lacks project professional support. The organization structure had considered if there was a professional related to the project but there was no profession related to water supply more evidence to this is that the project plan shows for the recruitment of wash expert.

The design was prepared by water experts. The designed project doesn't pass all necessary steps through participation of staffs or any other responsible stake holders, the community, government body regarding appropriateness of the design at conception stage. It is vital Participatory decision making for technology, material and equipment preference for the project. But one of the reasons for change in design of the project after a year which costs two folds of the original price caused due to lack of participation at a real time. As example shirinto3rd water supply project The document contains scopes, details, strategies, resources required and source of funding Monitoring plan, risk

management plan and bill of quantities and participation of the community but the issues of feasibility study not considered.

#### **4.4.3. Water infrastructure**

Water infrastructure factors considered in this research were availability of natural resource, availability of human resource, availability of equipment, availability of organization and community willingness to facilitate smooth functioning of water supply projects. The result indicated that shortage of natural resource contributed for low performance of water supply. Most of the project undertaken in this project exhibits difficult topography to be taken by gravity to different place which is the distance between 5- 10 km from the stream. But nothing is planned to the beneficiaries who live at the back, right and left sides of the stream. Difficult topography of the area, passage of the pipe line, the distance between the water points planned to installation and environmental factors which such as very deep ground water contributed for project delay.

From the human resource point of view lack of skilled or semi-skilled professional contributed to non performing water supply projects and for poor management of projects under construction. Low quality of input, technical problem motor pump, lack of project management know-how, Institutional support (legal/regulatory framework, organizational and management effectiveness) Low attention to the participation and limited involvement of stakeholders in project implementation process all this challenges were affected performance of water projects.

#### **4.4.4. Project financing**

This research tried to investigate project financing issues regarding the source of fund. There was a common problem of shortage of funds and Lack of adequate budget for maintenance of failed projects. From the investigation the cause for shortage of fund is due to poor project design and unable to conduct feasibility study. These basic causes tend to double the cost of the original project cost, frequent failure, creating potential disagreement among community members. Regarding financial source government, NGO's, and community contribution are the major source for project financing in the woreda.

They responses show that lack of stakeholder involvement, lack of leadership skill, lack of commitment, lack of timely response, poor communication, giving no emphasis as other government tasks, not working together, lack of respect to donor, weak support from all parties, giving no wait to the project, lack of government focus, poor follow up and support from the government, lack of close relation, lack of government supervision, not taking the project as own work, , inefficient of experienced person in the financial administration, mismatch of initial project cost, lack of consultation, lack of problem solving skills, lack of management skills, the committee had no equal participation, the committee not know the planning and designing, the committee had no involvement designing, planning, monitoring and decision making were challenges of water projects.

## CHAPTER FIVE

### 5. Conclusion and Recommendation

In this chapter, the researcher tried to present the final output of this research in concluded and recommended as follows.

#### 5.1. CONCLUSIONS

Based on the analysis of the data collected through questionnaires, interview, observation and secondary data, the researcher has arrived at the following conclusions.

The study concluded that community participation greatly and positively affects performance of water supply project in Mareko Woreda. The study deduced that execution affects initiation identification and developed sense of ownership toward the project greatly affects performance of water supply project in Mareko Woreda. Further, it was also revealed that locally available spar part material and selection of sites for water facilities greatly affect performance of water supply project in Mareko Woreda. The study also revealed that manage project financing, monitoring and controlling, that financial support and decision making moderately affects performance of water supply project in Mareko Woreda.

Further the study established that project management greatly and positively affects performance of water supply project in Mareko Woreda .the study deduced that management set up and able to finish within project life period greatly affect performance of water supply project in mareko Woreda. Further, it was deduced that manage using available material resource and clearly described scope of the project greatly affects performance of water supply project in Mareko Woreda. Further, the study established that to deliver the desired output and project quality greatly affects performance of water supply project in Mareko Woreda.

Further study concluded that water infrastructure positively affects performance of water supply projects in Mareko Woreda. The study deduced that underground water resource and adequate machinery needs to execution greatly affects performance of water supply project in Marko district. Further deduced maintenance cost and sufficient spar part supply greatly affect performance of water supply project.

The study also concluded that project financing greatly and positively affects performance of water project in Mareko Woreda. The study deduced that funding agencies and manage project financing greatly affect performance of water project in a great extent. Further the study deduced that budgeting greatly affects performance of water supply project in Mareko woreda and that budget for project under construction greatly affect performance of water supply project in Mareko Woreda.

## **5.2. Recommendations**

Based on the findings and major conclusions drawn above, the researcher has forwarded the following recommendations. The study recommends that government and stakeholders should allocate adequate funding towards the development of water infrastructure especially construction of new water point execution and maintenance fund for a water supply project.

The study recommends that more local technicians should be trained on operation and maintenance of generators and pipelines. The water management committee should be trained to capacitate whose management skill and facilitate by Mareko Woreda water, mining and energy sector. The study recommends that the community involvement and sense of ownership towards the water project should be done awareness creation by local government and that maintenance fund contribution.

The study recommends that strict guidelines should be set to govern how the management team carries out its activities in relation to the water projects. This will encourage transparency in leadership as well as better financial management result to a improved performance of water supply projects. The finding of this research revealed that all factors of water supply projects considered in this study and project performance scored moderately. On the other hand positive correlation observed between all factors of water supply project and project performance. This relationship suggests increasing the score of each factors of water supply projects leads to increasing the score of project performance. There for all stakeholders should work closely to increase the role of community participation, focusing on project management practice, establishing water infrastructure and following effective project financing mechanism.

The finding of this research revealed that project management plays statistically significant role for the prediction of project performance. There for, Universities found near to the project area should teach the fundamentals of project management techniques in short term training for water supply project committee, Government body found in the woreda should provide technical support to the community and provide administrative support in a different stage of project.

Community based water supply Project problems could be minimized through participating community member throughout project life period, project management techniques in short term training for water supply project committee, in general Community based water supply project performance could be enhanced through effective community participation, effective project management, improved water infrastructure and using multiple project financing mechanism and organizations should strongly support monitoring and evaluation of their water projects beside ensuring that community responsible for management and operation of water projects are well trained in operation and maintenance

This research concluded Community participation factor of water supply project provides little contribution for the prediction of project performance. Community member should be active participant throughout all phases of project in providing financial, labor and idea contribution in doing so each contribution will enhance project performance.

Community based water supply project performance could be enhanced through effective community participation, effective project management, improved water infrastructure and using multiple project financing mechanism. All factors of water supply projects should be used interactively.

Community based water supply Project problems could be minimized through participating community member throughout project life period , conducting feasibility study and selecting the most viable project ideas, creating consensus among all stakeholders on the design before starting the project, setting minimum quality standard for input required for the project prior to purchased, establishing responsible body to manage community based water supply projects and planning for sustainability of the project and assigning budget for maintenance.

#### **5.4. Suggestions for further research**

There is need to carry out more studies on this issue to establish whether there are other factors that influence the performance of water supply projects in promoting development as the study only considered as four major factors.

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**Invalid source specified.** water source become non-functional after a few years of service.

Water has been increasingly address as one basic human right of nation,(UNDP,2014)

Water source become non-functional after a few years of service,(Lockwood,2014)

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**ANNEXURE 1: QUESTIONNAIRES TO GOVERNMENT REPRESENTATIVES**  
**WOLKITE UNIVERSITY**  
**COLLEGE OF BUSINESS AND ECONOMICS**  
**MBA PROGRAM**

**Questionnaires to be filled by respondents**

The purpose of this questionnaire is to collect data for a thesis entitled “FACTORS AFFECTING PERFORMANCE OF WATER SUPPLY PROJECT: THE CASE OF GURAGHE ZONE MAREKO WOREDA, and to recommend possible solutions for further improvement for project success. Thus, your cooperation in responding to the questions honestly and timely is very essential to the success of the study. Your response will be kept confidential and will never be used for other purposes other than the purpose mentioned above. Therefore, you are kindly requested to complete the questionnaire honestly and responsibly.

**Thank you in advance for your cooperation!**

**Part one: Information about respondents’**

**1. Instruction:** please fill the required information by making ‘√’ in the box or on the space provided.

- 1.1 Gender of responde  1. Male  2. Female
- 1.2 Age of respondent: 1. Between 18-28 years  2. Between 29-38 years   
 3. Between 39-48 years  4. Greater or equal to 49 years
- 1.3 Respondents’ Occupation: 1. Government employee  2. Trade and industry   
 3. NGO employee  4. Agriculture  5. Self - employed   
 6. House maid  7. Student
- 1.4 Educational status of respondent: 1. Informal education  2. Primary school   
 education  3. Secondary school  4. Professional certificate  5. College   
 diploma  6. BA/Bsc degree  7. Greater or equal to MA/Msc   
 degree
- 1.5 Respondents’ relationships with Mareko woreda water supply project:
1. Water committee member  2. Water supply Project construction professional   
 3. Beneficiary/ user of the project  4. Government delegate to rural water supply   
 project

S.No.	Indicators	Responses				
		SD(1)	D(2)	N(3)	A(4)	SA(5)
<b>Community participation</b>						
1	The beneficiaries of water supply project were active participant during project initiation phase					
2	The beneficiary of water supply project involved in planning stage of the project					
3	The beneficiary of water supply project makes timely financial contribution					
4	The beneficiary of water supply project willingly makes labor contribution for the success of the project					
5	Community found near to water supply project construction area were equally willing to minimize conflict of interest					
6	The beneficiary of water supply project were willing to share maintenance cost					
7	The beneficiary of water supply project developed sense of ownership toward the project					
8	The beneficiary of water supply project acted as controller of the project					
9	Water project in Mareko woreda established society mobilization					
<b>Project management</b>						
1	Water supply project committee in mareko woreda acquired reasonably adequate project management knowledge					
2	Water supply project in Mareko woreda able to use available financial resources wisely					
3	Water supply project in Mareko woreda can using					

	available material resources					
4	Water supply project in Mareko woreda able to achieve minimum project risk leads to project delay					
5	Water supply project in Mareko woreda able to submit all project deliverables as described in project document					
6	Water supply project in Mareko woreda clearly described the scope of the project during project initiation phase					
7	Water supply project in Mareko woreda able to finish within project life period					
8	Water supply project in Mareko woreda able to satisfy pre specified project quality need					
9	Most projects undertaken in Mareko woreda has chance to deliver the desired output					
10	Most project undertaken in mareko woreda has contingency fund in order to minimize future problems					
<b>Water infrastructure</b>						
1	There is available underground water resource with in Mareko woreda					
2	There is willing society to expand water supply project in Mareko woreda					
3	There is adequate machinery needs to execution of water supply project in the woreda					
4	There is sufficient spare parts supply within Mareko woreda to maintain failed projects					
5	There is well equipped human resources able to run water supply project in the Woreda					
6	There is well organized government organization to					

	manage water supply project in the woreda					
7	There is adequate government willingness to support water project in mareko woreda					
8	There is reasonably sufficient number of non-governmental organizations to support water supply projects in the woreda					
<b>Project financing</b>						
1	Water supply project in Mareko woreda has sufficient budget for project under construction					
2	There is sufficient budget allocation to maintain water supply project faces frequent failure in the woreda					
3	The beneficiaries of water supply project are willing to pay monthly while using the water					
4	There is government body to manage project financing issues for project undertaken in the woreda					
5	Mareko woreda actively using community based project financing mechanism					
6	Mareko woreda uses government budget as a project financing mechanism					
7	Mareko woreda uses non-governmental organization support as a project financing mechanism					
8	Mareko woreda uses multiple project financing source as a project financing mechanism					

ክፍል አንድ : ግላዊ መረጃዎች

ማህጸን ዘቢያ፡- ከዚህ በታች ለቀረቡ ጥያቄዎች በተቀመጠው ሳጥን ወስጥ የራይት '✓' ምልክት በማድረግ ለቀረቡ ሁሉንም ጥያቄዎች አንድ ምላሽ ብቻ እንዲሰጡ በትህትና እጠይቃለሁ፡፡

1. እባኩን ይታዘብ ይገለጹ 1. ወንድ  2. ሴት
2. እባኩን የእርሶን የእድሜ ክልል የሚገኝበትን ቁጥር ያመልክቱ 1.  
 ከ18-28 እድሜ ክልል ወስጥ  29-38 እድሜ ክልል ወስጥ   
 3 ከ39-48 እድሜ ክልል ወስጥ  4. 49 ዓመት እድሜ እና ከዚያ በላይ
3. እባኩን የእርሶን የስራ ሁኔታ ይገለጹ 1. የመንግስት ሰራተኛ  ጋዴ   
 3 መንግስታዊ ባልሆነ የልማት ድርጅት ሰራተኛ  4. ግብርና   
 5 ስራ ፈጣሪ  6. የቤት እመቤት  7. ተማሪ
4. እባኩን የእርሶን የትምህርት ሁኔታ ይገለጹ  
 1. ኢ-መደበኛ ትምህርት  አንደኛ ደረጃ ትምህርት  3. ሁለተኛ ደረጃ ትምህርት   
 4. የመጽ ሰርተፍኬት  5. ኮሌጅ ዲፕሎማ   
 6 ቤ/ቢ ኤስ ሲ ዲግሪ  7 ኤም ኤ /ኤም ኤስ ሲ ዲግሪ እና ከዚያ በላይ
5. ከሚቆ ወረዳ የወሃ አቅርቦት ፕሮጀክት ጋር ያሉትን ግንኙነት ይገለጹ  
 1. የወሃ ኮሚቴ አባል  2. የወሃ አቅርቦት ፕሮጀክት ግንባታ መጽተኛ   
 3 የፕሮጀክቱ ተጠቃሚ  4. የመንግስት ተወካይ /ፕሮጀክት አስተባባሪ/

ተ.ቁ	ፈፀሞ አልሰማ ማም	አልሰማ ማም	ገለልተኛ ነኝ	እሰማ ማላሁ	በጣም እሰማ ሁ

የህብረተሰብ ተሳትፎ

1	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ከጅምሩ (የፕሮጀክቱን ሃሳብ በማመን ጨትና በመደገፍ) ንቁ ተሳታፊዎች ነበሩ				
2	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ፕሮጀክቱ በማታቀድበት ወቅት ተሳትፎ ነበራቸው				
3	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ፕሮጀክቱ እወን እንዲሆን የገንዘብ መዋጮ ድጋፍ አድርገዋል				
4	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ፕሮጀክቱ ወጠታማ እንዲሆን በፈቃደኝነት በስራው ላይ ይሳተፋሉ				
5	የወሃ አቅርቦት ፕሮጀክት በሚነገበት አካባቢ የሚገኙ የአካባቢያችን ማህበረሰቦች ጋር የሚሰሩት የጥቅም ግጭት ለመፍታት ተባባሪዎች ናቸው				
6	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ለጥገና የሚወጡ ወጪዎች ለመሸፈን ፈቃደኞች ናቸው				
7	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ፕሮጀክቱ የራሴ ነው የሚል አስተሳሰብ አዳብረዋል				
8	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች የፕሮጀክቱን ሂደት ይቆጣጠራሉ				
9	በሚቆይ ወረዳ ወስጥ የሚነሱ የወሃ አቅርቦት ፕሮጀክቶች የህብረተሰብ ንቅናቄ ፈጥረዋል				

የፕሮጀክት አስተዳደር

1	በሚቆ ወረዳ የሚኙ የወሃ አቅርቦት ፕሮጀክት ኮሚቴ አባላት ስለ ፕሮጀክት አስተዳደር እወቃቸው ጥሩ ነው					
2	የሚቆ ወረዳ የወሃ አቅርቦት ፕሮጀክቶች ከተለያዩ ምንጮች የተሰበሰበ ገንዘብ በአግባቡ ማጠቃለያ ችለዋል					
3	በሚቆ ወረዳ ወስጥ የሚገቡ የወሃ አቅርቦት ፕሮጀክቶች ያለውን የቁሳቁስ ሃብት በአግባቡ ማጠቃለያ ችለዋል					
4	በሚቆ ወረዳ የሚገኙ የወሃ አቅርቦት ፕሮጀክቶች እንዲዘገዩ የሚያደርጉ ማሰናከሎችን መካከል ችለዋል					
5	በሚቆ ወረዳ ወስጥ የተሰሩ የወሃ አቅርቦት ፕሮጀክቶች በፕሮጀክት ሰነድ ላይ የተጠቀሱ ዝርዝር ተግባራት በሙሉ ፈፅመው ለህብረተሰቡ አስረክበዋል					
6	በሚቆ ወረዳ ወስጥ እየተተገበሩ የሚኙ የወሃ አቅርቦት ፕሮጀክቶች ከመሻሻል ግልፅ የፕሮጀክት አፈፃፀም ዝርዝር ተዘገጅተዋል					
7	በሚቆ ወረዳ የተተገበሩ የወሃ አቅርቦት ፕሮጀክቶች በተቀመጠቸው የጊዜ ገደብ ወስጥ ተጠናቀዋል					
8	በሚቆ ወረዳ የተሰሩ የወሃ አቅርቦት ፕሮጀክቶች ከጅምሩ በግልፅ የተቀመጠውን የጥራት ደረጃ ማከካት ችለዋል					
9	በሚቆ ወረዳ ወስጥ እየተተገበሩ የሚኙ አብዛኞቹ ፕሮጀክቶች ለታለሙቸው ግብ የሚደረስ እድላቸው ሰፊ ነው					
10	በሚቆ ወረዳ ወስጥ እየተተገበሩ የሚኙ አብዛኞቹ የወሃ አቅርቦት ፕሮጀክቶች ያልታሰቡ ችግር በፈጠር ለመፍታት የሚያስችል የማጠበቂያ በጀት ተይዞላቸዋል					
<b>የወሃ ማረጋገጫ ስራዎች</b>						
1	በሚቆ ወረዳ ወስጥ በቂ የሆነ የክርስ-ምድር ወሃ ክምችት					

	ይገኛል					
2	የሚቆይ ወረዳ ማህበረሰብ በወረዳው ውስጥ የወሃ አቅርቦት ፕሮጀክቶች ለማስፋፋት ፍላጎት አለው					
3	በሚቆይ ወረዳ ውስጥ የወሃ አቅርቦት ፕሮጀክቶች ለመተግበር የሚፈጹ ማሸፍኞች በበቂ ሁኔታ ይገኛሉ					
4	በሚቆይ ወረዳ ውስጥ የተበላሹ የወሃ ፕሮጀክቶች ለመጠን የሚፈጹ መለዋወጫ ዕቃዎች አቅርቦት ይገኛል					
5	በሚቆይ ወረዳ ውስጥ የሚከተሉት የወሃ ፕሮጀክቶች ለመተግበር የሚችሉ የሰለጠኑ የሰው ሃይል ይገኛል					
6	በሚቆይ ወረዳ ውስጥ ለማስፋፋት/የተሰሩ/ ፕሮጀክቶችን የሚያስተዳድር/ የሚሟሉ/ የተደራጀ የመንግስት መስሪያ ቤት ይገኛል					
7	በሚቆይ ወረዳ ውስጥ ለሚከተሉት የወሃ አቅርቦት ፕሮጀክቶች ለመደገፍ የመንግስት ተቋማት ፍላጎት አላቸው					
8	በሚቆይ ወረዳ ውስጥ ለሚከተሉት የወሃ አቅርቦት ፕሮጀክቶች የሚደግፉ በርካታ መንግስታዊ ያልሆኑ የልማት ድርጅቶች ይገኛሉ					
<b>የወሃ ፕሮጀክት ሃብት አሰጣሪ</b>						
1	በሚቆይ ወረዳ ውስጥ በመንግስት ላይ ያሉ የወሃ አቅርቦት ፕሮጀክቶች ለመጨረስ በቂ በጀት ተይዞላቸዋል					
2	በሚቆይ ወረዳ ውስጥ አገልግሎት የሚሰጡ የወሃ አቅርቦት ፕሮጀክቶች ለመጠን የሚያስችሉ በጀት ይያዝላቸዋል					
3	በአካባቢያችን የሚገኙ የወሃ አቅርቦት ፕሮጀክት ተጠቃሚዎች ለተጠቀሙት ወሃ በየወሩ ተመጣጣኝ ክፍያ ለመፈፀም ፈቃደኞች ናቸው					

4	<p>በሚቆ ወረዳ ወስጥ የሚደረጉ የወሃ አቅርቦት ፕሮጀክቶች ገንዘብ ነክ ጉዳዮችን የሚጫወት የመንግስት ተቋም ይገኛል</p>					
5	<p>ሚቆ ወረዳ የወሃ አቅርቦት ፕሮጀክቶችን ለመከተል የመያዝ ሰፊ ማህበረሰብን መሰረት ያደረገ የገንዘብ ድጋፍ ለማሰባሰብ በንቃት ትሰራለች</p>					
6	<p>ሚቆ ወረዳ የመንግስት በጀት እንደዋነኛ የወሃ አቅርቦት ፕሮጀክት ማሰፊያ የገንዘብ ምንጭ አድርጋ ትጠቀማለች</p>					
7	<p>ሚቆ ወረዳ መንግስታዊ ያልሆኑ የልማት ድርጅቶች እንደዋነኛ የወሃ አቅርቦት ፕሮጀክት ማሰፊያ የገንዘብ ምንጭ አድርጋ ትጠቀማለች</p>					
8	<p>ሚቆ ወረዳ በርካታ የገንዘብ ምንጮች ለፕሮጀክት ማሰፊያና ት እንደመሰረደ ትጠቀማለች</p>					